

## **Chapter 7 Building Up Assets**

7.1 As discussed in chapter 2, the material well-being of the poor can be seen as a product of their assets and the level and variability of returns to these assets. Assets can be privately owned and operated or publicly supplied. The returns to private assets will depend on the markets in which their services are traded, the availability of other assets, and macro-level policies. Chapters 5 and 6 address some aspects of the variability of asset returns. This chapter is concerned primarily with the building up of the assets of the poor. The next chapter follows up with a discussion of market rates of return to these assets.

7.2 A wide range of assets matter for the poor—human, natural, physical, financial, and social. The capacity for labor is perhaps the most basic asset any of us has. This capacity can be enhanced through training and education and by maintaining good health. Thus education and health are often treated as assets. Physical assets include plant and machinery and infrastructure like roads or telecommunications—these can be privately owned or publicly supplied. Natural assets can be privately owned, such as farm land, or owned and operated as a common property resource, like woodlots, grazing pastures, or rivers. Financial assets include savings and credit instruments. Social assets encompass a range of reciprocal norms and obligations that can be drawn upon in times of need or that facilitate and enforce collective action. Chapters 3 and 4 discuss social capital and social arrangements as assets. This chapter focuses on the other types of assets.

7.3 Actions to build up the lowest levels of assets are central to poverty reduction strategies. But, as shown in chapter 2, the asset positions of the poor are highly varied. For a start, their geographical location varies greatly (indeed, location itself has sometimes been thought of as an asset). Natural assets are more important to the rural poor than the urban. Infrastructure is important to both, but in different ways—roads traversing great distances are important in some rural areas, sanitation becomes more important in urban areas given the close proximity in which the poor live. There are also significant cross-linkages between assets and hence between strategies to build them up. Examples include roads to schools and health clinics in rural areas, clean water and health and education and the return to farming.

7.4 This variability means that a blueprint for building up the assets of the poor is not possible. Actions have to be highly specific to the situation in which the poor find themselves. However, a general framework can help in thinking through the specific issues involved. Actions to build up assets have typically been thought of on the supply side—schools, roads, telecommunications, rural banks, and the like. Moreover, these supply-side actions have typically been thought of as being undertaken wholly or mainly by the state. But there is a demand side to the story as well. Schools can be built, but parents may not send children to school because of costs or social norms. A health clinic may be built, but it may still be too far for sick farmers to walk to. At the same time, while the state is a crucial player in the supply of many of these assets, it is not the only player. Without local monitoring and accountability, teachers may get paid but they may not show up to teach. Medicines from the public health clinic may disappear and then

reappear on the black market. And roads may be provided while water is what is most needed. For many environmental assets, local collective action is the key to preventing their degradation.

7.5 Public action to build up the poor's access to assets can therefore be seen as operating simultaneously on demand and on supply. A balanced expansion of demand for and supply of access to assets by the poor is called for, through a partnership of the state, the private sector, and the poor. Most important is the role of the poor—in defining and expressing their needs, demanding the assets that will lead them out of poverty given their specific circumstances, and ensuring that the supply is forthcoming in the right amounts.

### **How assets matter**

7.6 Access to assets determine the poor's physical well-being, their ability to pursue a livelihood and function as part of society. Given their limited access to any one asset, the poor depend on a wide range of assets.

#### *Human assets*

7.7 As shown in chapter 1, education and health are dimensions of well-being independent of income and consumption that have become integrated into the concept of poverty over the last 50 years. Thus more education and better health contribute directly to improving well-being and reducing poverty but are also instrumental in realizing other dimensions of well-being.

7.8 *Education.* The acquisition of skills and knowledge through education raises the productivity of the poor's labor and increases their chances of employment.<sup>1</sup> The evidence shows that a farmer with four years of complete schooling has much higher productivity than one with no education<sup>2</sup> and that workers in industry are more productive when educated.<sup>3</sup>

7.9 At the household level, there is clear evidence of positive impacts of parent—particularly the mother's—education on children's well-being. In Thailand, mothers with primary education were 30 percent more likely than mothers with no education to treat childhood diarrhea with oral rehydration therapy.<sup>4</sup> Among poor rural households in Côte d'Ivoire, stunting afflicts 24 percent of children of mothers with no education but only 11 percent of children of mothers with some elementary schooling.<sup>5</sup> Child mortality rates are estimated to be about 36 percent lower for children of mothers with secondary schooling than for those of mothers with only primary education.<sup>6</sup> In the

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<sup>1</sup> Assumes absence of labor market discrimination.

<sup>2</sup> Lockheed, Jamison, and Lau 1980; Moock 1994; World Bank 1995.

<sup>3</sup> Haddad et al. 1990.

<sup>4</sup> World Bank. 1993a.

<sup>5</sup> World Bank 1993a.

<sup>6</sup> Filmer and Pritchett 1999.

Philippines, maternal primary education reduces the risk of child mortality by half and secondary education by a factor of three.<sup>7</sup>

7.10 Several household surveys also show that the poor are more likely to live in households in which the heads have less schooling. In Zimbabwe, the poor are twice as likely to live in households in which the head has received no formal education.<sup>8</sup> Recent work on Latin America shows that in most countries in the region, even after controlling for other characteristics, households headed by a secondary school graduate have a per capita income at least 50 percent higher than households with a head who is illiterate.<sup>9</sup> In Bangladesh, a household whose head and spouse have both completed secondary education, would have an expected per capita consumption that is 90 percent greater in urban areas, and 57 percent greater in rural areas than a similar household whose head and spouse have no schooling.<sup>10</sup>

7.11 Education also generates positive externalities for society as a whole by reducing female fertility and lowering population growth and by strengthening civil institutions and building national capacity and good governance.<sup>11</sup> The rapid pace of globalization, technological advances, and increased migration during the 1990s has heightened the importance of education for improving the lot of the poor. But while access to education has continued to improve in much of the developing world during the 1990s, considerable inequalities remain across income groups (figure 7.1) and the poorest groups usually have limited access to this asset. In India, for example, literacy rates tend to be relatively low among scheduled castes, scheduled tribes, and Muslims. Moreover, even at a given level of income, children from these disadvantaged communities are much less likely to go to school than other children.<sup>12</sup>

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<sup>7</sup> Oxfam 1999.

<sup>8</sup> Oxfam 1999.

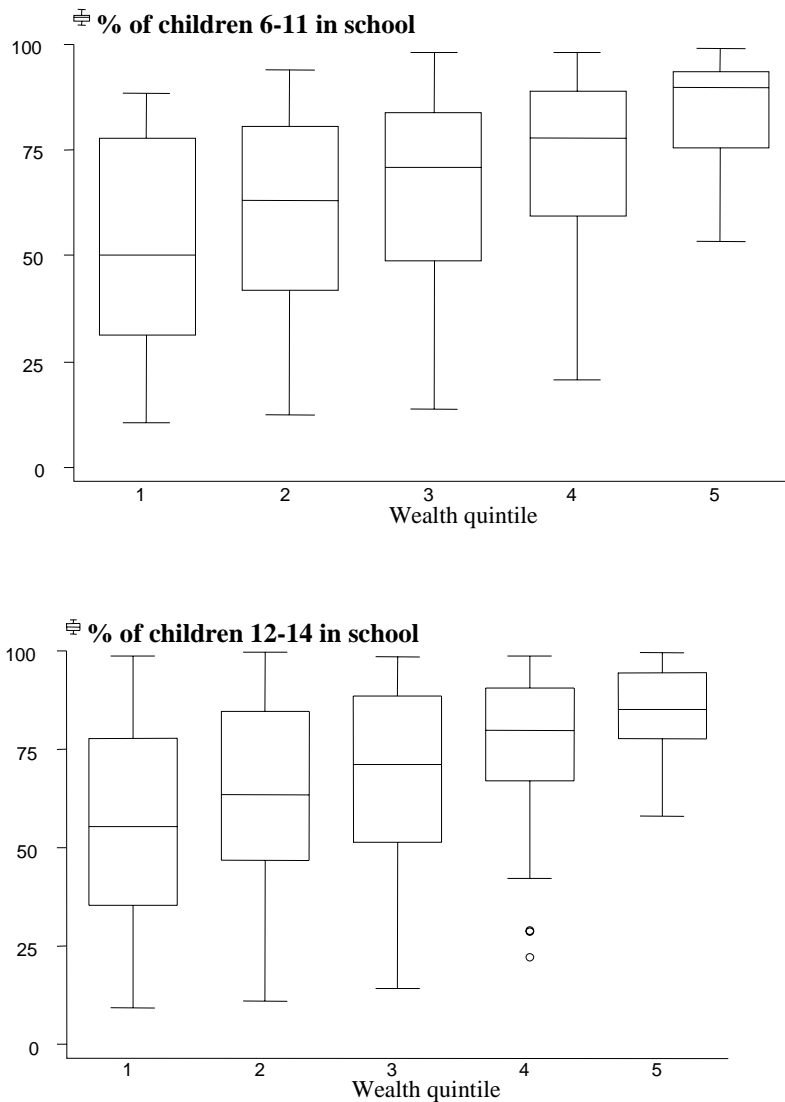
<sup>9</sup> World Bank 1999d.

<sup>10</sup> World Bank 1998a.

<sup>11</sup> World Bank 1995.

<sup>12</sup> PROBE 1999.

**Figure 7.1 Inequalities in schooling across income groups remain**



Source: Database on 41 developing countries constructed by D. Filmer and L. Pritchett from the Demographic Health Survey.

Notes: The box shows the 25th, 50th (median) and 75th percentile. The whisker shows the upper and lower adjacent values. The circles show data points outside the whisker.

7.12 *Health.* Like education, better health improves the productivity of labor assets. It also reduces the number of work days lost to illness, allows longer working lives, and increases opportunities for the poor to obtain better-paying jobs.<sup>13</sup> Data from a wide range of countries show that anthropometric measures (such as height and body mass index) and nutritional measures are positively correlated with labor market participation and wages. Micronutrient malnutrition has also been shown to strongly affect productivity.<sup>14</sup> The evidence suggests that safeguarding health during childhood is

<sup>13</sup> World Bank 1993a.

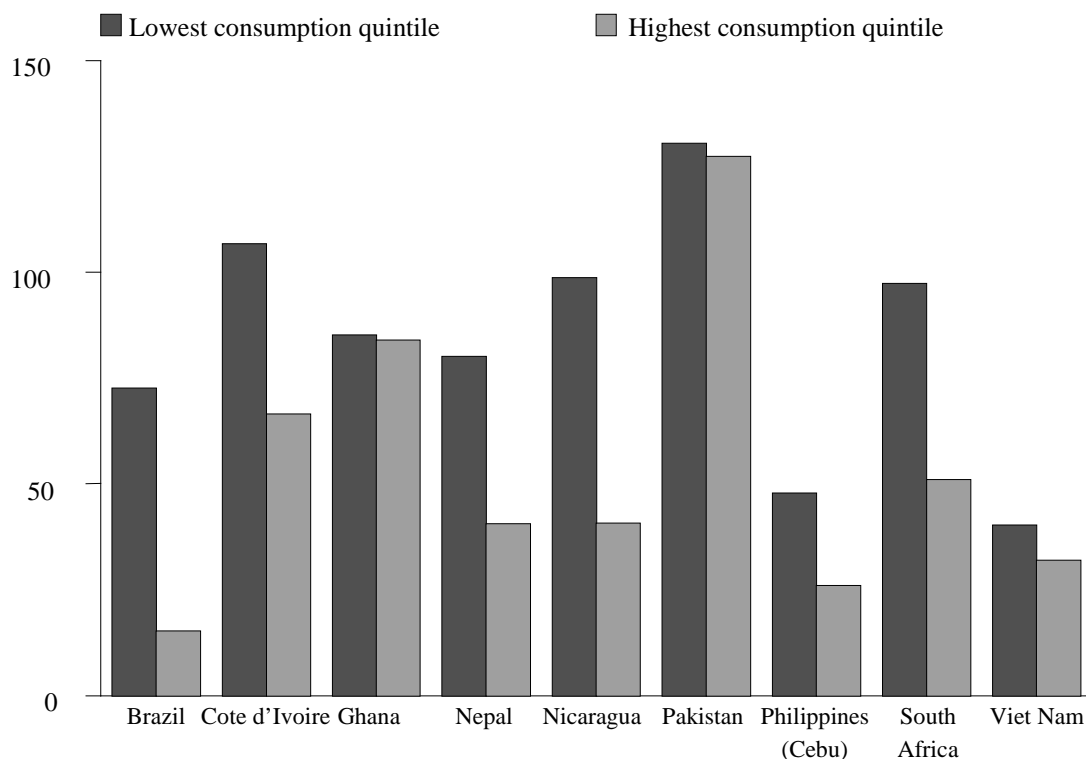
<sup>14</sup> Basta, Samir et al. 1979; Bhargava 1997.

more important than at any other age, because poor health in early years is likely to permanently impair an individual's human capital.<sup>15</sup> Poor health and nutrition of children reduce the gains from their schooling through reduced enrollment, ability to learn, and school participation by girls.<sup>16</sup>

7.13 Good health of parents also promotes more investment in the education and health of their children. Poor health and premature death of adults in households lead to income and expenditure changes that can have adverse effects on child nutrition and schooling. A study of children under 10 in Bangladesh found mortality rates to be twice as high for boys and three times as high for girls over a two year period following the death of a mother as for children with living mothers.<sup>17</sup> Data on enrollments in nine countries show that orphans often have lower school enrollment rates than nonorphans.<sup>18</sup> Good health of the individual also promotes benefits for society as a whole, through lower incidence of infectious and other behaviorally transmitted diseases and reduced costs of medical care. As for education, there are considerable inequalities in various health indicators across income groups. Figure 7.2 illustrates large gaps in infant and under 5 mortality between consumption groups in some countries.

