

ISSUES OF LOCAL LEVEL MANAGEMENT

C. Malmberg Calvo, World Bank (1998)

Objectives of the paper

Abstract

Policymakers and transport professionals in governments and donor agencies have paid little attention to institutional arrangements for managing and financing local government roads and community roads and paths. The lack of a well-defined institutional framework for rural transport infrastructure seriously threatens the sustainability of ongoing and future efforts to fight rural poverty and break rural isolation. This paper presents a framework for better management of local government roads and community roads and paths.

Key issues

- The first step to reform is to develop a national rural transport policy and strategy that is consistent with the government's overall plans for rural development and provides the conceptual base for the reform effort—defining the role of governments, communities, private sector stakeholders, and donors. Stakeholder involvement in designing the strategy will engender workable solutions, keep policymakers committed, and ensure that the reform process is on course. An effective strategy must provide clear answers to the question of who should own local government roads and community roads and paths, and how capacity for managing local government roads and community roads and paths can be economically mobilized at the local level?
- It is unrealistic and inefficient to build full capacity for all management functions in each local government and community. The different levels of government, the community, and the private sector should allocate tasks according to each of their comparative advantage. For example, the preparation of plans, work programs, designs, bill of quantities, and contracts, as well as supervision, can be economically provided by the private sector. Local governments should develop their client role and ability to plan for and with their constituents.

Key topic areas

- Symptoms of the problems with managing rural transport
- The underlying cause of these problems
- A framework for reform
- Managing local government roads
- Managing community roads and paths

1. INTRODUCTION

In the past few decades attempts to improve rural transport in developing countries have not created a sustainable network of rural roads. Frequently, the wrong facilities were provided in the wrong places using the wrong technology. By focusing on the construction of roads rather than the improvement of access, problems were accentuated. This chapter looks at related symptoms and the principal underlying cause of this state of affairs.

2. CHALLENGES OF MANAGING RURAL TRANSPORT

2.1. Unclear Responsibilities

In most developing countries, responsibilities for rural transport are fragmented at the central government level, with multiple agencies involved in providing rural roads. In addition, many countries have repeatedly changed the organizational structures of central government agencies overseeing local government roads, shifting responsibility from one ministry to another, often producing little more than confusion. For example, in Ghana, until the Ministry of Roads and Highways was created in 1981, no fewer than five central sector ministries had responsibility for rural roads. In making changes, governments hoped to improve living conditions in rural areas by providing more and better roads. But the frequency of change, and the many sector ministries involved in rural road construction, resulted in a situation in which no one knew who was really in charge of rural roads.

Many countries lack a legal framework regulating community ownership of roads and paths. Efforts to create a “sense of community ownership” of roads, that is, a willingness to maintain roads, have often been erratic and typically have not included a clear definition of communities’ legal rights and responsibilities. While in some countries ownership of roads by non-government entities is illegal, rural communities have, often by default, been assigned responsibility for maintaining both designated and undesignated rural roads. The lack of a legal framework for private or community ownership of roads may result in all rural roads being designated as the responsibility of the local government, even when the local government does not have the capacity to assume this responsibility. In Tanzania the commitment of communities to maintain the access road they built themselves was destroyed when the government officially took over maintenance responsibilities but failed to meet its obligations.

Local communities have often been asked, ad hoc, to contribute to improving and maintaining roads constructed and improved through government, NGO, and donor programs. In principle, nothing is wrong with this. In fact, local acceptance of responsibility is encouraged. But community contributions should not be mistaken for commitment to maintenance or assumption of ownership responsibilities. Very rarely have communities been consulted on and agreed to their responsibilities and those of the rural road agency for maintenance. Experience in Malawi and elsewhere shows that communities are more forthcoming with in-kind contributions, including labor, for the construction of a bridge or a road than for maintenance. In Zambia donor programs paid communities (in cash and food) to improve roads and tracks, which

they were subsequently expected to maintain on a voluntary basis. But communities are unlikely to perform tasks for nothing if they were once paid to do so. Reliance on unpaid volunteer labor for regular maintenance of local government roads is not sustainable and leads to confused responsibilities.

2.2. Disintegration of the planning system

Even though local governments are often the legally constituted road authority for the designated rural roads in their area, many roads are planned at the central level without local government involvement. Central government agencies have repeatedly acted without consulting or coordinating with each other or local governments, even though local authorities are expected to maintain the roads. For example, in Nigeria two high-level agencies, the Agricultural Development Programs and the Federal Directorate of Food, Roads, and Rural Infrastructure, built rural roads, leaving maintenance to local governments. Several roads were constructed in the same local government jurisdiction by different agencies. Many roads did not correspond to local priorities, or maintenance responsibility was not transferred to a competent road agency. As a result, many of these roads do not have effective owners and receive no regular maintenance.

