
CONCLUSIONS AND RECOMMENDATIONS

Study Conclusions



During rainy season, access is very limited.

Improved rural roads guarantee access throughout the year, so that those villagers who are able can now invest time and resources in an outside endeavor. They know that communications and links with the outside world are reasonably assured, and they can make use of a wider variety of transport services, which are more frequent, take less time to get to nearby centers, and are often cheaper than before road rehabilitation. Rural roads are, therefore, an important enabling condition for livelihood development for people in the project sites.¹⁹

Time and Energy Savings

The poor and very poor assign high priority to basic access. It reduces their vulnerability, and they consider it a matter of dignity to be able to communicate with the outside world and engage in social activities outside the village. This is confirmed by evidence from PRAs in the project and control sites. In the absence of improved opportunities to use roads, the poor rely on the primary network of paths, tracks, culverts, and basic access routes in the immediate village vicinity. There is a walking world, and improvements to this primary village network of tracks, etc. that reduce the burden of basic household and productive tasks are likely to have a significant poverty reduction impact by reducing their time and energy impoverishment. In this context, the increased availability of intermediate modes of transport with larger carrying capacity to collect water, firewood, etc. is likely to have a greater initial impact on their well-being. They need to first accumulate surpluses even periodically to be able to seize new opportunities that motorized transportation may bring.



Improvements to the village tracks and paths can save time spent on household chores.

Poverty Reduction

Therefore, the study confirms that better rural roads are a necessary but not sufficient condition for graduating from poverty. There is little evi-

dence that roads have impacted directly in terms of reducing income poverty on those groups in each study community who were identified explicitly as being very poor. The ability of the poor and very poor to make significant economic use of a road depends on their asset base and the entitlements to resources and opportunities that they can command, as well as on the passage of time. In a few instances, the poor who have invested savings in a small business or used their skills have graduated from poverty, using the benefits from the road. However, the poor and very poor benefit primarily through the indirect impacts of road improvements, of better access to state services and improved provision of services to the village, and of opportunities in alternative livelihood income streams where the preconditions for their development are right. The poor can also benefit broadly from improvements to the rural economy through increased opportunities for agricultural wage labor; but, again, these impacts are contingent on favorable preconditions being in place. The preconditions shaping the potential for development of an area can be classified broadly into two groups.

The first group consists of the external conditions around which projects must be designed. These are the macro factors, which, in the context of an investment project design, must be accepted as given. The spatial position appears to have a significant bearing on development. Remoteness is an aspect of poverty, and where communities are far from existing marketing centers, the dynamism of development is lessened considerably. Impacts appear to be of a higher order in locations closer to major centers, or where the density of population and settlement is higher, than in areas that are much more remote. Climatic conditions and the natural environment are also important; they must be able to support any potential increase in agri-

¹⁹ Those along the roads are also subject to road safety issues, though this was not prominent on case study roads.

cultural production. The macroeconomic context and the prevailing terms of trade for agricultural produce are also critical to all of those area economies that are intimately linked to primary commodity production. Again, the scope for intervention of a rural road investment here is limited, except through livelihood diversification.

The second group covers structural poverty problems. These are issues of resource allocation and distribution, and prevailing social structure. The socioeconomic and cultural landscape is a critical prism through which communities are impacted by rural road investments. But again, the capacity of such investments to shape or influence this landscape is limited. The nature and distribution of land ownership constitute a fundamental determinant, but this is a political issue that ADB can hope to influence only in broad terms over a period of time and at the macro level through policy dialogue, and not over the course of a project cycle. Similarly, the social and cultural structure of communities is determined by broad historical processes and is unlikely to change immediately through rural road investments. What the investment can do is provide a vehicle for change through complementary activities that broaden opportunities for the poor and, at the same time, challenge some of the ingrained structural perceptions that otherwise restrict opportunities. An example of this is the direct employment of single, female household heads in rural road rehabilitation work. In most countries, they are one of the poorest groups, and employment on a road can improve income, broaden choice, and enhance self-esteem and confidence. Although rural road projects cannot directly challenge the structure of land ownership, they can, given the right complementary activities, broaden livelihood opportunities outside agriculture for the landless poor. This, in turn, can help the poor escape from chronic debt cycles, and so escape from poverty.