**Fig 7.2 Inequalities in health indicators across consumption quintiles**

**Infant mortality rate (per 1000)**



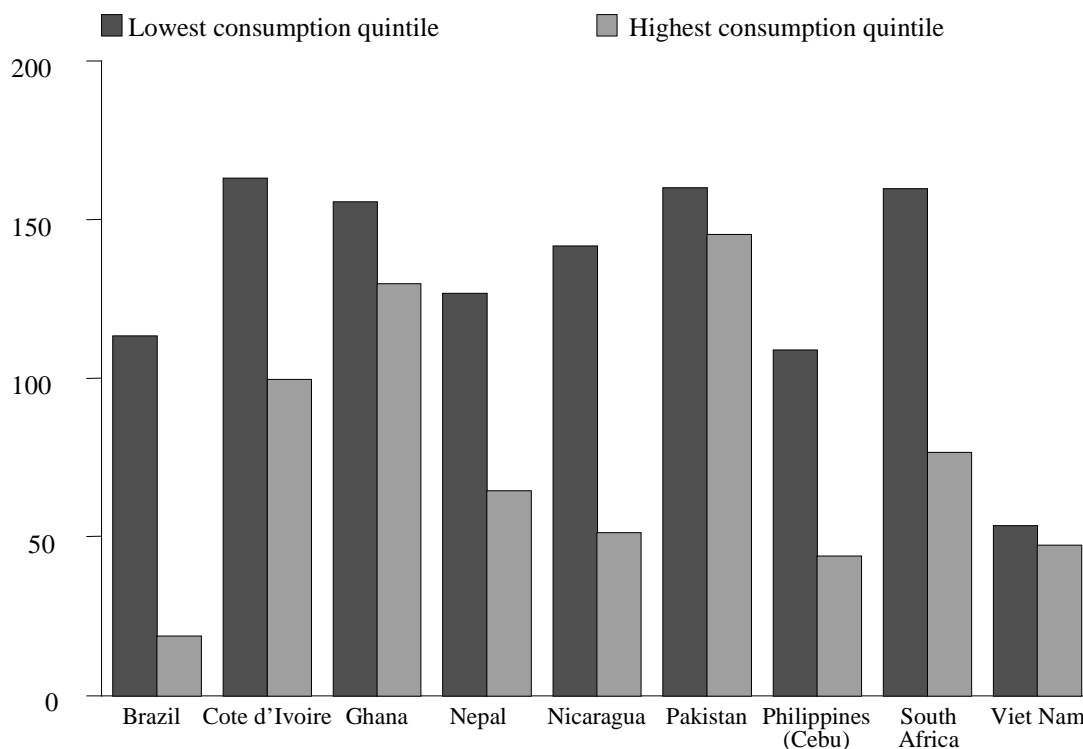
<sup>15</sup> Dasgupta et al. 1999.

<sup>16</sup> World Bank 1993a.

<sup>17</sup> World Bank 1993a.

<sup>18</sup> World Bank 1999c.

**Under five mortality rate (per 1000)**



Source: Wagstaff 2000.

*Physical assets*

7.14 Lack of access to some minimum quantity and quality of infrastructure services—especially safe water, sanitation, transport, electricity, and information and communications technology—results in unhealthy living conditions, reduces the poor’s ability to use social services, engage in productive activities, and access employment opportunities. Unsanitary living conditions are the primary cause of the high incidence of diarrheal diseases, which kill about 2 million children a year and cause 900 million episodes of illness.<sup>19</sup> Lack of adequate sanitation is also a major cause of degradation of ground and surface water.<sup>20</sup> Access to transport and irrigation infrastructure has been found to expand the opportunities for nonfarm employment in rural areas directly and often indirectly and to contribute to higher and more stable incomes, enabling the poor to manage risk.<sup>21</sup>

7.15 Numerous participatory poverty assessments in rural areas document the isolation, drudgery, and perils faced by rural dwellers due to inadequate access to the most basic infrastructure services (clean water, safe footbridges, all-season tracks). It is also well documented that in rural households in many parts of the world women dedicate an inordinate amount of time and energy to subsistence tasks such as transport of water

<sup>19</sup> <http://www.worldbank.org/html/fpd/water/>

<sup>20</sup> <http://www.worldbank.org/html/fpd/water/>

<sup>21</sup> World Bank 1994.

and fuelwood. Not only is this hard work, but the opportunity cost of these tasks may well preclude women's involvement in more productive activities or result in children, particularly girls, being kept out of school. Box 7.1 illustrates the link between access to water and school attendance in Madagascar.

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**Box 7.1 Fetching water or attending school in Madagascar?**

The link between school attendance and infrastructure is strongly related to time availability. As the following table indicates, girls in school are two and a half times less likely to spend time collecting water than those who are not in school. The percentage of boys spending time collecting water is constant regardless of whether they go to school.

**Box Table 1 School participation rates (percent)**

	Children not in school		Children in school	
	Boys	Girls	Boys	Girls
Spent time collecting water	37	83	41	58
Did not spend time collecting water	63	17	59	42
Total	100	100	100	100

Also the amount of time spent collecting water is greater for girls than for boys and much greater for girls not in school. Obviously collecting water is not the only task related to a lower school attendance. However, the relatively large amount of time spent collecting water by girls not in school (4.1 hours) in contrast to the total amount of time spent on all household tasks by girls in school (8.8 hours) suggests that poor access to water decreases school attendance.

**Box Table 2 Time spent by children on weekly chores**

	Children not in school		Children in school	
	Boys	Girls	Boys	Girls
Average number of hours spent collecting water	1.4	4.1	1.5	2.3
Average number of hours spent on all household tasks	8.9	21.1	5.6	8.8

Source: Bredie and Beehary 1998.

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7.16 But the sheer availability of infrastructure is not enough. For the poor, the most dramatic impact of inadequate infrastructure may be the lack of access to existing infrastructure. What good is electrification if the poor can not afford to connect? Affordability, both in time and money, influences access.<sup>22</sup> If the clinic is too far away from the home, a pregnant women may not be able to afford the time it takes to go for pre-natal check-ups. Location matters too.<sup>23</sup> And so do socio-political factors.<sup>24</sup> The poor do not have the political clout to ensure that the water standpost is located close to their houses, or that they get their share of irrigation water in periods of water scarcity.

7.17 Improved communications bring new influences and, in general, a more outward view of the world.<sup>25</sup> Until recently, better communications meant essentially improvements in the transport system. Nowadays, telecommunications and informatics

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<sup>22</sup> Pouliquen 2000.

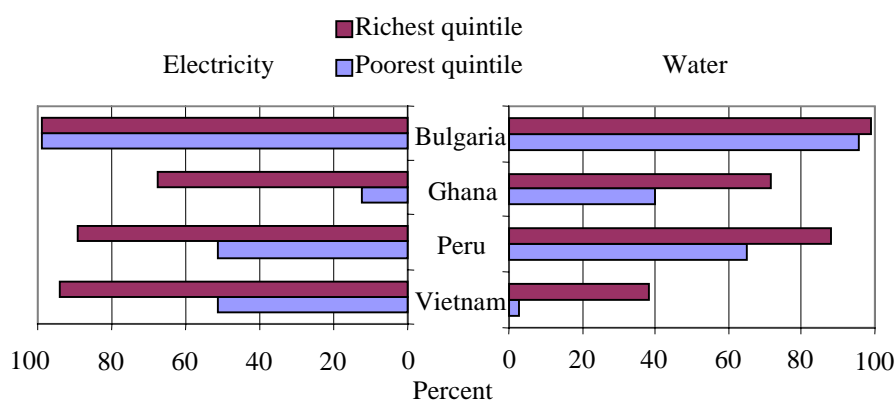
<sup>23</sup> Jalan and Ravallion 1997.

<sup>24</sup> Durlauf 1999; van de Walle and Gunewardena 1999.

<sup>25</sup> Communications have a positive impact on social capital, and, as discussed in chapter 4, the poor benefit more from an increase in social capital than the non-poor. Grootaert 1999b.

are also of great benefit to the poor. A study of rural business in Botswana and Zimbabwe found that access to a telephone was a critical determinant of success or failure.<sup>26</sup> In Sri Lanka, the introduction of telephone services in rural areas increased farmers' share of the price received for crops sold in the capital city from 50–60 percent up to 80–90 percent.<sup>27</sup> The Internet is also being used to improve the earnings potential of the poor. In Kenya, a rural farming cooperative has established a relationship through electronic mail with EarthMarketplace, a U.S. organization, to sell local produce direct to the U.S. market—bypassing the distributor and increasing the revenues of local farmers. Other examples include Virtual Souk and PEOPLink, which use the Internet to sell products produced by artisans in developing countries. While in many countries access to telecommunications, energy and water has increased over the last decade and a half, in part through private sector provision, access to infrastructure varies across countries, across service and across income groups (figure 7.3).

**Figure 7.3 Access to infrastructure services across income groups**



Sources: Bulgaria: Bulgarian Integrated Household Survey 1995; Ecuador: Encuesta de Condiciones de Vida 1998; Ghana: Core Welfare Indicators Questionnaire 1997; Peru: Encuesta Nacional de Hoogares sobre Medicion de Niveles de Vida 1997; Vietnam: Household Living Standards Survey 1998.

*Natural assets*

7.18 The livelihood of poor people, especially in rural areas, depends heavily on natural assets including privately owned land and common property resources, given their limited access to other forms of capital. Land is a major productive resource in many parts of the world. Access to land increases the poor's ability to make indivisible investments that would have to be financed out of credit and has a large impact on nutritional welfare in settings where credit and product markets are incomplete.<sup>28</sup> Thus in most rural areas, access to land is a key determinant of per capita income. In El Salvador, a 10 percent increase in land ownership is estimated to boost per capita income by 4 percent for an average rural household.<sup>29</sup> In rural areas of Bangladesh, consumption

<sup>26</sup> Kayani and Dymond 1997.

<sup>27</sup> World Bank 1998b.

<sup>28</sup> Deininger and Binswanger 1998.

<sup>29</sup> World Bank 1998c.

gains from owning land are high and rise sharply as the size of the landholding increases. Compared to a landless household, a rural household with less than half an acre of land enjoyed 7 percent higher average consumption, and a household with at least 2.5 acres enjoyed 43 percent higher per capita consumption in 1995-96.<sup>30</sup> However, the private and social productivity of access to land by the poorest depends on other factors such as access to credit, to knowledge of farming techniques, and to markets through good transportation networks.

7.19 Farmers are usually concerned to avoid degradation of potentially renewable natural resources such as soils, forests, and sources of fresh water. Urban dwellers are affected by hazardous and solid waste, contaminated water, and air pollution. A recent review found solid evidence that the poor are the main victims of a degraded environment.<sup>31</sup> The poor however are also sometimes the agents of environmental degradation. Often the rural poor lack the incentives or means to intensify their production and are forced to exploit new and fragile lands. Driven by population growth and other factors, they are compelled to exploit marginal areas, such as steep hillsides, or to derive resources from protected areas. The urban poor also contribute to the degradation of their environment since they usually lack practical alternatives. But poor people on their own have sometimes developed sustainable common property management institutions to facilitate access to essential resources over time. A well-documented case is community management of irrigation schemes in the Philippines.<sup>32</sup> A somewhat different case is community management of forests in partnership with government in Andhra Pradesh.

#### *Financial assets*

7.20 Access to financial assets (credit, insurance and savings services) is important in the poor's ability to pursue a means of livelihood, smooth consumption and cope with risk. For some of the poor, access to credit is required to achieve the minimum cash endowment to enter productive activity.<sup>33</sup> For others, it can allow expansion and increased productivity of ongoing activities by providing access to complementary inputs—seeds, tools, technology—that enhance productivity.

7.21 Savings and access to credit can also help the poor smooth over seasonal or unexpected troughs in income, allowing them to keep consumption levels from falling too low while maintaining investments in other assets, such as education and health.<sup>34</sup> In rural areas, access to financial services is important in reducing the impact of strong seasonality in incomes and employment and mitigating the impact of natural disasters.<sup>35</sup> When poor people and small entrepreneurs are able to access credit or insurance instruments to meet expenditures stemming from repeated shocks and emergencies, their investment options may also widen and they can better afford to carry enterprise risks.

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<sup>30</sup> World Bank 1998a.

<sup>31</sup> Ekbom and Bojo 1999.

<sup>32</sup> Ostrom 1990.

<sup>33</sup> de Janvry and Sadoulet 1999a.

<sup>34</sup> Sebstad and Cohen 1999.

<sup>35</sup> Yaron et al. 1997.