Planning is often inconsistent and uncoordinated. The lack of a comprehensive planning system for assessing overall client demands means, in practice, that many of the basic access needs of rural households go unaddressed. While rural transport infrastructure (RTI) facilitates the delivery of various services, individual ministries deal with the needs of their specific client subgroup and provide the roads their client requires. Thousands of kilometres of roads in rural Africa have been constructed by agricultural projects, food-for-work schemes, NGOs, timber companies, and cocoa and cotton boards without a consistent national policy and strategy framework and without consulting with the road agencies that are eventually supposed to maintain these roads. For example, a Zambian NGO built thousands of kilometres of roads during the first half of the 1990s as part of a food drought relief effort; now, no one is legally responsible for overseeing many of these roads, and they are rapidly deteriorating. In theory, rural households are a constituency aided under the rubric of infrastructure development. In practice, their needs are addressed only peripherally by the state and haphazardly by others.

2.3. Inadequate local capacity

There is a lack of incentives for road staff at the local level. Civil servant salaries—inadequate when compared with private sector salaries—have adversely affected the technical capacity of road agency staff, leading to high vacancy rates and poor motivation. Poor remuneration has inadvertently encouraged road agency staff to supplement their incomes through moonlighting, daylighting, and pilfering. This situation is at its worst at the local government level. Local government employees have fewer career prospects and opportunities for training than staff working for a strong central sector ministry. Furthermore, living conditions are often harsh. Many district works departments are, therefore, headed by under-qualified and indifferent staff, and have unfilled positions. But having a competent cadre of local road officials would make little sense if they command few resources.

Private sector involvement in rural roads is marginal. Many countries are in the process of moving from executing works in-house (force account) to using private contractors. Countries have considerable experience with using private, often foreign, contractors for large capital works on rural roads. The contracting process itself is usually handled by the responsible ministry in the capital city. Local governments, though, have little experience with formal contract management. They rarely use local consultants in planning and supervising rural transport infrastructure works, partly because of the small size of the contracts that local governments can offer—making it unattractive for experienced firms to mobilize in rural areas—and partly because of local governments' and communities' lack of experience in dealing with the private sector. Local governments' lack of contract management experience and the resultant lack of contracts act as powerful brakes to the involvement of both local consultants and small-scale contractors in the road sector.

In addition, centralized administration and poor communications between urban and rural areas have perpetuated an urban bias in allocating both human and financial resources. In some countries this dualism can be profound. Policymakers tend to respond first to what they see close at hand. They live in urban areas, thus they tend to first address the more visible urban problems. Urban constituencies are more vocal and may pose internal security problems. Central governments have inadvertently accelerated rural-to-urban migration by failing to better respond to the needs of rural areas and build up local capacity.

2.4. Inappropriate Design Standards and Methods

Rural transport policy and programs in many developing countries have focused on providing conventional highways for use by motorized vehicles. This is the case, in part, because engineers have been trained using curricula and educational materials influenced by the requirements of high-wage industrial countries. Many foreign technical assistants have also encouraged the use of design standards that are more suited to the levels of motorized traffic they are accustomed to in their home countries. Inappropriate methods have also contributed to inefficient resource use. The issues of standards and methods have already been treated extensively in previous publications and are covered in Stock and de Veen (1996). They will not be further discussed here.

2.5. Weak Local Government and Community Institutions

The common thread running through the symptoms described above is weak local government and community institutions. In many developing countries, governments have been highly centralized. The central government often has representatives not only at the central and regional levels but at the district, subdistrict, and village levels. Most ministries and parastatals (government enterprises) are vertically structured, with decision making and financial authority firmly vested at the centre.

Because central sector ministries control resources at the local government level, local governments are virtually absolved of accountability for rural infrastructure and other local services. Planning for roads has been carried out by central government agencies with minimal local involvement, effectively marginalizing local stakeholders and road users. Donor intervention has accentuated centralized provision of rural roads. Donors

have typically reacted to institutional weaknesses at the local level by channeling their support through central government sector ministries. As a result, they have bypassed local governments and unintentionally contributed to the weakening of local institutional capacity.

