Chapter 1

INTRODUCTION

Background

Concern about poverty and economic inequity has long driven the international development agenda. However, this concern has taken different forms over time. In the aftermath of World War II, the concern was for the economic consequences of the war and for ensuring rapid recovery in the defeated countries, to avoid a repetition of the social phenomena that gave rise to the war in Europe and Asia. The success of postwar reconstruction efforts in Europe and Japan led the international community to turn its attention to the poorer countries of the "Third World," where poverty was more deeply rooted. In the 1960s, development investments often focused on large infrastructure projects designed to promote the economic growth of poor countries, such as ports, bridges, and power plants. In the 1970s, however, it was recognized that such investments did not necessarily bring benefits to the majority of people—mostly poor—in those countries. In particular, they promoted the development of urban areas and industries, while failing to address the needs of the generally poor rural population. Consequently, attempts to address poverty in the 1970s and early 1980s became more focused on rural development.

Subsequent studies (Chambers 1983; Cernea 1985) showed that rural development programs were difficult to implement successfully and often failed to reach the poorer parts of the rural population. Following the publication of the first United Nations Development Programme (UNDP) *Human Development Report* in 1990, the focus of poverty alleviation efforts shifted to the development of human capital by improving education and health care services, complemented by structural and institutional change to alleviate the indirect burdens of debt and inflation on the poor. More recently, these concerns have extended to the physical, social, and cultural environment of the poor. Meanwhile, resource constraints have encouraged the withdrawal of the State from economic activities and greater involvement of the private sector in delivering services needed for development. These concerns have led some members of the development assistance community to question the value of public infrastructure investments in promoting sustainable development and poverty reduction.

Since the 1970s and the identification of poverty with the rural population of the developing world, theory and research on the impact of transport investments on poverty have focused on their role in promoting increased agricultural production and improving the incomes of farm households. In energy, they have focused on the "energy transition" from traditional to modern fuels. A considerable research effort has been devoted to understanding these changes. Only recently, however, have researchers begun to look specifically at the nature of poverty in both urban and rural areas, to disaggregate beneficiary populations into poor and nonpoor groups, and to study the intrahousehold distribution of benefits (e.g., gender-specific effects).

Throughout this evolution, transport and energy infrastructure has remained a priority concern for the clients of development finance institutions, and a major conduit for the flow of funds from the developed to the developing world. Recent research on the perceptions of poverty by poor people around the world also shows that they experience lack of access to transport and energy infrastructure as a process of social exclusion (Box 1.1). Consequently, the international development assistance community has recognized the need to learn more about how different types of transport and energy infrastructure investments can help reduce poverty in developing countries.

In response to shared concerns about the limited knowledge base linking infrastructure investment to poverty reduction, the Asian Development Bank (ADB), in collaboration with the World Bank, Japan Bank for International Cooperation (JBIC), and United Kingdom's Department for International Development (DFID), undertook a regional technical assistance project (RETA 5947). The purpose of this RETA was to assess the impact of selected transport and energy infrastructure investments on poverty reduction, based on field research

Box 1.1. Perceptions of the Poor about Transport and Energy

Many poor communities... are isolated by distance, bad road conditions, lack of or broken bridges, and inadequate transport. In both rural and urban areas, these conditions make it difficult for people to get their goods to market and themselves to places of work, to handle health emergencies, to send children to schools, to obtain public services, and to keep in touch with events and influence decisions.

> *A community without roads does not have a way out.*
>
> —A poor man, Juncal, Ecuador

> *If we get the road we would get everything else, community center, employment, post office, water, telephones.*
>
> —A young woman, Little Bay, Jamaica

Energy scarcity emerges as especially acute for poor people in the urban areas of the cold-weather climates of Eastern Europe and Central Asia… As in so many domains, so with energy scarcity: the poor and vulnerable suffer, and finally the children.