Financial services can thus equip the poor to deal better with risks, emergencies, and various life cycle events.<sup>36</sup> As a result, their demand for these services is high. In India, deepening the system of rural financial intermediation between 1972-73 and 1980-81, brought high payoffs in rural growth, employment, and welfare.<sup>37</sup> But credit schemes targeted to the poor have had mixed results and may have little poverty impact for the poorest who have no access to complementary inputs, including infrastructure. In such cases, other (noncredit) interventions may be more effective in relieving poverty.<sup>38</sup>

### *Asset interlinkages*

7.22 No single asset will on its own explain why some people are poor and others are rich. What really matters is the combination of assets and their interlinkage. The benefits of one asset can depend crucially on the presence or absence of another—mother’s education and child health, access to water and schooling. The poor tell us that the “bad life” is multidimensional and that many dimensions of disadvantage reinforce each other and interlock to form a poverty trap.<sup>39</sup> The “good life” too is multidimensional and synergistic.

7.23 Interventions to improve the quality and rates of return of different types of assets can bring synergy, so that the impact of better access to two interlinked assets will add up to more than the sum of the parts. For example, in the Philippines, electrification of rural areas increased the returns to education (box 7.2). And secure tenure will facilitate access to credit. In Thailand, title-owners’ better access to credit enabled them to invest more, so that titled land had significantly higher market value and productivity per unit than untitled land.<sup>40</sup> Similar findings are reported for Brazil<sup>41</sup> and Honduras.<sup>42</sup> In Vietnam, higher education levels raised the return to irrigation schemes and the impact was largest for the poor.<sup>43</sup> Construction of an all-season road can facilitate access to a health center in emergencies. “*Each day there is a funeral in a nearby village because of distance to the hospital.*”—Musanya, Zambia.<sup>44</sup> The road may also attract regular transport service. In Morocco, improved feeder roads had positive impact on agriculture and were also associated with a threefold increase in the enrollment of girls in primary schools and a twofold increase in the use of health care facilities.<sup>45</sup> Data for 85 districts in 13 Indian states, showed that improved communications (through road infrastructure) lowered banks’ costs of doing business, allowing them to expand lending to farmers.<sup>46</sup> And in Uganda, poor public infrastructure as proxied by inadequate power supply, significantly reduces productive private investment.<sup>47</sup> In Peru, there is

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<sup>36</sup> Sebstad and Cohen 1999.

<sup>37</sup> Binswanger and Khandker 1995.

<sup>38</sup> Ravallion 1996.

<sup>39</sup> Narayan et al. 1999.

<sup>40</sup> Feder et al. 1988.

<sup>41</sup> Alston et al. 1996.

<sup>42</sup> Lopez 1997.

<sup>43</sup> van de Walle 1999b.

<sup>44</sup> Narayan et al. 1999.

<sup>45</sup> Levy 1996.

<sup>46</sup> World Bank 1994.

<sup>47</sup> Reinikka and Svensson 1999.

emerging evidence of synergies from “bundling,” that is, the provision of a package of infrastructure services (box 7.3).

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**Box 7.2 Energy and education go together in the Philippines**

Rural electrification generates not only direct benefits to consumers of electricity (in the form of, say, better lighting or cheaper irrigation) but also indirectly complements government efforts to improve education.

A survey of 2,000 households in the Philippines indicates that one year of education increases, on average, annual income by about 13,000 pesos. However, this increase is augmented by an additional 2,000 pesos if the household has electricity. The gain in income reflects the fact that electrification appears to increase the probability of participating in the labor force. More important, the quality of education may improve with electrification. Both the decision to read and the amount of time spent studying and reading are significantly higher in homes with electricity. Children in homes with electricity, for example, study about 30 minutes longer each day than children in households without electricity. These findings support the notion that electricity complements other rural development programs, especially education.

Source: Barnes 1997.

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**Box 7.3 Access to basic services and the effects on well-being**

Providing basic infrastructure services to families can have an immediate impact on well-being. In addition access to basic services can create cumulative benefits over time by increasing both the level and growth rate of income. However, both immediate static and dynamic benefits will depend on the number and types of services available. Families might only reap the benefits of basic services if they are provided jointly or bundled.

Recent empirical evidence from a study in Peru suggests that bundling of services matters. The study examines panel data from more than 800 Peruvian families, interviewed in 1994 and 1997 about their living standards, access to basic services, and household consumption and income. It finds that the additional positive impact of each new service on growth of per capita household consumption, increases with the total number of services available (while controlling for other factors influencing the change in household welfare).

The results imply that if a household had access to only two services (water, sanitation, telephone, and electricity), in 1994, its growth rate of consumption was about .05 percent higher over the three-year period than for households that had no access. If a household had three services, the growth rate was 0.16 percent higher. The marginal impact of the third service was 0.09 percent which is a bigger impact than two services combined. Families with access to four services in the initial period experienced a 0.28 percent faster growth than families with no access. The marginal return on the fourth service was 0.12 percent. Therefore, the additional positive impact of each service increases with the total number of services available.

Source: Chong and Hentschel 1999.

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## **Guiding principles for public action**

7.24 We have seen how a broad range of assets and the interaction between them matter to the poor. But different assets matter in different ways to different groups of the poor. For the poorest groups in both rural and urban settings, access to clean water and basic health and education assets would seem critical. For the rural poor, access to land and rural roads would seem an important priority. In more urban settings, housing and sanitation services would assume greater importance. A context-specific approach is thus needed to help determine the preferred sequencing of assets and prioritize actions to help the poor build assets. Experience suggests five closely interrelated general guiding principles:

- Take national-level actions to reallocate public expenditures and, in some cases, to redistribute land.
- Seek partnerships among government, private sector, civil society and the poor to work on the demand and supply sides of asset buildup.
- Focus on building mechanisms at the local level that can hold national and local levels accountable and can ensure that the resources received are allocated to meet the heterogeneous needs of the poor.
- Pay attention to the demand side of the equation, especially at the local level, to ensure that demand responses contribute to asset buildup at rate matching supply-side interventions.
- Build on synergies between different assets to increase the well-being of the poor, especially in crafting rural and urban development strategies.

*National-level redistributive actions.*

7.25 The asset positions of the poor can be greatly influenced by national-level parameters over which they do not have direct control. Two important parameters are the pattern of public expenditures and policies on land redistribution and land reform.

7.26 *Pro-poor public expenditures.* Patterns of public expenditures at the national level can be improved to make them pro-poor. Expansion of basic health and education services was part of the two part strategy for poverty reduction put forward by World Development Report 1990. What has been the record of public expenditures on education and health? A recent study showed large increases in real per capita education and health spending in Asia and Latin America and the Caribbean between the mid-1980s and 1996, while in Sub Saharan Africa, per capita spending fell in education and rose only moderately in health. In the transition economies, both education and health spending declined sharply.<sup>48</sup> In the sample of 118 developing and transition economies, real per capita spending increased an average of 0.7 percent annually in education and 1.3 percent in health. Spending also rose as a share of both national income and total expenditure.

7.27 The evidence shows however, that spending in both sectors goes disproportionately to areas—such as tertiary education and hospital and curative care—that tend to benefit better-off groups more and that the poor generally benefit much less than better-off groups from public expenditure in both sectors (tables 7.1 and table 7.2).

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<sup>48</sup> Gupta et al. 1998.

**Table 7.1 Distribution of public spending on education by income quintile (percent)**

	Country	Year	Quintile				
			1-poorest	2	3	4	5-richest
1	Armenia	1996	7.0	17.3	22.0	25.0	29.0
2	Côte d'Ivoire <sup>a</sup>	1995	13.5	17.4	17.1	17.2	34.8
3	Ecuador	1994	15.0	17.4	19.3	21.4	26.8
4	Ghana <sup>a</sup>	1992	16.4	20.7	21.0	21.1	20.8
5	Guinea <sup>a b</sup>	1994	8.5	13.1	21.1	30.4	26.9
6	Guyana	1993	14.5	16.3	16.2	20.9	32.1
7	Jamaica	1992	18.0	18.7	20.3	21.2	21.8
8	Kazakhstan	1996	8.4	15.9	22.6	27.1	26.0
9	Kenya	1992/93	16.7	19.9	21.0	21.7	20.7
10	Kyrgyz Republic	1993	14.1	17.3	18.0	24.2	26.5
11	Madagascar <sup>a</sup>	1993/94	8	15	14	21	41
12	Malawi <sup>a</sup>	1994/95	16	19	20	20	25
13	Morocco	1991	14.8	17.1	20.3	25.0	22.8
14	Nepal	1996	10.5	11.8	14.0	17.6	46.0
15	Nicaragua	1993	9.1	11.8	15.5	23.5	40.1
16	Pakistan	1991	14.3	16.7	19.4	20.5	29.1
17	Panama	1997	19.8	18.6	20.2	23.9	17.5
18	Peru	1994	14.8	18.8	21.6	22.7	22.1
19	Romania	1994	21.5	21.0	20.7	19.6	17.1
20	South Africa <sup>a</sup>	1993	21.1	18.5	16.9	20.1	23.4
21	Tanzania <sup>a</sup>	1993	13	16	16	16	38
22	Vietnam	1991	12.2	16.1	17.1	19.2	35.4

a. World Bank data.

b. Including only primary and secondary education.

Source: Li, Steel, and Glewwe 1999, World Bank Education Sector Thematic Group.

**Table 7.2 Distribution of public spending on health by income quintile relative to the poorest**

Country	Year	Quintile				
		1-poorest	2	3	4	5-richest
Argentina	1991	1	0.62 <sup>a</sup>	0.62 <sup>a</sup>	0.62 <sup>a</sup>	0.18
Brazil	1990	1	2.25	3.75	3.13	2.50
Bulgaria	1995	1	1.23	1.62	2.00	1.92
Chile	1982	1	1.02	1.02 <sup>a</sup>	1.02 <sup>a</sup>	0.50
Ghana	1994	1	1.25	1.58	1.75	2.75
Indonesia	1987	1	1.17	1.58	2.25	2.42
Kenya	1992	1	1.21	1.57	1.57	1.71
Malaysia	1989	1	0.69 <sup>a</sup>	0.69 <sup>a</sup>	0.69 <sup>a</sup>	0.38
Mongolia	1995	1	1.11	1.06	1.09	1.34
South Africa	1993	1	1.40 <sup>a</sup>	1.40 <sup>a</sup>	1.40 <sup>a</sup>	1.06
Uruguay <sup>b</sup>	1989	1	0.57	0.46	0.38	0.30
Vietnam	1993	1	1.33	1.75	1.83	2.42

a. Distribution across these quintiles not distinguished in original source

b. Quintiles defined on household rather than per capita basis.

Source: Filmer and Pritchett 1998.

7.28 The poor also benefit less from other areas of public spending. In five countries in Latin America the ratios of public subsidies in water and sewerage of the richest to the poorest quintiles range from 2.8 to 1.3.<sup>49</sup> Even in formally centrally

<sup>49</sup> World Bank 1994.

planned Algeria and Hungary, the rich have received more than the poor in infrastructure subsidies.<sup>50</sup> In Bangladesh, subsidies on infrastructure services are about six times larger for the better-off than for the poor.<sup>51</sup> Power price subsidies disproportionately benefit higher-income households, which use more energy than poorer households.<sup>52</sup> In Ecuador, kerosene for cooking and lighting was subsidized until recently, but retailers often sold the kerosene for use in vehicles, a more lucrative market.<sup>53</sup> In Nepal, fertilizer subsidies—amounting to between one-fourth and one fifth of total budgetary outlays for agriculture—benefit poor farmers the least, and their better-off neighbors the most. In 1997, farmers in the top consumption bracket were also five times more likely than those at the bottom to have seen an agricultural extension agent.<sup>54</sup>

7.29 The issue of military spending is an important one. In developing countries with severe budget constraints, it is likely that high levels of military spending will crowd out spending in areas such as basic education and health. Since the end of the Cold War, military spending in developing countries has fallen from an average of 4.9 percent of GDP in 1990, to about 2.4 percent of GDP in 1995.<sup>55</sup> In several countries, between 1993 and 1997, this declining share of military spending has also been associated with increasing shares of education and health spending in GDP government spending. On average, in a group of 18 highly indebted poor countries (HIPC), the share of military spending in GDP fell by the same amount (0.6 percent) as the increase in the share of education and health spending.<sup>56</sup>

7.30 Some post-conflict countries, have as expected, experienced significant declines in military spending. In Ethiopia, following the end of the civil war and demobilization, military spending fell to 16.4 percent of government recurrent spending in 1993-94, compared to a high of 46 percent in the three years preceding demobilization. In parallel, social spending rose from 17 percent to 23.5 percent.<sup>57</sup> In countries in conflict, in contrast, military spending tends to take up increasing shares of public resources. In Sierra Leone for example, military spending increased from about 1 percent of GDP in 1991, to about 6 percent in 1995 and to almost 30 percent of central government expenditure. Between 1990 and 1997, Sierra Leone's public spending on health was under 2 percent of GNP.

7.31 Maintaining security forces (armed forces and police) allows governments to provide adequate internal and external security to citizens. Its scope is motivated by perceptions of internal and external security or lack thereof. The appropriate level of spending on these security forces will depend on several factors and will naturally vary across countries. In some cases, it may be possible to reduce such spending without compromising national and internal security. Resolution of conflict situations—as we

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<sup>50</sup> World Bank 1994.

<sup>51</sup> World Bank 1994.

<sup>52</sup> Barnes et al. 1997.