Strengthening local institutions through effective decentralization is the centerpiece of rural development. It implies building local capacity in both the public and private sectors. To do that, an enabling environment of sound policies, incentives, effective management structures, democratic control of local governments, and qualified, trained and motivated staff are needed. The primary issue is cross-sectoral—the need for a sound framework for rural development. The secondary issue is sectoral—in the case of RTI, the lack of coherent institutional and financial arrangements to make sustainable improvements. A dual approach that addresses both the primary and secondary issues is essential to promoting the development of services that meet the priority needs of the rural population.

3. A FRAMEWORK FOR REFORM

3.1. A Rural Transport Policy and Strategy

Policy and strategy have two important functions. First, they serve as a conceptual framework and set out the steps for implementing the reform agenda. Second, when developed in close consultation with key stakeholders, they can be powerful instruments for bringing order and consistency to the rural transport sub-sector. For rural transport policy and strategy to be effective reform instruments, they must provide realistic responses to the issues raised above. Production of long documents that only describe existing problems and state desired outcomes are not sufficient. What is needed is a detailed process through which stakeholders map out and customize the reform program, given the country context. (Refer to the course notes on rural transport strategy and policy formulation.)

3.2. Ownership and responsibility

Central government frequently delegates the responsibility for rural roads to local governments, but there is often a significant degree of confusion regarding ownership of individual roads and maintenance responsibilities at the local level. Many roads either have no legal caretakers or are untended by the local governments that are legally responsible. For example, within the administrative area of a local government there may lie new and relatively important roads constructed by NGOs and others that remain undesignated.

Thus a crucial step in the reform process is to end the confusion and clarify who owns each asset. Clarifying ownership is also a prerequisite to designing the management structure of local government roads and community roads and paths. A key feature of this structure is a private-public partnership. Such a partnership rests best on a legal instrument that can grant 'de jure' ownership of roads and paths to communities and interest groups, such as individual landowners, agricultural co-operatives, and NGOs.

3.3. Local Capacity

Ownership requires managerial and technical know-how. It is easy to understand why donors have frequently opted to work through central ministries and bypassed local institutions. Local governments are often little more than empty shells. But while central sector ministries may have technical capacity, they rarely possess any interest or stake in maintaining RTI over time. Governments and supporting donors must take a long-term view and actively strengthen local public and private institutions. Central governments and donors should be denied the excuse of “inadequate local capacity.” They should instead support the development of innovative arrangements to mobilize required capacity. For example, while building full-fledged capacity for all management functions in each local government and community would be costly (and unrealistic), many of the required management skills for rural roads can be more cost-effectively provided by the private sector.

Of course, transferring responsibilities to local governments and communities, and involving the private sector in rural road management must be gradual. Their networks are small, and the management contract for an individual local government may be too modest to attract the interest of competent consulting firms. But many small contracts for the provision of management services can be aggregated through joint packaging across adjacent local governments and communities.¹ Building effective managerial control at the local level requires training both the public and private sector, and developing economies of scale.

4. A FRAMEWORK FOR MANAGING LOCAL GOVERNMENT ROADS

With the ongoing decentralization efforts in most developing countries, local governments are increasingly being assigned responsibility for the rural roads within their administrative area. In other countries responsibility for rural roads remains with the ministry in charge of main roads. In still others legal responsibility may rest with local governments, but a central sector ministry manages the roads on their behalf. All of these road agencies must manage the network competently.

Many countries have scant records on the rural road network at both central and local levels. Regular inspections of the roads are not made, and information is lacking on designation, condition, and usage. Two initial steps are required to clarify responsibilities: first, an inventory and functional classification of the RTI network, and then the establishment of legal ownership.

4.1. Inventory and Functional Classification

Most tertiary roads are the responsibility of local governments and most access roads and paths are the responsibility of communities and other non-government entities. Local governments may, however, be responsible for some important access roads and paths, and communities may be responsible for some less important tertiary roads. For example, in a Tanzanian district the local council is the designated owner and

¹ Although unbundling large contracts is important for enabling small contractors to enter the market, providing sizable amounts of work may be important to motivate local consultants to establish themselves in rural areas.

highway authority for a footpath that links two districts. In this case the footpath ranks higher on the district's list of priorities than some roads.

The road inventory provides data on the functions, conditions, and usage of the RTI network. These data should be added to existing public records of roads and paths in order to provide a comprehensive record of the current RTI responsibilities and network characteristics. Subsequent annual inspections should determine if the classification and ownership designation of a particular road is adequate.