The case studies selected in each country were either sector road investments or integrated projects. The impact of improved transport services that enhanced competition and reduced transport costs for the entire community (especially those using regular transport) appeared to be greater in the transport sector projects. Under the integrated projects, it was anticipated that the poverty reduction impact would be greater, as roads were linked to other investments that could broaden livelihood opportunities for the poor. In practice, however, this was not always the case.²⁰ In Sorsogon, the parallel project activities were not effectively integrated: investments in roads were made in one area, and in tree nurseries and irrigation works in

others. There is some evidence that the integrated projects in Indonesia and Sri Lanka were more successful than that in the Philippines in improving livelihoods for the poor, as the roads covered in those projects were basic gravel roads, of which the poor can make more use in accessing local services and destinations. However, the projects were not sufficiently focused on the livelihoods of the poor. The Bengkulu project had a minimum landholding requirement for farmers to be able to take part, and they had to have sufficient land and reserves of family labor in order to qualify.²¹ In Kurunegala, the irrigation tank rehabilitation work favored landholding farmers directly, with benefits assumed to trickle down to the poor in the form of increased wage-labor opportunities.

Project Design

Poverty reduction was not an explicit and primary objective in the design of most of these projects, a point frequently made during fieldwork by local executing agency staff. They requested that project design in the future be much more explicit about the objective of poverty reduction and that appropriate measures be included as the means of achieving this. More pro-poor investments in the future require genuinely integrated project components that offer the poor, too, some opportunity to diversify and broaden livelihoods, and thus strengthen the accumulation of capital with which to make use of improved rural roads. For this, linkages with complementary activities and services, which support the broadening of livelihood opportunities for the poor, are needed. Simply improving a road is not enough; the poor also require support in being able to make use of it.

²⁰ Some anticipated impacts were diminished by shocks such as droughts and adverse world market prices.

²¹ These criteria were introduced by the executing agencies to ensure the viability of newly established plantations and to ensure high-aggregate rubber yields.



Road investments provide complementary activities that broaden opportunities for the poor.

Recommendations for Strengthening Poverty Reduction Impacts

MEASURES DIRECTLY RELATED TO TRANSPORT

Broadening Access

All of the case study locations demonstrated, to a greater or lesser degree, a high level of road density.²² Given the density of existing rural road networks in the study locations, perhaps there is a need now also to look at how to make better use of existing roads and infrastructure. This could mean designing interventions that concentrate on removing the access and mobility constraints on the poor, specifically making investments in tracks, paths, culverts, and crossings, as well as improving transport modalities and their carrying capacity, especially intermediate (nonmotorized) means of transport that benefit the poor.

Periodic Maintenance

Long-term social and economic benefits from roads are often threatened by neglect of periodic maintenance. Rural roads, particularly gravel roads, quickly deteriorate if not regularly maintained,

and benefits can be quickly lost if the roads are periodically impassable or the overall condition is bad. The poor are generally risk averse and will not engage in a new activity if they know that the road on which it depends will be temporarily unusable or if its poorer condition in the following year will mean that costs and time will increase. Devolving responsibility for road maintenance to local communities, particularly for basic rural roads, is a means of ensuring simultaneously that the

poor can receive benefits through direct employment and that local communities are stakeholders in the road serving their area. This can be a powerful means of ensuring long-term sustainability, if supported by local ownership and the technical expertise of local authorities. The income generated from employment on the road can also provide start-up capital for the poor to make use of the road in some future enterprise or endeavor.

Regulatory Environment and Affordable Transport

The role of governments is critical in two ways. First, governments have a crucial role to play in fa-

cilitating a suitable regulatory environment for the development of competition in the transport sector. If the preconditions for the development of competition are not present, governments may need to provide transport services as a public service obligation. However, if the provision of roads has been coupled with incentives for livelihood enhancement, the poor may be able to diversify income through selling craftwork or cash crops, or providing labor in nearby markets. The state transport services could then be removed as income from these activities gives rise to sustainable private transport services.

Criteria for Road Location and Type

Often, the decisions about what roads are selected for a project are not transparent. Participation is a key element in the selection of roads to be rehabilitated or reconstructed under a rural road program, not only to decide which roads need improvement but also to understand the type of road and ancillary investments that are needed.²³ If poverty reduction is to be a serious consideration, then criteria for road selection should include a poverty component. This can be a weighting by poverty population within the zone of influence of a road, in combination with other conventional criteria such as vehicular traffic and population density. The roads serving poverty areas could be upgraded only to a standard that is needed to connect them to the main road network.

Labor-Based Technology

Rural roads are an enabling condition for poverty reduction, and a very necessary one. Direct benefits of roads alone do not come very readily to the poor. One very important way in which they do come, however, is through direct employment of the poor in labor-based road construction and maintenance. Experience from Asia and Africa shows that, given a sufficiently long period of employment on the road, the poor can accumulate capital to invest in alternative livelihood opportunities and thus move away from poverty.²⁴



Long-term benefits from roads are threatened by neglect of periodic maintenance.