<sup>53</sup> Barnes et al. 1997.

<sup>54</sup> Prenzushi 1999.

<sup>55</sup> Gupta et al. 1996.

<sup>56</sup> IMF 1999.

<sup>57</sup> Colletta, Nat et al. 1996b.

have seen in Ethiopia—can be instrumental in releasing resources for spending in areas that help the poor build assets.

7.32 Improving the poverty focus of public expenditures will require reallocation both between and within sectors, as well as improvements in the efficiency of expenditures. In some cases the priority may be reallocating within sectors—in favor of basic education and primary health for example—in others, the issue may be channeling greater resources to sectors such as education and health. More than reorientation is needed, of course—the local efficacy of public expenditure on behalf of the poor is also important and is discussed later. But orienting public expenditure toward building up the assets of the poor is central to any poverty reduction strategy.

7.33 *Land reform and redistribution.* The social objective of poverty reduction would require redistribution of access to land from those who have more to those who have less. In fact, since land is a key asset for the majority of the poor in rural areas of developing countries, policies that improve their rights to land they already cultivate, that allow them increased access to land via the market, and that provide specific assistance to bring about equity-and productivity-enhancing land distribution will all have an important impact on poverty. Land rights held by the poor are often very insecure.<sup>58</sup> Programs to give the poor clearly defined land rights, resolve land conflicts on a broad scale, establish accessible legal mechanisms, and protect them against land grabbing, all can greatly enhance the ability of the poor to utilize and invest in land they already “own”. Improving the functioning of land rental markets will not only help increase overall efficiency of land use, but can also help the landless gain access to land and climb the “agricultural ladder” to gradual ownership. Finally, redistributive land reform, i.e. specific measures to assist the poor gain access to land ownership has re-emerged as an important policy issue in a number of countries.<sup>59</sup>

7.34 Land redistribution has been particularly successful in landlord estates<sup>60</sup>—for example in Bolivia, China, Ethiopia, Eastern India, Korea, Taiwan (China)—where supporting infrastructure (access to markets, technology etc.) was already in place. In hacienda<sup>61</sup> systems, it has been more difficult<sup>62</sup>, both because a more comprehensive change in the pattern of production is required and because measures of land reform have been implemented against a long tradition of measures (economic and non-economic) that protected politically powerful large landowners.

7.35 Macro-economic reforms and the associated abandonment of protection of the large farm sector have, in many countries, facilitated not only a more integral discussion of land policy issues but opened a window to redress huge inequalities in the distribution of productive assets in a way that could be more sustainable than past land reforms. A number of countries—Brazil, Colombia, South Africa, the Philippines—are

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<sup>58</sup> Deininger and Binswanger 1999.

<sup>59</sup> Deininger 1999a.

<sup>60</sup> A key reason is that production remained in the same family farm system and beneficiaries already had skills and implements to cultivate the land. Deininger 1999a.

<sup>61</sup> Systems where tenants had a small house plot for subsistence but worked the majority of the time on the landlord’s home farm.

<sup>62</sup> de Janvry and Sadoulet 1989; Binswanger et al. 1995.

now experimenting with an approach of “negotiated”, i.e. decentralized, community-based and demand-driven land reform. This model relies on two key insights. First, to provide a sustainable way out of poverty, it is not enough to transfer land but to enable poor to make productive use of this land. This requires a transparent and public processes of dissemination, training, and eventually beneficiary selection that is promoted through democratic institutions at the community level. Self-selection of beneficiaries, their willingness to make a contribution and take some risk, provision for complementary investments, and participation of the private sector are critical elements in this. Second, while helping potential beneficiaries to better articulate their demand is important, attention also needs to be devoted to land supply. In addition to elimination of subsidies and legal measures (e.g. subdivision laws) which historically provided support to the large farm sector, better collection of land taxes could not only provide a powerful incentive to increase productivity of underutilized land but also provide a basis to finance land purchase grants to the poor in a fiscally sustainable way.

7.36 Evidence from pilots in Colombia<sup>63</sup> suggests that the decentralized approach under negotiated land reform has been faster and has resulted in prices as much as 40 percent lower than before. Demand-led training and capacity building, with an emphasis on detailed project planning has improved the ability of beneficiaries to negotiate independently with land owners and given them a clearer idea of how to proceed once they receive land. In Brazil, community organizations allowed for even quicker implementation. It is still too early to fully evaluate this new generation of land reforms, but they hold promise for greater success of land redistribution efforts.

7.37 Land and agrarian reform has been a key element of post-communist reforms in several parts of Eastern Europe and Central Asia. This has been motivated mainly by the desire to increase agricultural efficiency and less by the goals of restoring equity and equality. It has involved both privatization and farm restructuring. In most of the former Soviet republics, private ownership is now allowed for potentially all farmland. But restrictions on land transfers is a serious obstacle to efficiency gains since farmers are prevented from adjusting their operations to a more efficient level and there are no mechanisms for transfer of land.

#### *Public-private-community partnerships*

7.38 While the public sector has a key role in helping to build up the assets of the poor, there is no presumption that it should be the only player or even the main player in some cases. Different types of arrangements are needed for different types of assets, involving partnerships of the private sector, the state, and the community. Arrangements for provision will clearly have to be context-specific but some general principles can help frame the discussion. Policymakers can apply two criteria to help identify and choose between competing institutional options: characteristics of the service, and the country institutional context (box 7.4). Institutional arrangements have to be tailored to the nature of the service, with responsibilities for the various stages of provision—design delivery and monitoring—assigned according to the comparative advantage of the different parties. The country’s political, state and social institutions will also determine

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<sup>63</sup> Deininger 1999a.

the feasibility of any given arrangement. Examples from infrastructure provision, preservation of natural assets, and provision of financial assets, illustrate different arrangements for delivering service to the poor.

**Box 7.4 Institutional options for service delivery**

The characteristics of a service suggest appropriate institutional arrangements for provision. Services can be categorized by their degrees of contestability and information asymmetry. High contestability markets are characterized by several suppliers. Information asymmetry occurs when information about the quality of service delivery is not equally available to purchasers, producers, and users. These two characteristics can be combined in six different ways as shown below. A type I service such as garbage collection is highly contestable. It is also information symmetric because public, private and civil society actors can easily monitor it. Type II services such as management of railroads are also information symmetric but do not lend themselves to competition in the market as type I because of their idiosyncratic investments requirements. Type III goods (e.g. immunization) are highly contestable while type IV (e.g., common properties) are characterized by high entry barriers. Both type III and IV goods are information asymmetric and can be divided into two separate categories depending on whether they are provider or user asymmetric. In the provision of provider asymmetric goods, the purchaser (often the government) suffers from an informational disadvantage vis-à-vis the producers of the service (private firms, public sector units or agencies, or non-profits). For example, in public legal representation, the risk that the producer will produce outputs of a different quality than the purchaser requires can be mitigated through the specification, monitoring and enforcement of performance standards. Watershed management suffers from asymmetry in the sense that the user has an information advantage over other entities. Such goods can not be produced efficiently without the input of beneficiaries as standard setters, co-producers, or regulators. A service such as primary education can be characterized as both a type III A and III B good because it may display both producer and beneficiary information asymmetry, although it is best monitored by users.

**Box table 1 Six categories of goods**

<i>Production Characteristics</i>	<i>High Contestability</i>	<i>Low Contestability</i>
Information symmetric	Type I: Transport Services Garbage Collection	Type II: Infrastructure build-operate-transfer Operation of ports and railroads
Provider Information Asymmetric	Type III-A: Public legal representation Immunization	Type IV-A: Budgeting Defense
User Information Asymmetric	Type III-B: Primary education Family planning	Type IV-B: Watershed management Management of common pastures

Depending on the service and the stage of the delivery process—design, delivery, or monitoring—different arrangements —market, voice, and hierarchy—have the comparative advantage (see table below). For example, type I services (garbage collection) are best provided by potential providers competing in the market. A type II service (railroads) is best provided through a sequence of hierarchy-market-hierarchy arrangements. Type IV B common property goods are often best managed by participation and voice in all stages. Most social and economic services for the poor call for a richer combination of market, voice, and hierarchy during provision in order to be operationally efficient. This means that monopolistic public sector provision of services, which still is the norm in many developing countries, is rarely good practice.

**Box table 2. Mapping institutional options at different stages of provision**

Stage of Provision	Institutional Options		
	Market	Voice	Hierarchy
Design		IVB	II IVA
Delivery	I II	IVB	IVA
Monitoring		IVB	II IVA

Source: Adapted from Girishankar 1999a and 1999b

7.39 *Telecommunications, privatization, and the poor.* Since the mid-1980s, developing countries have been opening up their telecommunications sectors to private participation and competition.<sup>64</sup> Arrangements have ranged from private investment in publicly owned companies (as in China) to complete privatization and widespread competition with the state's most important role that of regulation. The outcome has generally been rapid growth in access, lower prices, and better quality service. In Peru, in the aftermath of reform, the number of fixed lines increased more than 165 percent in five years, the number of mobile lines rose from about 20,000 to nearly half a million, and the number of localities with access to telephones more than doubled. The share of households in the lowest quintile with access to telephones increased from 1 percent to 7 percent between 1995 and 1996.<sup>65</sup> Grameen Telecom of Bangladesh is a model for providing the poor access to telephone services using the entrepreneurial talents of rural women. The company operates a variant of the telecenter concept in rural areas. Grameen Bank members can borrow money to purchase a cell phone and then sell air time to villagers to repay the loan and earn income. As of October 1998, 140 villages had telecommunications access through the Grameen mobile phone network.<sup>66</sup>

7.40 Privatization alone, in the absence of greater competition and effective regulation to prevent abuse of market power, is unlikely to significantly increase access, particularly for poorer groups. To make private participation in telecommunications—and infrastructure more broadly—more pro-poor, policymakers may need to refocus both regulations and the regulatory and transactions processes (box 7.5). A recent econometric study of telecommunications provision in 30 African and Latin American countries found that competition is correlated with per capita increases in the number of mainlines, payphones, and connection capacity and with decreases in the price of local calls, and that well-run regulation was also important in improving connection capacity.<sup>67</sup> These results confirm that privatization without attention to competition and regulation may be of little or no advantage to poorer consumers.

<sup>64</sup> Izaguirre 1999. Over 90 developing countries opened up their telecommunications sectors to private participation between 1990 and 1998.

<sup>65</sup> OSIPTTEL 1996.

<sup>66</sup> Uddim 1999.

<sup>67</sup> Wallsten 1999.

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**Box 7.5 Making private participation in infrastructure pro-poor**

The current approach to private participation in infrastructure frequently involves exclusive control of a local monopoly over a long period and an obligation to provide service to all or to all who request it within an area of exclusivity. This approach can inadvertently erect barriers to improving service for low-income households. Better access for low-income consumers may be possible through an alternative approach that stresses competition through increased entry, including increased entry by nonconventional suppliers, which may not involve connection to a formal network. Achieving such entry requires rethinking the design of both transactions and supporting regulation. Policymakers will need to refocus regulation—to the extent that regulation is still needed—on facilitating entry and monitoring quality and prices to end users. And they may need to refocus regulatory and transactions processes.

*Avoid service cuts.* At the least, arrangements for private participation should not cut off existing service options or reduce choices for the poor. For example, simply reassessing the relevance of far-reaching exclusivity provisions can help make contracts for private provision more pro-poor.

*Focus on outcomes.* Market restructuring to allow entry—for example, in retailing—can remove a major legal barrier to service expansion but may not be enough to encourage entry when entrants face rigid input or output standards. Technical standards for construction are often set at industrial country levels, leading to high startup costs and creating disincentive to expand network services. Easing or setting aside such standards, by reducing the costs of bringing improved services to poor households, may actually improve service quality for these households. The focus of any standards should be on such outcomes as the basic potability of water at point use or electric lighting for homes every day—and thus on the ultimate goals of public health and safety and poverty alleviation.

*Rethink interconnection.* Regulation focusing on interconnection issues has become routine in sectors such as telecommunications but seldom addresses serving the poor. Allowing entry by microentrepreneurs to supply low-income neighborhoods may raise new issues for regulators. In some sectors, solutions could involve explicit contractual provisions for interconnections between suppliers or for bulk supply. In others, regulators may need to facilitate discussions between incumbent utilities, community groups, and alternative providers.

*Untie support.* Easing entry by avoiding exclusivity and supporting low-income households through such measures as land tenure initiatives and better access to microcredit should reduce the gap between service affordability and consumer willingness to pay. Subsidy targeting becomes critical if these improvements still leave a gap. Government should avoid targeting subsidies to one provider since this will deter entry by raising the relative price of alternative services. A better alternative may be to target subsidies to low-income consumers so as to facilitate consumer choice.

*Redesign processes.* Regulators may need to pay more attention to facilitating access to regulatory processes for residents in low-income settlements (for example, through local hearings or local complaint bureaus). Further, communities could become more active players in regulatory processes by assisting in both gathering and disseminating information on the performance of local infrastructure service providers.

*Manage transition.* Ideally pro-poor approaches would address all the key issues affecting entry and the expansion of service options to low-income areas. But governments may not be able to implement every desirable reform at one time. Policy sequencing then becomes critical. Incremental moves to make policies more pro-poor should ensure that hard to change policies are not left until late in the process. Policymakers also need to ensure that policies not only do not harm the poor, but also support timely sustainable improvements in service.