Inventories for local government roads are relatively standard. They include assessment of surface type and condition, drainage structures, and volume and composition of traffic, including bicycles, animal carts, tractors, motorcycles, and pedestrians. Inventories should be complemented by information on the location of important services found along the roads, such as hospitals, markets, and schools. More challenging is developing an inventory for the extensive network of community roads and paths. Such inventories must be simple, avoiding the costly collection of large amounts of information. South Africa, for example, used aerial photographs and satellite imaging to get an overview of the extent of the unclassified network. Other countries, such as Zambia, have relied on simpler inventories when evaluating access needs, using scoring sheets to identify the functions and physical characteristics of this network. A road inspector from the local government engineer's office or a local consultant with the assistance of community representatives may drive or walk along access roads and paths. Such efforts may be initiated on a pilot basis in one region or a few districts before being extended to the entire network.

4.2. Legal Ownership

Establishing ownership of individual roads and paths required designating roads and paths, that is, naming the owner or primary entity responsible. Subsequent annual inspections will determine if the set classification and ownership is adequate. The designation of a road must be revisited periodically because the function and usage of individual roads and paths may justify a change of owner. For example, some roads already designated to a government body may, because of few government resources, need to be adopted by communities and other private entities or abandoned if no one claims responsibility for them. New roads may need to be specifically designated as government responsibilities. The annual road management system can, through regular inspections, furnish the required data so that road ownership can be transferred in an orderly fashion to prevent roads from deteriorating.

Prompt adjustments in road ownership are particularly important in rural areas, where the function of a road may change when new facilities, such as markets or health clinics, are built along them. Rural road inventories are often one-time exercises carried out as part of the preparation for a road improvement project. They are rarely revisited. It would be useful to establish a system for regularly updating road condition, usage, and function, and legal record keeping. The agency in charge of local government roads in an area is the most appropriate keeper of these records.

4.3. Generating Management and Local Capacity

Local governments can mobilize the capacity required to discharge their responsibilities for RTI in various ways. In the past local governments commonly created an in-house rural road unit to manage projects and execute works. Technical assistance and training were provided by donor-financed programs to build capacity. Technical assistance has been marginally successful in transferring skills to local government staff. Often, no member of the road agency staff is qualified for training, and the technical assistants themselves end up performing the staff's routine functions. Furthermore, except for countries with large local government units (such as India), local governments have not successfully carried out in-house management of rural roads because road networks are too small to justify developing adequate technical capacity in each local government unit.

Rationalizing and reducing demands on local governments' in-house capacity involves two basic steps. The first step is to contract out physical works to the private sector. Contracting out is particularly cost-effective in rural areas where the workload is unevenly distributed throughout the year. Small firms often produce better quality work at a lower cost than government agencies because they have far more flexibility in creating incentives, hiring (and firing) staff, setting working conditions, adapting techniques to local skills and resources, and taking into account local social and political constraints. The written contract can be monitored, and it in itself provides an incentive for performance regardless of whether physical works are contracted to the private sector, as in Ghana, or to a parastatal, as in Mozambique. The strongest incentive for performance is, of course, prompt payment to the contractor.

The second step is to contract out key management functions to local consultants. When private contractors execute physical works, local governments are able to focus on which kind, quantity, and quality of RTI to provide and how to finance construction and maintenance. Planning works, preparing and evaluating bid documents, awarding contracts, supervising, carrying out physical audits, accounting, and ensuring timely payment of contractors are not small tasks—most of the skills needed to complete them are lacking at the local level. Local governments can purchase many of these services from the private sector. The challenge is to ensure that the volume of work is large enough to encourage local consulting firms to operate in rural areas.

4.4. Establishing a Planning Framework and Planning Methods

The central government is usually responsible for providing the overall planning framework and direction. In most countries, however, there is no consolidated planning process for rural transport or for transport infrastructure. There may be planning methods and criteria for selecting road improvement projects, but these are useful only if applied in the context of a planning framework for both capital works and maintenance.

As a first step in the local planning process local governments and their constituents must assess priorities across sectors. Planning for maintenance of already existing roads and RTI for which the local government is responsible should be part of the annual planning process. The planning framework should be built on a participatory

and iterative process, providing incentives for good performance. The planning framework should also generate good value for money.

5. MANAGING AND FINANCING COMMUNITY ROADS AND PATHS

In most countries governments have left responsibility for access roads and paths to communities. Communities, however, have rarely assumed this responsibility. In fact, communities have often failed to construct or maintain access roads and paths even when they themselves consider them important.