> *Finding firewood for cooking is the problem. Very soon we may have to go to the town to buy firewood.*
>
> —A woman, Viyalagoda, Sri Lanka

> *Gas heating is a great joy for us.*
>
> —A poor elderly man, Takhtakupyr, Uzbekistan

Source: Narayan et al. 2000. pp. 75–80.

in three Asian countries. Its objectives were to enhance current understanding of how transport and energy infrastructure and services contribute to poverty reduction, to fill knowledge gaps, and to identify lessons learned and good practices to be taken into account in future development assistance operations. The RETA was also intended to help formulate the infrastructure components of national or regional poverty reduction strategies in ADB's developing member countries (DMCs). Finally, it aimed to help build capacity in DMC research institutions to design and conduct policy-relevant research on poverty and infrastructure.

Methodology

The scope of work for the study was set forth in an ADB technical assistance paper, approved in October 2000 (ADB 2000a). A Steering Committee for the study was set up, involving representatives of the four development partner institutions, as well as key decision makers and interested staff from ADB. In Stage 1, an international consultant team consisting of a poverty specialist, a transport specialist, and an energy specialist, supported by an ADB research assistant, and in consultation with staff of the four collaborating institutions, conducted a review of relevant literature and project experience, to identify knowledge gaps and prepare proposals for field research. In Stage 2, teams from domestic research institutions undertook field work and data analysis in three ADB DMCs. The three teams came together at the beginning and end of Stage 2 in technical workshops, held in the participating countries, to coordinate the study methodology and to share the field work findings across the three countries. In Stage 3, the results of the three country studies were compared to identify new knowledge gained and the policy and operational implications to be drawn from it, as well as priorities for future research.

Before starting the study, the consultant team identified some key issues.

- The impact of any physical investment on poverty is highly dependent on the policy context. Thus, the study needed to take into account variations in policy context as well as actual infrastructure investment. These variations include both macroeconomic and social policy, as well as sector policy issues.
- The impact of infrastructure investment on poverty is mediated by the provision of efficient, reliable services to the poor. Thus, the study should consider not only improvements in infrastructure but also in transport and/or energy services, as well as the targeting of such services to the poor.

- Improvements at the margin of an infrastructure network can have a positive impact on the poor only if the network itself functions well. Thus, if access to services by the poor has already been provided, improvements in the cost-effectiveness of service provision on the network as a whole may have a greater poverty impact than additional infrastructure investment.
- Transport and energy investments meet different but complementary needs for the poor. In some circumstances, a substitution effect may apply (e.g., information flow); at other times, synergy may occur (e.g., electricity for schools and clinics can enhance the effectiveness of services provided via improved road access). In still other ways, their effects may be entirely separate. Similarly, the contributions of transport and energy investments to poverty reduction are likely to be different in urban and rural areas.

Literature and Project Review

The study team identified research on the impact of transportation and energy infrastructure on poverty reduction through a search of bibliographic databases. It searched the Econ Lit database (in a CD-ROM from ADB's Library), containing reports and articles from various economic journals, for relevant studies. The World Bank website, mainly the infrastructure and poverty sections, also yielded substantive results. The staff of ADB's divisions responsible for transport and energy operations provided suggestions on additional studies that could be useful for the RETA. In addition, the study coordinator and sector specialists on the international study team identified relevant publications. DFID and JBIC representatives on the Steering Committee also made suggestions, as well as the RETA's peer reviewers and participants in review workshops. The results of the review reported in the RETA Interim Report (ADB 2001a) were updated after the field work was completed in 2003.