Source: Cowen and Tynan 1999.

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7.41 As private providers focus on the most profitable market segments, there may be pockets of the population—particularly poorer populations—that may remain without service because of the exceptionally high cost and low revenue potential of extending service to them. This situation requires innovative approaches to public-private partnerships appropriate to the particular context. Chile's development telecommunications fund is an example of how government resources were used to stimulate the private provision of lifeline telephone services to low-income households, improve access for people with disabilities and extend Internet connectivity to public schools, health centers, and libraries. Chile introduced a system of auctioning subsidies

to pay for rural telecommunications rollout. Within two years, 90 percent of rollout objectives had been achieved at about half of the initial budget: in about half of the chosen locations, bids to provide service did not include subsidies.<sup>68</sup>

7.42 *Joint management of natural assets.* In recent years, several countries have moved from state-led to state-community management of natural resource assets. This change reflects a range of factors, from dwindling public resources and poor environmental outcomes under state-led programs to the general shift from top-down to more bottom-up development approaches. The evidence suggests that community participation and management can be an important tool for improving access of the poor to these assets while promoting benefits to society at large from their conservation and improvement. But like other approaches, it has its limits.

7.43 Community management of forestry resources has been highly successful in some cases—for example Andhra Pradesh (box 7.6)—but the record is mixed in others—the hill areas of Uttar Pradesh for example.<sup>69</sup> Obstacles include conflicts over forest resources, dispersed population structures, and the history of forestry ownership patterns and use. There may also be powerful interests at the national level against devolving authority to a broader range of forest users. And at the local level, forest users or communities may be unorganized and may lack the capacity, interest, and incentives to manage large forest areas. Social inequalities may reinforce the influence of politically powerful and better-off groups in the community over forests and forest benefits.<sup>70</sup>

7.44 A variety of approaches have been used to evade such obstacles. Providing appropriate incentives to sustain stakeholder participation is a fundamental factor in success. These have included providing secure tenure and rights to forest users, sharing benefits and management responsibilities, and using socially acceptable technologies.<sup>71</sup> A Bank-financed forestry project in Nepal allowed user communities to take over forest management. Forest users received certificates ensuring long-term rights to forest benefits following approval of forest management plans.<sup>72</sup> In Kenya, the community-based wildlife extension project in the Amboseli National Park came to life only after the introduction of policies aimed at securing constructive cooperation and dialogue with local communities through revenue sharing.<sup>73</sup> Community participation is higher when appropriate technologies allow for an adequate return from activities. Thus survival rates of trees have been low in fuelwood plantations that use closely spaced planting that provide no returns because of their poor market value and so elicit low levels of community responsibility. By contrast, when there is an annual flow of income from nontimber (agricultural intercrops, fodder or thatch grass, commercially valuable seed or leaves), community participation is high.<sup>74</sup>

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<sup>68</sup> Wallenius 1997.

<sup>69</sup> Prakash 1997.

<sup>70</sup> Banarjee et al. 1997.

<sup>71</sup> Banarjee et al. 1997.

<sup>72</sup> World Bank 1989.

<sup>73</sup> Lembuya 1992.

<sup>74</sup> Barnarjee et al. 1997.

7.45 Effective mechanisms for conflict resolution may also be important, especially in areas where resource users' livelihood objectives compete with other objectives such as biodiversity protection or sustainable forestry. In some cases, boundaries and land uses may need to be changed through negotiations between governments, village representatives, and stakeholders. Contracts between government, villages, and fuelwood collectors in Burkina Faso and Madagascar under Bank-financed forestry projects specify which subgroups manage options in watershed and protected areas. In other cases (Czech Republic, Ecuador, Slovak Republic, Ukraine), sites outside protected areas are re-zoned to accommodate multiple land uses.<sup>75</sup> Group consultations and village meetings, negotiations with community leaders, and dispute resolution processes have all been used effectively to reach consensus and reduce disputes over boundaries and land use.

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**Box 7.6 Rejuvenating India's decimated forests through joint action: Lessons from Andhra Pradesh**

The state government of Andhra Pradesh has introduced on a massive scale a new approach to protecting forest resources known as joint forest management. Under this approach, local people living on the fringes of forests are forming Vana Samrakashna Samithi (VSS)—village organizations established to protect forests—joining forces with the state forestry department to work in partnership to rejuvenate Andhra Pradesh's degraded forests. They share the responsibilities and benefits of forest restoration, protection, and management.

Under the program, the forestry department is responsible for organizing and providing technical and administrative support to the VSS. Villages and socially homogenous groups are carefully selected. Persons from all households are eligible, but those from the most deprived groups—scheduled castes and tribes—are automatically eligible for membership. The VSS protects the forest from encroachment, grazing, theft, and fire and improves the forest according to an approved joint forest management plan. As compensation, the VSS is entitled to all of the forest's produce (nontimber as well as 100 percent of the income from the harvest of timber and bamboo) provided that they set aside half of this income for the future development. Thus the policy ensures the long term sustainability of the forest.

The program got off to a slow start because villagers were hesitant to assume responsibility for forest management. Forest department staff also had their reservations about the suitability of joint forest management for the conditions in Andhra Pradesh. But today over 5,000 VSS organizations are rejuvenating more than 1.2 million hectares of degraded forests in the state. By the year 2,000 the forestry department hopes to foster an additional 7,000 VSS members or organizations to help manage 1.7 million hectares of forest.

The initial results of this joint approach are impressive. The degraded forests have sprung back to life, timber smuggling has almost been stopped, and cattle grazing is under control. There is no further encroachment by agriculture on lands vested with the VSS. Village labor is gainfully employed and outmigration has declined. Women participate in all VSS affairs and receive the same pay as men. Soil conservation has resulted in higher water tables in many areas, leading to improvements in agricultural production. Local flora and fauna have flourished.

Source: Venkataraman and Falconer 1999.

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7.46 Joint forestry management programs need to attend to issues of exclusion, especially of women and other disadvantaged groups. Since membership in village management groups is not automatic, some of the poorest groups, especially women who depend more heavily on such communal assets, may have less access and be pushed deeper into poverty. Several programs in India allow only one member per household, which effectively excludes women. But even when women are not excluded, their

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<sup>75</sup> Banarjee et al. 1997.

numbers and influence in such groups are low.<sup>76</sup> In several villages in India, women were barred by all-male groups from any form of collection in protected lands.<sup>77</sup> Greater inclusion of women may require social marketing of the importance of women's participation in such schemes, to break through societal norms that keep women from playing an equal role with men.

7.47 *Group credit/insurance schemes and private and state credit.* Purely state-led efforts to provide financial services to the poor have generally not been very successful. Most have involved extensive state intervention in financial markets through directed credit—from state-owned and private banks—and through interest rate subsidies. It is widely documented, especially for rural finance, that such programs have had very limited reach, especially among the poor, and their costs and default rates have been extremely high.<sup>78</sup> Government-sponsored rural credit programs in a wide range of countries, from Peru to Malawi to Indonesia, have collapsed under the weight of their losses.<sup>79</sup> Formal private sector provision has also had limited reach to the poor because of the high costs of loan provision relative to benefits. Informal private arrangements, such as rotating credit associations, provide some short-term assistance, but do not sufficiently diversify risk or serve larger-scale projects, and long-term indebtedness to money lenders tends to entrench rather than relieve poverty.<sup>80</sup>

7.48 Group-based credit and insurance programs that have sprung up all over the developing world over the last two decades, offer greater promise of success in extending financial services to the poor. This approach addresses some of the reasons that financial markets have traditionally failed the poor: it reduces problems of adverse selection and moral hazard<sup>81</sup> as well as the likelihood that members will take up excessively risky projects; generally does away with the requirement for traditional forms of collateral (which most poor people lack); and accommodates even very small loans. There is considerable evidence of improved outcomes in reaching groups that traditionally have had limited access to financial services and of high repayment rates and sustainability under group credit programs.<sup>82</sup> In Bangladesh for example, these programs serve close to 5 million borrowers, the majority of whom are women.<sup>83</sup> Major new programs report loan repayment rates in almost all cases above 95 percent.<sup>84</sup>

7.49 Closer analysis of group-based programs finds that these programs have shortcomings as well. Success is not universal, the poorest and most vulnerable groups may still be excluded, selection biases may overstate the benefits from program participation and financial sustainability remains a concern. One study of micro-finance credit schemes finds that they are more successful in reaching the moderately poor than

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<sup>76</sup> Agarwal 1997.

<sup>77</sup> Agarwal 1997.

<sup>78</sup> for example Adams, Graham, and von Pischke 1984.

<sup>79</sup> Yaron et al. 1998.

<sup>80</sup> Woolcock 1999.

<sup>81</sup> Stiglitz 1990; Varian 1990; Ghatak 1999.

<sup>82</sup> Hossain 1988; Patten et al. 1991; Remiyi 1991; Hulme and Mosley 1996; Khandker 1998.

<sup>83</sup> Murdoch 1999a.

<sup>84</sup> Murdoch 1999a.

the extreme poor and those who are unable to bear the risk involved in self-employment.<sup>85</sup> Such individuals may exclude themselves from such programs or may be excluded by other group members because they are too poor.<sup>86</sup> A study of the Grameen Bank found that not controlling for selection biases in favor of borrowers that are likely to succeed anyway, can lead to overestimation of the effect of participation on profits by as much as 100 percent.<sup>87</sup> A large number of first-time borrowers were already above the poverty-eligibility criteria set by the Grameen Bank when they joined the program. In Northeast Thailand, group lending was found to have little positive impact once self-selection and endogenous program placement were accounted for.<sup>88</sup> But selection bias and non random program placement can also underestimate program benefits in instances where poor households and areas are effectively targeted.

7.50 Evidence is also emerging that subsidy dependence is significant in some cases. A recent survey found that even programs with a commitment to achieving financial sustainability cover only about 70 percent of their full costs.<sup>89</sup> A study of 13 programs found positive subsidy dependence indices for all but one program.<sup>90</sup> In some cases, interest rates would have had to more than double for the institutions to meet their real resource costs out of current income.<sup>91</sup> Estimates for 1989-96 suggest that Grameen Bank—a pioneer in group lending and one of the most visible success stories—would have had to increase nominal rates on its general loan product from 20 percent to more than 50 percent in order to operate without any subsidies.<sup>92</sup>

7.51 These findings raise the issue of costs and benefits of credit subsidies, of whether public subsidies to group credit are more effective than other social investments as instruments of poverty reduction and what level of subsidy is socially desirable or optimal. The limited evidence on cost-benefit ratios of group finance programs shows differences across programs and within programs across different groups of borrowers. For example, the cost-benefit ratio for improvements in household consumption as a result of Grameen Bank loans has been estimated at 0.91 for women and 1.48 for men (society pays 0.91 or 1.48 for every 1 unit of consumption generated by the loan).<sup>93</sup> For another program, the Bangladesh Rural Advancement Program (BRAC), the ratios are 3.53 and 2.59.<sup>94</sup>

7.52 Group credit schemes may need to think of innovative ways to lower costs while maintaining their outreach to the poor. But it is also clear that considerable

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<sup>85</sup> Sebstad and Cohen 1999.

<sup>86</sup> Hashemi and Schuler 1977; Hulme and Mosley 1996.

<sup>87</sup> McKernan 1996.

<sup>88</sup> Coleman 1999.

<sup>89</sup> Microbanking Bulletin 1998 as cited in Morduch 1999a.

<sup>90</sup> The subsidy dependence index, developed by Yaron in 1992, measures the extent to which the lending interest rate would have to be raised to cover all operating costs in the absence of subsidies.

<sup>91</sup> Murdoch 1999a.

<sup>92</sup> Overall, the break-even rate is 32 percent (the average on-lending rate is lower than 20 percent since about a quarter of the portfolio is comprised of housing loans offered at 8 percent interest per year. Murdoch 1999a.

<sup>93</sup> Khandker 1998.

<sup>94</sup> Khandker 1998.

empirical work needs to inform discussions on the issue of public subsidies to this approach.

### *Local-level monitoring and accountability*

7.53 National-level supply side actions have to be translated into implementation at the local level. The countless cases of well-intentioned pro-poor interventions that have failed to deliver desired outcomes on the ground have taught us that the connection is not straightforward. Evaluations of Bank-funded projects suggest that extremely weak capacity, especially at the local level, and overly complex design are usually key factors in poor implementation outcomes.

7.54 But even when capacity is adequate, government efficacy may still be low, especially where public workers lack social and political incentives to do their work well. Chapter 3 shows that voice for the poor and accountability of state institutions also matter. Evaluations of a wide range of projects financed by the World Bank also show that setting and regularly monitoring clearly defined project targets is important in tracking outcomes and promoting more effective implementation.<sup>95</sup> Moreover, since communities possess informational advantages over outsiders, the monitoring function is probably best handled by local stakeholders. Thus local monitoring and accountability can be an important factor in motivating government workers to deliver high quality services to benefit the poor. But what is the appropriate mechanism for local monitoring? How can these mechanisms be protected from capture by special interests in the community? How can the poor be helped to effectively assess and monitor quality of service? The ongoing impact evaluation of Village Level Participation<sup>96</sup> will provide useful insights into achieving effective local and village level participation in poverty interventions. Examples from primary health care, education, and infrastructure projects discussed below, highlight approaches in local monitoring and accountability that seem to be improving outcomes for pro-poor interventions. The basic message is that community based mechanisms can help, but they are not a panacea.