²² This was confirmed by the difficulties in identifying suitable control areas (Appendix 1).

²³ However, the study acknowledges that detailed design of a particular road needs to be carried out by engineers with appropriate competencies in the most cost-effective manner.

²⁴ An example of the effective and sustainable use of labor-based methods for poverty reduction is the Nepal Rural Access Program design, where poverty groups are targeted for employment (including poor female household heads, and women employed traditionally as long-distance porters whose livelihood will suffer from road construction) during agricultural off-peak times without compromising other livelihood activities. Workers should contribute to parallel credit and savings schemes that allow them to move to livelihood alternatives once road construction is finished.

MEASURES NOT DIRECTLY RELATED TO TRANSPORT

Integrated Projects

Experience from the case studies shows that rural roads alone are not enough in tackling poverty. The poor face fundamental deficiencies in their assets to take advantage of better opportunities that a rural road may bring and, therefore, need support to capitalize. This suggests that integrated projects are needed to tackle poverty effectively. The case studies covered both sector road investments and integrated investments where the road was one part of a larger program of support. In practice, the integrated projects were either not truly integrated, or were focused largely on benefiting better-off farmer groups. The poor require genuinely integrated programs of support right through the cycles of production, transportation, and sale.²⁵ Diversification into alternative livelihood opportunities will also cushion them against the impact of adverse movements in commodity prices.

Promoting Understanding

Another key role that governments have to play is fostering an understanding of the priority of poverty reduction, and disseminating this understanding to lower levels of government and to implementing agencies. Where a commitment to explicit poverty reduction objectives is missing at local implementation levels, the poverty impact can be missed completely. Governments' institutional understanding of, and commitment to, poverty reduction must be equal to that of external funding agencies, and shared objectives should be agreed upon toward the common end of poverty reduction and addressing related structural barriers.

Participatory Design and Planning

An integrated program needs a proper period of mobilization and preparation in order to be effective and sustainable. Mechanisms should be institutionalized to ensure that the poor themselves are involved in many aspects of the investment design (but not engineering design), implementation, and operation and maintenance. Including the poor in identifying livelihood opportunities would ensure that programs are relevant to their needs and skills, that they are the principal beneficiaries, and that the benefits are sustainable.

Poverty Assessment

If poverty reduction is an objective, a proper analysis at the project design stage is necessary of who the poor are and on what factors their livelihood strategies depend. This requires a stakeholder



Stakeholders need to be involved early on if poverty reduction is an explicit objective of road investment.

analysis and poverty benchmarking to establish a baseline against which project impacts can be measured in the future. Experience from the study shows that significant social benefits accrue to the poor from rural road investments, particularly in accessing outside services. These are inherently unquantifiable, but can be assessed qualitatively if effective, structured baseline research is done at inception.

Project Performance Monitoring

Regular monitoring and evaluation of livelihood impacts against this baseline should be carried out through a clearly defined project performance monitoring system. This will ensure that, in the future, impacts on the poor are captured, rather than assumed.²⁶ Project performance monitoring and evaluation systems were part of the ADB design of most of the case studies covered by this evaluation, but were exclusively the responsibility of the executing agencies, which were often expected to meet the costs from counterpart funding. In a situation of scarcity of local resources, such systems were often abandoned, or allowed to lapse for so long that information that was eventually collected was largely useless. Monitoring indicators were also usually progress indicators, measuring fund disbursement and physical works, and were not

²⁵ Experience from the project site in Bengkulu, Indonesia shows that the formation of farmers' groups and cooperatives is not in itself enough. The groups must go beyond simply producing a particular commodity or crop and should be able to undertake credit and marketing and also to access affordable transportation.

²⁶ Often, impacts on the villagers and particularly the poor and very poor take a long time to materialize and need to be monitored periodically to evaluate progress.

complemented by impact indicators for identifying exactly what the outcome of works had been, particularly on the poor.

Partners

How best to implement rural roads with integrated livelihood support components is a difficult question. Funding agencies may require borrowers to take on partners with a proven track record in as-

pects of the program design, such as bilateral agencies, or local or international nongovernment organizations that have good experience in mobilizing and working closely with communities. It should be recognized that complex, integrated programs may require a number of partners, and external funding agencies can play a key role in helping executing agencies manage and coordinate this process effectively.