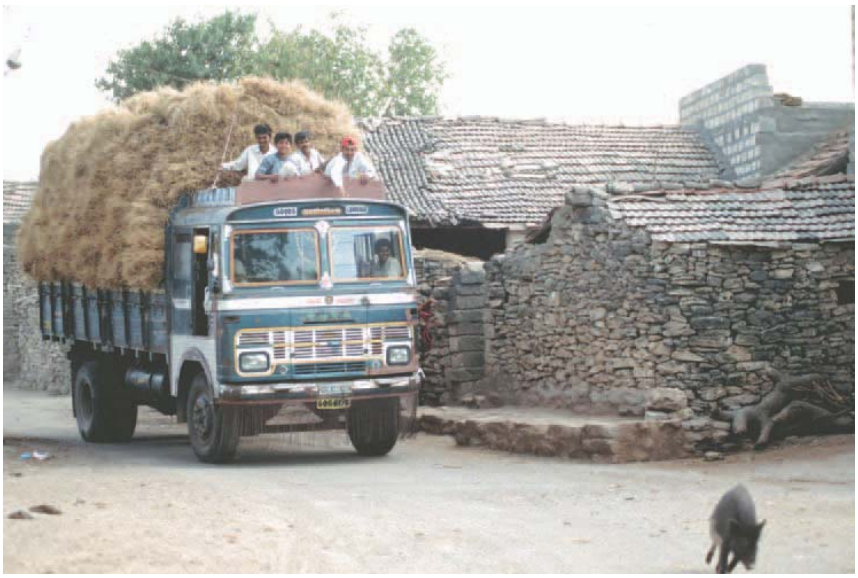
The study team also carried out a review of ADB transport and energy projects between 1993 and 2000 that indicated poverty as a primary or secondary objective, and of World Bank poverty-oriented transport and energy projects approved between 1994 and 2000. The objective of the review was to identify the technical approaches used and expected outcomes for poverty reduction, with particular attention to any plans for monitoring poverty impacts and any relevant evaluation results. The study team reviewed project summaries and appraisals for these projects, together with selected projects carried out by DFID and JBIC.

The findings of the literature review are summarized briefly in Chapter 2 and more fully in the Appendix. A complete list of the studies reviewed is given in the Bibliography. The findings of the project review are reported in Chapter 3. The literature and project review helped identify the research hypotheses and to evaluate the available evidence concerning the impacts of transport and energy infrastructure investments on poverty reduction in developing countries. This information formed the basis for a knowledge gap analysis and the formulation of proposals for the field research, described in Chapter 4.

Country Case Studies

During Stage 1, suitable countries and regions within countries, as well as qualified domestic research institutions in those countries, were identified, with the approval of the RETA Steering Committee. Proposed country team leaders participated in the review workshop on the RETA

A truck transports crops to market in Jamnagar, in India's Gujarat State.



Interim Report, held in November 2001. The research institutions were then invited to submit proposals in which they would identify the specific transport and energy investments to be studied and the research hypotheses they believed to be most appropriate for pursuing the policy dialogue in their countries. They were also asked to constitute national steering committees and to plan for national workshops in which the findings of their country studies could be discussed and disseminated. These proposals formed the basis for a Study Methodology Workshop held in Bangkok, Thailand, in January 2002.

The three country teams examined the full range of research hypotheses identified in Stage 1, regarding rural transport and energy improvements (generally, rural roads and rural electrification). They gave less attention to urban transport and energy investments, although the Thailand team did carry out urban case studies. Apart from rural road improvements, the teams variously looked at rail, port, and major road improvements. All three country studies used a combination of quantitative and qualitative methods, and performed secondary data analysis for the purpose of selecting sample communities and households, as well as for comparison to the results of field surveys. Each team collected data from community-level key informants as well as from selected sample households. Community discussions and group interviews also yielded data. The three teams shared preliminary results in a workshop held in Vadodara, Gujarat State, India, in July 2003. National seminars were also held in all three countries between April and October 2003.

Comparative Analysis and Conclusions

A RETA draft final report was reviewed in a workshop held at ADB in Manila in October 2003. Based on this review, the RETA Steering Committee concluded that additional analysis was needed to further explore the results of the country studies and to further develop the policy and operational implications of the research. This work was completed by April 2004 and is reflected in this final report. Chapters 1–4 summarize the current state of knowledge about transport and energy investments and their impacts on poverty. Chapters 5–7 describe the country contexts and case studies. Chapters 8–10 present the findings of the RETA, its policy and operational implications, and priorities for future research. Data sources are detailed in the Bibliography.

Transport and energy enable other activities to bring about poverty reduction. Policies and approaches to operations should seek to realize the full potential of this enabling influence.