7.55 *Primary health care.* Evidence on the impact of national-level public health spending on health outcomes is not very strong. A review of national studies notes that the share of public health expenditures in GDP is not a significant determinant of child mortality outcomes.<sup>97</sup> Another study estimates that a doubling of public spending as a share of GDP would improve mortality by 13 percent at most—a very low elasticity indeed.<sup>98</sup> These agnostic results carry through even to local-level expenditures and facilities. Of course simply correlating the presence of a primary health care facility and health outcomes in a locality, which is what many studies do can understate or overstate the impact of health care facilities. Such correlations ignore “placement effects,”—the deliberate placement of facilities in localities with poor health outcomes more political clout (perhaps because they are better-off). Overall, however, the evidence on the health effect of clinics in an area is decidedly mixed.

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<sup>95</sup> World Bank 1992.

<sup>96</sup> This is being implemented by the World Bank in about 6,000 villages in 11 African countries.

<sup>97</sup> Musgrove 1996.

<sup>98</sup> Filmer and Pritchett 1997.

7.56 There is ample evidence, both anecdotal and documented, of poor service from public health service workers. A client survey of women at rural health centers in Mutasa district, Tanzania, is revealing about the bad treatment that nurses gave to women who came to give birth.<sup>99</sup> People often do not go to local public health clinics because of the low quality of service. As chapter 4 shows, public workers also divert drugs and other resources for private use, further compromising the quality of health care. A study in Uganda showed that health units staff use on average of 70 percent of the drugs and supplies for personal gain.<sup>100</sup>

7.57 But there are success stories as well, and lessons we can learn from them. A common finding is the importance of local social and political factors that can hold government interventions accountable. In Kerala, India, this has been demonstrated for government services in general, and in some instances, local protests forced health workers to do their work properly.<sup>101 102</sup> Evidence from Ceara State in northeast Brazil highlights such factors as respect for workers by members of the community, for the dramatic reduction in infant mortality (box 7.7).<sup>103</sup> Monitoring by health workers, family, and community greatly increase the likelihood that tuberculosis patients will complete their treatment regimen. Widespread use of this strategy in China has been credited with success in curing about 700,000 infected patients.<sup>104</sup> Patient progress is tracked at the local level by the village doctors who treat them. Workers can document their successes and receive incentives based on their results. The information flows upwards for coherent regular reporting on the TB situation and quality of service delivery—but it is at the local level that it is most critical.

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**Box 7.7 Health and government transformed in northeast Brazil**

After only a few years of operation, the new preventive health program of Ceara—one of Brazil's largest states—had contributed to a reduction in infant deaths from 102 per 1,000 to 65 per 1,000. Vaccination coverage for measles and polio tripled from 25 percent to 90 percent of the population. By 1993 health agents were visiting 850,000 families—65 percent of the population—in their homes every month.

A review of the program shows three key factors to its success. First, in an era of contempt for government, the state succeeded in creating an aura of “mission” around the program and remarkable respect for the workers in the communities where they worked. The government used a merit-based hiring process for health agents and incessant advertising about the program and its achievements. To be chosen for the program was like being publicly awarded. Newly hired workers began their jobs strongly influenced by the prestige accorded by the selection process. Advertising also placed the program's workers in the limelight, bringing widespread recognition. Second, workers often took on tasks voluntarily that fell outside of their job description, which formed trust between workers and citizens.

Third, through advertising and the socialization of job candidates, the state raised the community's hopes about what to expect from its government. This turned the community, and particularly dozens of rejected applicants, into informed public monitors of the program. Through constant messages to citizens, the state indirectly incited them to demand that the mayor commit resources to the program and implement it fairly in return for their votes. The state's actions changed the dynamics of patronage at the local level.

Source: Tendler and Freedheim 1994.

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<sup>99</sup> Mtemeli 1994.

<sup>100</sup> Asiiimwe et al. 1997.

<sup>101</sup> Heller 1996.

<sup>102</sup> Caldwell 1986.

<sup>103</sup> Tendler and Freedheim 1994.

<sup>104</sup> WHO 1998.

7.58 *Community management in education.* As in health care, spending more on education at the national levels is one thing; achievement on the ground is quite another. Anecdotal accounts abound of teachers in both rural and urban areas who fail to turn up to teach, or who are ineffective when they do because there are no textbooks or other complementary inputs. There are also accounts of primary school graduates who can barely read or write their names. These stories are consistent with the empirical finding that public spending on education is also only weakly related to educational outcomes.<sup>105</sup>

7.59 There are good theoretical arguments to explain why local management and accountability can be important in transforming public resources into good educational outcomes. Individual school administrators and parents are likely to be more aware of and respond better to the needs of local schools which could differ widely across different communities. Greater parent involvement in children's education may inspire children to attend school and put pressure on providers to deliver better services.<sup>106</sup> Communities that assist in school management may also be more willing to assist in financing schooling.<sup>107</sup>

7.60 In several developing countries, parents and communities are becoming increasingly involved in managing their children's schools. In Sri Lanka, legislation in 1993 established school development boards<sup>108</sup> to promote community participation in school management. In Bangladesh, school management committees have been reactivated under the Social Mobilization Campaign which involves communities in education and El Salvador started involving communities in rural school management in 1995.<sup>109</sup> In several communities, parent groups are being given responsibility for hiring and firing teachers and for supplying and maintaining equipment, under contract from education ministries.

7.61 The empirical evidence confirms that community management of education can lead to efficiency gains. Preliminary results for the Philippines shows that primary schools which rely more heavily on local sources are more efficient-i.e. have lower cost, holding constant for enrollment and quality.<sup>110</sup> Parent-teacher associations have been so successful in Mauritius that government funds are being used to stimulate this partnership further.<sup>111</sup> And El Salvador's EDUCO<sup>112</sup> program has been remarkably successful in expanding educational opportunities for the poor in rural areas, without adversely affecting student achievement and has also diminished student absences due to teacher-absences, with potential longer-term benefits for achievements.<sup>113</sup> In some

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<sup>105</sup> Filmer and Pritchett 1999.

<sup>106</sup> Jimenez 1998.

<sup>107</sup> World Bank 1995.

<sup>108</sup> With representatives from school staff, parents, past students and well-wishers and chaired by the principal.

<sup>109</sup> World Bank 1995.

<sup>110</sup> Jimenez and Paqueo 1996.

<sup>111</sup> World Bank 1995.

<sup>112</sup> Educacion con Paricipacion de la Comunidad.

<sup>113</sup> Jimenez et al. 1998.

villages in Zambezia province, Mozambique, parents' management committees, have led to genuine and beneficial partnerships between communities and schools.<sup>114</sup>

7.62 But effective community management in education may be hard to achieve. Finding enough qualified people at the local level to help manage schools can be a problem. Botswana has had trouble attracting enough good people to school boards. Extensive training may also be needed for newly elected parent trustees.<sup>115</sup> Alongside successes in Zambezia, Mozambique there are other villages in the same province where parent's committees barely function. Many villagers are afraid to criticize school staff openly and committees have been co-opted by corrupt officials.<sup>116</sup> There is also some evidence that greater community involvement may not have a great impact on achievement in communities where adults are barely literate.<sup>117</sup> El Salvador's EDUCO program for example, despite its success in expanding access to education, has not delivered higher achievement scores than traditional schools in the poor communities that were the highest priorities for rural expansion. This may reflect in part, the absence of direct incentives to teachers, teachers, parents and parent teacher associations to raise standardized scores in mathematics and languages. In the Philippines, local secondary (*barangay*) schools had lower achievement than national schools.<sup>118</sup>

7.63 Community management can be an important tool in improving the efficiency of public education resources through greater local level accountability, but the principle of working with parents must be fully accepted by school staff and community leaders, Governments and communities must be willing to invest in providing the resources and incentives needed for success. As we discuss later, there is also significant scope for public private partnerships to help translate public spending into good educational outcomes.

7.64 *Local management of infrastructure.* Local infrastructure investments are often financed, planned, and managed by central government, with inadequate involvement of local government agencies and end users. This centralized approach results in the wrong facilities being provided in the wrong places using the wrong the technology. Central agencies may not be familiar enough with local concerns to make appropriate provision for local conditions. For example, road design by transport ministries in Africa and Latin America is often more sensitive to technical considerations than to service needs. As a result, rural roads are overdesigned, and this means fewer roads and more isolated communities.<sup>119</sup> Experience suggests that decentralizing responsibility for infrastructure to subnational levels of government and actively involving local beneficiaries can improve infrastructure provision. For example, per capita water production costs for a group of developing countries are four times as high in centralized as in decentralized systems and are lowest when decentralization is

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<sup>114</sup> Oxfam 1999.

<sup>115</sup> World Bank 1995.

<sup>116</sup> Oxfam 1999.

<sup>117</sup> Jimenez et al. 1998.

<sup>118</sup> Lockheed and Zhao 1993. This could also reflect the fact that local secondary schools get virtually no national funding. Jimenez and Paqueo 1996.

<sup>119</sup> Malmberg Calvo 1998.

combined with centralized coordination.<sup>120</sup> Similarly, full decentralization of maintenance responsibilities for rural roads produced the highest efficiency gains as quality roads were provided at lower unit costs.<sup>121</sup> Nevertheless many countries continue to manage rural roads from their capital cities to the detriment of service quality and costs (box 7.8). But, decentralization of infrastructure management is not a panacea. Infrastructure services for the poor are highly heterogeneous and, as we have seen, can be provided through different institutional arrangements.<sup>122</sup>

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**Box 7.8 Management of infrastructure—centralized or local?**

Institutional arrangements influence outcomes. In the case of road maintenance management in Guatemala and Zambia centralized versus decentralized arrangements influence efficiency and capacity building of local institutions. In Guatemala road maintenance contracts are managed from the capital city. Maintenance is financed by a road fund whose board is dominated by public sector officials and includes civil works contractors. All contracts are let in the capital, and local agencies, including the deconcentrated agency of the Ministry of Transport, are not informed of the specifications of the contracts. This prevents them from intervening when contractors are doing substandard work. The contractors and consultant supervisors know who their paymasters are and largely ignore the concerns of local agencies and constituents. The lack of transparency and dialogue between the central and local agencies result in inadequate attention to local priorities and expertise and ineffective use of financial resources.

The opposite situation prevails in Zambia where the road fund board has majority private sector membership and is dominated by road-user interest groups, including representatives of rural membership based organizations (farmers unions and rural transporters). Funds for rural road maintenance are transferred to district governments upon the approval of the annual program submitted by the districts. A consultant assists districts to make well-informed decisions, prepare the program, bid the contracts, and certify the works. In this way local governments and their constituents are well aware of technical trade-offs, and the type of works that will be undertaken in their jurisdiction. This knowledge empowers them and makes them effective clients and watchdogs, ensuring that the agreed upon quality of work is delivered by contractors, and that they receive good value for money.

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7.65 Enhanced public accountability, through local choice of leaders, local control of finances, and other forms of local responsibility is a critical factor in the success of local management of infrastructure. Another is involving beneficiaries directly in infrastructure management, for example, by offering them choices among investments and technologies and asking them to contribute to these investments in cash or in-kind. Both of these factors are integral parts of many demand-driven community infrastructure funds. These social or rural infrastructure funds provide, among other things, mechanisms for channeling money to communities for construction of schools, clinics, roads, water supply and so on. Experience from these funds<sup>123</sup> confirms that entrusting contract and financial management to community members builds local organizational capacity, and community involvement in investment choices and technical standards results in a better fit between what the community wants (and is willing to pay for) and what it gets. Potential drawbacks of the funds are the risks of financing ad hoc

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<sup>120</sup> World Bank 1994.

<sup>121</sup> Humplick and Moini-Araghi 1999b.

<sup>122</sup> Kähkönen and Pouliquen 1999.

<sup>123</sup> Since 1987, when the World Bank approved its first social fund project, the Bank has supported about 60 social fund projects with commitments of over US \$1.5 billion as of the end of fiscal 1998 and an average project size of about US \$25million. Sub-Saharan Africa and Latin America account for most of the Bank's social fund projects. Bank lending for social fund projects continues to expand at a rapid rate and is expected to roughly double over the next five years.

investments, and the difficulty of ensuring the operation and maintenance of the investments. Also, while a 1998 review of beneficiary assessments found that social fund projects by and large reflected pressing needs of the community, subprojects risk capture by local elites and intervening agents.<sup>124</sup> For example, in Peru, although three quarters of beneficiaries said projects were selected based on the majority decision of the community, in 30 percent of the cases the project was suggested by a promoter or contractor. In Malawi, 60 percent of beneficiaries interviewed said the prime facilitators were local politicians, and in one beneficiary assessment in Zambia, all but two projects in the sample of sixty were conceived by prominent persons, often with a negative impact. Newer social funds give more attention to issues of coordination, ownership, and sustainability, as exemplified in the 1996 Ethiopia Social Rehabilitation Fund.<sup>125</sup>

### *The demand side*

7.66 Supply-side interventions by the public sector—building schools and health clinics, extending water supply schemes—will help to build up the assets of the poor only if supply matches up with demand by the poor. The demand for the services offered by the public sector depends on price, quality, and the alternatives available to the poor. The alternative to treatment at a public clinic is treatment in the private sector or no treatment. An alternative to schooling is child labor, and whether that option is exercised depends on the cost and quality of schooling. In rural areas an improved source of drinking water will often be used only if it is located closer to the home than the traditional source. However, because the poor already pay a lot for access to water, in cash or in time, they are often willing to pay significant amounts for better access.

7.67 *Cost and demand for education.* Several factors, economic and cultural, interact to determine the private demand for education. The cost (both direct and indirect) of education is important but the relationship between cost and factors such as the distance children have to travel to attend school, the quality of education, and the returns to education also matter for the education decisions of poor households. Social norms related to the education of women, for example, also matter. Given the significant positive externalities from education, private demand tends to be below what society would wish it to be, on grounds of poverty reduction and broader growth and development. Closing this gap through interventions to reduce education costs, improve quality and influence social norms on the education of girls needs to complement supply side interventions to help the poor build quality education assets.

7.68 For several poor households in developing countries, the cost of education is such a large share of incomes that it can be expected to significantly limit their demand. Even where primary education is officially free, households have to pay a wide range of fees to send children to school. In Vietnam, households in the lowest income quintile have to spend 22 percent of their non-food income to send a child to school, almost twice the percentage of those in the richest quintile.<sup>126</sup> In Nepal households in the poorest quintile spend over 40 percent of average income to send one child to primary

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<sup>124</sup> Owen and Van Domelen 1998.

<sup>125</sup> World Bank 1997d.

<sup>126</sup> Oxfam 1999.

school, twice the rate in the wealthiest quintile.<sup>127</sup> In rural areas of Northern India, the annual costs of elementary education for one child represents about 30-40 days' wages for a rural laborer.<sup>128</sup> Indirect costs to households in terms of forgone incomes from child labor<sup>129</sup> or in terms of household chores no longer performed by children in school can also be significant. The importance of cost barriers to education for the poor is evident in the responses from several surveys (box 7.9). A survey conducted by the Academy for Educational Development for example showed that four of the five main constraints<sup>130</sup> to female secondary enrollment in Bangladesh were related to costs.<sup>131</sup> Given the significant weight of education costs in their incomes, poorer households may also be more sensitive to increasing costs of education.

7.69 There is also evidence that reducing costs can stimulate enrollment. In Uganda, enrollments rose from 2.9 million to 5.7 million in the 1997/98 school year when the requirement that parents pay half the cost of school fees was lifted and PTAs levies were banned.<sup>132</sup> Thus lowering private costs—both direct and indirect—of acquiring education is one way to bridge the gap between private demand and society's preferences. But this policy lever may not be the most important or critical for all poor households in all countries. In some cases, improving educational quality or changing social perceptions about the education of girls may be more urgent.

7.70 Developing countries are using a wide range of instruments to reduce the costs and increase education demand of poor households. Some provide stipends to offset school expenses or to compensate families for the opportunity cost of the time children spend in school. In Bangladesh as part of the government's initiatives to raise female literacy from 16 to 25 percent, stipends covering 30-54 percent of direct school expenses are paid for girls in grades 6-10. Some countries also provide funds directly to schools, municipalities, or provinces earmarked for increasing access for minority, indigenous, or poor children. In Mexico, a government program targets bursaries to the poorest municipalities and thus to indigenous children indirectly. Public resources are also used to fund vouchers that students may use in their school of choice. Poor children in Colombia receive vouchers for secondary school. In the Dominican Republic, subsidies are paid to private schools that provide basic education for children from low-income families. And some countries use community grants tied to attendance at a community-created institution for example, grants for girls to attend community schools in Balochistan.<sup>133</sup>

7.71 These instruments are also used in programs to promote human capital investments for poor children and mothers. In Brazil, Honduras, and Mexico, cash or in kind transfers conditional on children's school attendance and participation by mothers

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<sup>127</sup> Oxfam 1999.

<sup>128</sup> Oxfam 1999.

<sup>129</sup> In some cases, though, child labor may be a consequence rather than a cause of children being out of school (Oxfam 1999).

<sup>130</sup> Tuition, books, transportation, boys and uniforms.

<sup>131</sup> Liang 1996.

<sup>132</sup> Oxfam 1999.

<sup>133</sup> Patrinos and Ariasingam 1997.

and children in maternal and child care programs are used to compensate parents for the opportunity cost to the household of the time children spend in school. These programs meet immediate consumption needs while also creating incentives to invest in human capital and reduce the intergenerational transmission of poverty. Some communities—the Escuela Nueva program in Colombia and the Community Schools program in Egypt for example—are also adjusting the school term and day to fit the seasonal labor patterns of local community, hence reducing forgone household incomes from children attending school.<sup>134</sup>

7.72 The effectiveness of different instruments in increasing demand and access to education for poor groups depends on the social, cultural, and economic context. For poor girls and minorities, awareness-raising social marketing measures may also be needed.<sup>135</sup> In very poor communities, measures that do not compensate for the opportunity cost of children's time in school may not be very effective. Such compensation has been particularly effective in enabling girls from poor rural families to attend school.<sup>136</sup> The female secondary school stipend program in Bangladesh was so popular in the first year that the government expanded it nationwide to all six rural subdivisions. In the federal District of Brasilia, stipends for every low income family with a child aged between 9-14 have had dramatic success in reducing drop-out rates.<sup>137</sup> In the Balochistan fellowships program, girls' enrollments have risen an average of 33 percentage points following the creation of private girls' schools in poor urban neighborhoods of Quetta. As shown in chapter 5, Mexico's PROGRESA has been successful in raising enrollment. In India, employment reservation policies have enhanced the educational aspirations for their children of parents from disadvantaged castes.<sup>138</sup>

7.73 But program success alone is not sufficient in selecting amongst instruments. Governments may need to use a range of instruments to address different aspects of education demand, but the mix of instruments will need to be informed by the more difficult determination of which instrument is the most cost effective for each objective. The evidence suggests that the Balochistan urban fellowship program was cost effective when compared to alternative policy options.<sup>139</sup> For each instrument there should be efforts made to evaluate and rank cost-effectiveness. Arriving at this determination may take years of careful monitoring of costs and outcomes on the ground.

7.74 *Cost and demand for health care.* As with education, health care may be expensive enough to significantly reduce demand by poor households (box 7.9). The estimated 1.2 million poor people living on under a dollar a day, can typically neither afford much health care nor borrow to pay for it.<sup>140</sup> In Cambodia for example, a single

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<sup>134</sup> Oxfam 1999.

<sup>135</sup> Patrinos and Ariasingam 1997.

<sup>136</sup> Patrinos and Ariasingam 1997.

<sup>137</sup> Oxfam 1999.

<sup>138</sup> PROBE 1999.

<sup>139</sup> Kim, Alderman and Orazem 1998.

<sup>140</sup> World Bank 1993a.

outpatient visit to a commune clinic or district health center takes up a third of a year's non-food spending for those in the poorest quintile.<sup>141</sup>

7.75 The evidence also shows that demand for health care by poor households is more sensitive to price changes than is demand by non-poor households.<sup>142</sup> In some studies, user fees tend to prevent the poor from using health services more than it does the non-poor.<sup>143</sup> In rural Peru and Côte D'Ivoire, user fees at the level of half and full marginal cost recovery would effectively price residents of the poorer communities out of the medical care market. In contrast, these same level of fees do not seem to substantially reduce medical care utilization by households in wealthier villages.<sup>144</sup> In Ghana, a major increase in user fees between 1983 and 1985 was associated with a sharp drop in use of government health facilities. In urban areas, attendance gradually rose back to pre-1985 levels over a two-year period, but in poorer rural areas, the drop was sustained over a three-year period.<sup>145</sup> In the Philippines, demand by the poor for children's health care has also been shown to be more sensitive to price changes than demand by the rich.<sup>146</sup> Moreover, since the burden of disease is also greater for the poor than for the non-poor, access to free or low-cost care for the poor can produce large increases in their demand for health care.<sup>147</sup>

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#### **Box 7.9 Locked out by health and education fees**

Whether to seek medical treatment or education for their children can present agonizing choices for poor people. The "Voices of the Poor" studies highlight the special dread that illness causes and how deeply impoverishing health costs often are.

In case studies for "Voices" illness stands out as the most frequent trigger for a downward slide deeper into poverty. Nha, a 26 year-old father in Vietnam, reported that he had to sell four buffaloes, a horse, and two pigs to pay for his daughter's operation. The operation failed to cure her, and the need for further treatment transformed his family from one of the most prosperous in the community to one of the poorest.

In Pakistan, many households reported that they had borrowed large sums of money, sold assets, or removed a child from school at least once to cover medical costs. "If you don't have money today, your disease will take you to your grave," stated an old woman from Ghana.

Corruption in health care was widely reported in the participatory studies. Poor women from Madaripur, Bangladesh, said that the duty doctor in the government health care center ignored them, giving preferential treatment to patients wearing good clothes and to those who could afford the side payments referred to as "visit fees." A study participant from Vares, Bosnia and Herzegovina, exclaimed that "Before everyone could get health care, but now everyone just prays to God that they don't get sick because everywhere they just ask for money."

Difficulties with paying school fees and other costs associated with sending children to school were also widely reported in participatory studies. A mother from Millbank, Jamaica explains that she cannot send her six-year old daughter to school because she could not afford the uniform, and other costs. Another daughter had to drop out of school because the family could not afford the \$500 for school fees. "My son will be ready for school in September but I can't see how I'll be able to send all three of them to school." Amadi, a 14 year-old boy from Nigeria, said that he has been in and out of school because his parents could

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<sup>141</sup> World Bank 1999d.

<sup>142</sup> Gertler and Van der Gaag 1990.

<sup>143</sup> Booth et al. 1995.

<sup>144</sup> Gertler and van der Gaag 1990.

<sup>145</sup> Waddington and Enyimayew 1989.

<sup>146</sup> Ching 1995.

<sup>147</sup> World Bank 1993a.

not pay his school fees regularly and promptly. He has missed his promotion exams several times and remains in primary school while his age mates have gone on to secondary school.

In some countries, children are pulled out of school because fees are due when families can least afford them. In Ethiopia, payments are due at the start of the school year in September, a time of two important festivals and harvesting. A poor woman from Ho Chi Minh City, Vietnam, said that “her son just plays all day instead of going to school” because she is unable to raise the fees that must be paid at the beginning of the school year.

In formerly communist countries the cost of schooling is a serious concern for poor families because education had been free in the past. People in these countries also reported problems of teachers eliciting bribes and special “tutoring fees” in exchange for passing grades and diplomas.

Source: Narayan, Chambers, Shah and Petesch (forthcoming); and Narayan with Patel, Schafft, Rademacher and Koch-Schulte 2000.

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7.76 Several developing countries face the challenge of designing and implementing pricing policies and mechanisms in the health sector that effectively taps the willingness and ability to pay of wealthier groups in order to subsidize demand by poorer groups. Evidence suggests that improving quality in parallel with user fees can be instrumental. In Ghana, the positive effects of simultaneously improving the availability of drugs, services and infrastructure by 100 percent on the use of modern health facilities are such that fees would have to increase by over 1,200 percent to offset them.<sup>148</sup> In Cebu, Philippines, drug availability, waiting time and the availability of doctors to perform deliveries were significant determinants of choice of obstetric care by women.<sup>149</sup> In Adamaoua province, Cameroon, quality improvements offset the negative effects of fees and even increased demand by the poorest.<sup>150</sup> Quality improvements also appear to reduce the negative effects of long distances from health facilities on demand. In Ghana, consumer choice has been shown to be unaffected when the mean distance to the nearest public health provider is doubled if services are simultaneously improved 100 percent.<sup>151</sup>

7.77 Governments thus need to focus on improving quality with institution of user fees. Evidence shows that allowing facilities to retain a portion of fees collected empowers managers and staff of health centers and hospitals to make qualitative improvements in their facilities that will be readily perceived by clients.<sup>152</sup> However, in many countries in Africa for example, clinics are usually required to turn user fees over to the government.<sup>153</sup>

7.78 Health subsidies must also be targeted more effectively to the poor. But few countries have successfully implemented sliding fee structures.<sup>154</sup> In most African countries, this and other types of exemptions tend to benefit wealthier groups such as civil servants.<sup>155</sup> In the Volta Region in Ghana, exemptions have not worked well. In 1995, less than 1 percent of patients were exempted and 71 percent of all exemptions

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<sup>148</sup> Lavy and Germain 1994.

<sup>149</sup> Hotchkiss 1993.

<sup>150</sup> Bodart and Litvack 1993.

<sup>151</sup> Alderman and Lavy 1996.

<sup>152</sup> Shaw and Ainsworth 1996.

<sup>153</sup> Alderman and Lavy 1996.

<sup>154</sup> Nolan and Turbut 1995.

<sup>155</sup> Gilson 1998.

granted went to health service staff. With an estimated 15-to 30 percent of the population living in poverty, this could very well be preventing access for the poor.<sup>156</sup> Evidence also suggests that pure user fees are more likely to worsen inequities in access to health care than fees that allow for risk sharing,<sup>157</sup> but fees for services such as drugs are less likely to discourage demand than general consultation fees.

7.79 Governments need to be clear about user-fee exemptions policies and the kinds of mechanisms that can best achieve targeting goals. Simplicity, transparency and adequate information (for staff and patients alike) about policies can help. There should also be clear community consensus on who qualifies as “poor.”<sup>158</sup> In the absence of effective exemptions for the poor and appreciable quality improvements, health care costs are likely to limit demand by the poor.

7.80 *Cost and demand for water.* Lack of financing is often cited as the reason why infrastructure services are unsustainable. In most cases, however, the underlying cause is the lack of demand-responsiveness in service provision.<sup>159</sup> Numerous studies have shown that users, including very poor households, are willing to pay full operation and maintenance costs—and the full investment costs in many cases—if water services meet their needs. Many poor people already spend a very high proportion of their income on water services from informal vendors (table 7.3). The cost of these services is very high in the absence of a minimum level of infrastructure and in the small quantities the poor buy.<sup>160</sup> A gallon of water purchased from a vendor in Onitsha, Nigeria, costs 12 times as much as a gallon of water at the borehole.<sup>161</sup>

**Table 7.3 Expenditure on water in Nigeria by income/level**

Percentage of income		
Income level (naira per month)	Dry season	Rainy season
Up to 499	18	8
500 to 799	4	2
800 to 1,999	5	2
2,000 and over	3	.5

Source: Whittington et al.

7.81 Full cost recovery in water provision is rare, however. Subsidies and inadequate user fees are the rule in almost all developing countries, to the detriment of the poor and the sector as a whole. The objective of utility managers becomes one of maximizing subsidies rather than reducing costs or expanding service, and consumers have no incentive to conserve underpriced water.<sup>162</sup> The poor suffer most.

<sup>156</sup> Nyanoator and Kutzin 1999.

<sup>157</sup> Diop et al. 1995.

<sup>158</sup> Shaw and Ainsworth 1996.

<sup>159</sup> Kahkonen and Pouliquen 1999.

<sup>160</sup> Pouliquen 1999.

<sup>161</sup> Whittington, Lauria, and Mu. 1989.

<sup>162</sup> This is demonstrated by the very high consumption in many countries – which is completely at odds with their wealth. Consumers in many central Asian countries have higher water consumption than their counterparts in Europe and the USA (IWSA International Statistics for Water Supply).

7.82 A study of 1,875 households in rural communities in six countries served by UNDP-World Bank Water and Sanitation Program projects (Benin, Bolivia, Honduras, Indonesia, Pakistan, and Uganda) suggests that water system sustainability is significantly increased by an approach that focuses on delivering the type of service users want and are willing to pay for.<sup>163</sup> This confirms the global experience that sustainability is enhanced when key investment decisions on system design and planning are driven by consumer demand rather than the service provider. This means that policies should focus on developing transparent rules and information disclosure requirements on the costs and responsibilities of various options and allow users to select the level of service, technology, and location of facilities that best fit their needs (box 7.10).

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**Box 7.10 Cost recovery and demand-responsive approach in the Philippines**

An urban water and sanitation project in the Philippines intended to cover 35 towns and benefit 6 million people, presents users with a range of options and assists them in deciding on the levels of service they want and are able to pay for. Consumers are willing to pay higher prices for water than water utilities have charged in the past provided that the services are reliable and meet their requirements for quality and access. Communities decide to participate in the project (borrowing money from the Bank's loan) through a process of extensive consultation with end users culminating in a final decision by the mayor and town council. System charges will be used to repay the loan and ongoing operations and maintenance expenses. The involvement of end-users together with local government decisionmaking on loan participation ensures the ownership needed to enhance prospects for long-term sustainability.

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*Synergies across sectors*

7.83 We have already discussed how the benefits from an asset can depend crucially on access to other assets. A multisectoral approach that considers, for every intervention, the tradeoffs in access to other assets and what other assets are needed to make the intervention work—or work better, is thus needed for helping the poor build assets. Specific complementary measures may need to be put in place ahead of or together with an intervention to address negative externalities (roads and environmental assets) or the joint supply of assets (slum upgrading) may be needed to exploit synergies. Each intervention must fit within a broader framework that recognizes that several assets and their interaction matter for the poor.

7.84 *Reducing negative externalities: roads and deforestation.* Building new roads in forested areas can result in corridors of deforestation several kilometers wide. This finding holds robustly across a range of sites with diverse economic, social, and ecological characteristics, including Belize, Brazil, Cameroon, Mexico, and Zaire.<sup>164</sup> By dramatically reducing the cost of transporting agricultural goods and, increasing the returns to agriculture, new roads encourage the conversion of forest land to agriculture. The conversion radius is especially large where towns are nearby and soils are good. There is also evidence that road installation favors commercial agriculture over subsistence agriculture. In Belize, road and market proximity had a strong impact on forest conversion to commercial agriculture in areas where soils were suitable for

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<sup>163</sup> Sara and Katz 1998.

<sup>164</sup> Chomitz and Gray 1995, 1996; Pfaff 1996; Alves 1999; Mertens and Lambin 1997; Deininger and Minten 1995, 1996.

commercial exploitation.<sup>165</sup> Semisubsistence agriculture was far less sensitive to road proximity. Similarly, roads have a wider radius of impact in Cameroon, where markets are active and export crops common, than in Zaire, where markets have been moribund.

7.85 Depending on why and where roads are built, they can generate lose-lose, win-lose, or win-win outcomes with regard to development and deforestation. Roads sited in remote forested areas with poor agronomic suitability may be lose-lose propositions. They may expose indigenous people to disruptive forces and open an area to the poaching of large mammals, while generating little in the way of sustainable agricultural development.<sup>166</sup> The poor are the most likely to endure the deprivation and health risks associated with opening new lands on the frontier, as they tend to be relatively disadvantaged in terms of physical capital and have little opportunity to do well elsewhere.<sup>167</sup>

7.86 Roads that open up forested areas that are not too remote and have reasonable agricultural prospects can present difficult win-lose tradeoffs. Many forest areas can support sustained agriculture. Roads into these areas will benefit local populations and may provide employment opportunities for migrants. These economic and social benefits, however, can come at the expense of deforestation. The environmental impact of forest loss will depend greatly on what kind of agriculture replaces the forest. Agroforestry can provide many of the environmental values of the original forest, though it generally supports less biodiversity.<sup>168</sup> Finally there is a possibility of win-win outcomes from road intensification in noncritical forest areas near markets.<sup>169</sup>

7.87 Forest roads constitute a small portion of the road network in most countries, and network intensification rather than penetration is the rule rather than the exception. Also, most developing countries are involved more with road reconstruction and rehabilitation than with new construction. Nonetheless, where there are environmental tradeoffs, they have to be addressed up-front and road construction will need to be accompanied by complementary interventions if it is to fight poverty, e.g., land titling and credit programs. Technical mitigation measures, as in Nepal, can address many negative local impacts (box 7.11). The global impact of deforestation is best addressed through international financial transfers.

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<sup>165</sup> Chomitz and Gray 1995, 1996.

<sup>166</sup> Environmental risks, however, do not only depend on roads and where substantial populations exist near forests reserves, these may present substantial threats even when access remains poor. This is the case in remote areas of the Nepal mountains, which are already substantially deforested by population pressures, and tiger rich forests in central India.

<sup>167</sup> The opportunity cost of their labor is therefore low. And since the poor have great difficulty obtaining credit, if land is accessible and sufficiently cheap, their best strategy is to "mine" the soil through an unsustainable extraction of nutrients and then to move their farm to a nutrient-rich, pest-free environment rather than purchase fertilizers and pesticides (Schneider 1995).

<sup>168</sup> Tomich *et al.* 1998.

<sup>169</sup> Schneider 1996.

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**Box 7.11 Mitigating tradeoffs in road construction and environmental outcomes in Nepal**

The cumulative impact of road construction due to steep topography, often unstable geology, high rainfall intensities, and intensive landuse, leads to the destabilization of terrain and production land. To mitigate such outcomes Nepal has pursued environmental assessments and bioengineering with local varieties to control slope erosion and geotechnical solutions to resolve difficult terrain issues. Extensive geotechnical engineering measures and certain forms of bioengineering complement the more traditional civil engineering structures and practices and help to resolve most of the difficulties faced on the road lines. With the promulgation of environmental law, all development projects, since 1993, are subject to environmental screening in accordance with His Majesty's Government of Nepal's Environmental Impact Assessment Guidelines. These guidelines address the need for implementing environmental mitigation measures in the surveying, design, construction, maintenance, and operation of road projects, and include environmental mitigation measures, socioeconomic considerations, public participation, and coordination with other institutions. The department of roads is now implementing bioengineering works on a routine basis throughout the strategic road network. A complete set of interim standard specifications for bioengineering works were produced in July 1996 by the Geo-Environment Unit of the department of roads.

Source: His Majesty's Government of Nepal 1997.

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7.88 *Exploiting positive synergies: slum upgrading.* Slum upgrading interventions demonstrate the significant payoffs to addressing the basic needs of the poorest groups through an integrated approach. Slum upgrading addresses physical areas where the poor (and some non-poor, in income terms) live in degrading and unsafe conditions because of a host of market failures (land, infrastructure, housing markets) that have led to shortages in developed land and government failures to provide local public goods. The slum residents are then disadvantaged by lack of access to basic infrastructure and physical exclusion from service networks, lack of assets (lacking tenure, they cannot improve a housing asset or invest as a local community in shared communal assets), political exclusion from formal channels of representation, and the stigma associated with living in a slum. Slum upgrading operations include interventions across a broad range of assets: physical (from water and sanitation to footpaths, streets, storm drains and flood prevention, and public telephones), human (health posts, nurseries), and financial (micro credit and microenterprise). Most programs also stress improved security of tenure and social support programs to address problems of security, violence, substance abuse and others.

7.89 The evidence shows that this approach makes a large, immediate, and highly visible difference to the quality of life of the urban poor—eradicating sources of communicable disease, which impose a particular hardship on slum inhabitants, to name just one.<sup>170</sup> Investments in local public goods can catalyze private investments by residents, unleashing their vast productive energy and leveraging private capital. Experience from Bank-funded operations shows that for every \$1 in public upgrading investments households have invested \$7 privately in housing improvements, particularly where tenure has been made secure. Serviced plots acquire a value premium that can be 10 times higher than unserviced plots.

7.90 In Ahmedabad, India, a slum networking project uses an integrated approach to addressing the needs of the urban poor through improvements in the physical

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<sup>170</sup> World Bank 1999e.

environment and community development activities. Community development activities include nonformal education programs for pre-primary age children, community health education and other interventions in diseases prevalent and maternal and child health, and support for vocational training, job access for the unemployed, and access to formal sector finance for small and medium-scale enterprises. The project is financed through a partnership of residents, NGOs, industry sponsors, and the municipal corporation. The project has prompted great interest by other communities.<sup>171</sup> Box 7.12 presents some of the successes of slum upgrading in the *favelas* of Rio de Janeiro.

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**Box 7.12 From Favelados to citizens**

Less than 10 years ago, Rio de Janeiro, one of the most beautiful cities in the world, had one of the planet's most intractable urban problems. A full quarter of its population of 5.5 million inhabitants, lived in squatter communities, or *favelas*, occupying lands to which they had no title or right in communities formed haphazardly along narrow streets or on the slopes of unstable hills.

For years, small, occasional public works projects that brought water, electricity, or sewage systems to scattered communities did little to improve living conditions in the *favelas*. A central concept behind the slum upgrading is that even the poorest families make a personal and material investment in the houses they build.

Today, over 400,000 people have left the *favelas* without moving or losing their homes. Through a program known as Favela Barrio, the government of Rio and the Inter-American Development Bank have created a synergy between urban and social policy. By enabling residents to legalize tenure and pay for good access to water and sanitation, paved and illuminated streets and footpaths, and phone and mail service, Rio is integrating the *favelas* into the rest of the city and transforming them into neighborhoods, or *barrios*.

Muddy and frequently impassable alleys have been replaced with paved roads, sewage systems have been built, and garbage that has piled up over the years has been removed. All houses are connected to safe water supply, electricity, and in some cases phone service. Uninhabited areas have been reforested. A childcare center for children up to 4 years has been built. Residents vote on the placement and design of each component of the program. When disagreements arise, creative solutions are sought. Security has been improved, and fear of being assaulted has been reduced.

So far, about 105 of the city's 300 *favelas* have benefited. By the end of 2004, Rio expects to have improved living conditions for 70 to 75 percent of its slum population and to have tackled even the biggest *favelas* of the city.

Source: The Cities Alliance 1999.

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7.91 The disappointing outcomes under integrated area development projects which were popular in the 1970s and 1980s, has led to some disenchantment with integrated approaches to poverty interventions. But the lessons from this experience are well known and can be avoided. Nonetheless, some caution is still merited because working cross-sectorally poses major challenges, particularly for government institutions. Government institutions are often organized along sectoral lines and incentive structures may protect sectoral turf rather than reward cross-sectoral endeavors. Furthermore while multi-sectoral strategies are essential, multi-sectoral projects are often not effective in addressing the underlying policy and institutional problems in for example the water and sanitation and transport sector. Pursuing every single asset synergy may not be feasible or even desirable given financial and capacity constraints. Identifying the most critical synergies, with participation of the poor, and planning interventions accordingly is important.

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<sup>171</sup> Varma 1999.

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