5.1. Building Community Ownership and Capacity

Access roads and paths are often undesignated but are considered to belong to adjoining landowners, communities, or commercial entities, such as logging, tea, or mining companies. As a general proposition, no one can be held legally responsible for a specific road or path unless that person or entity has been granted or has established ownership. Interested parties can assume upkeep of orphan roads, but just as easily abandon them. In fact, roads and paths can be mapped and functionally classified, yet have no designated owner.

5.2. Legal Ownership

Ownership of private roads requires a legal framework that permits communities and non-government entities to assume management responsibility. Without a law that grants legal ownership of a community road or path to a community, and without other incentives, it is very difficult to engender a tangible interest that will translate into effective management. Responsibility for local government roads can be assigned to a public agency, but designating ownership to a non-government entity, such as a group of private landowners or a village, should be based on consent and active interest.

Changing road ownership requires prompt and explicit procedures, including consultation with the concerned parties. A change in ownership of a rural road, especially a public-to-private transfer, merits special mention because it is a transfer from (to) a public entity to (from) a private entity. For example, if a road has been the responsibility of a local government and will no longer be designated as such, local communities and other concerned parties must be informed so they can decide whether to assume this responsibility. Otherwise, the road will fall into disrepair.

Often the local government road agency is legally responsible for many more kilometers of roads than it can maintain. Clarifying responsibilities for individual roads and paths is a continuous need. Prompt procedures for changing the designation of roads become especially important when the local government road agency identifies a core network that it can effectively sustain given its resources. This core network will be smaller than the full local network and will thus result in many unclaimed (undesignated) kilometers of roads. The fate of these dispossessed roads must be decided. Some have no value and will be abandoned. Others will require an assumption of responsibility. The local road authority should at least contact potential owners as a matter of routine.

5.3. Planning Community Roads and Paths

Transport planning has been dominated by an emphasis on providing only roads. Yet non-transport solutions may solve some access problems more effectively and at a lower cost (see Dawson and Barwell 1993). For example, a program to rehabilitate and maintain grinding mills or water sources may cost less and have a larger impact on reducing the transport burden than road rehabilitation. Often government standards for access roads are too high given community traffic and resources. Simple improvements to a dirt track might be sufficient—and result in reduced costs—considering the small number of visiting vehicles.

Planning procedures and criteria, though providing useful information to guide decision-making, should not be considered a substitute for local participation in the decision making process. Local participation is a complex area and will be touched on very briefly. Weak members of society are likely to be affected by road works but are rarely consulted. They lack verbal skills and wealth, and local leaders may regard their views as having little value. While it is important that community leaders are involved in the planning, construction, and maintenance of access roads and paths, they can pose obstacles. Community leaders and local elites are often reluctant to expand participation for fear of altering the authority structure. Participation presents people with more choices and makes them more likely to hold community leaders accountable. Increased accountability may change power structures as well as the use and allocation of resources among social groups. Leaders, therefore, may be reluctant to open up to full participation of community members. Strategies for successful participation need include specific steps aimed at encouraging the involvement of non-elites.

5.4. Technical and Managerial Advice

Communities need technical advice (such as on road design and standards, appropriate materials, work planning) and managerial advice (such as on financial accounting, contract management, procurement) so that they can effectively perform the new responsibilities that come with ownership of roads and paths.

The lack of technical know-how is often mentioned as the main hurdle to achieving effective community management. Experience shows that the required skills in road maintenance can be effectively transferred to communities by a foreman in a few days coupled with periodic supervisory visits. The Village Access Roads and Bridges Assistance Unit project in Malawi found that one day of training, combining theory and hands-on experience, suffices to prepare community work gang leaders for the technical aspects of maintaining their roads. Periodic supervisory visits by a foreman from the road agency helps the community to follow an annual schedule of programmed maintenance activities.

Villages can group themselves into road associations based on maximum community participation and minimal government involvement. Such associations might be based on traditional leadership structures, groups of villages, extended families, groups of commercial farmers, transporters, or other groups that share a common interest. In Ghana many villages have a development committee with an infrastructure subcommittee. The subcommittee sets the priorities and submits these to the plenary

village development committee for consideration. Groups of villages have joint development committees dealing with projects, such as roads, that affect several villages. To function more efficiently, the joint villages development committee can register as the legal owner of a road in order to qualify for partial funding.

Communities need to organize themselves to execute work planning and programming in a timely and efficient manner. In many countries, this involves organizing works around the seasonality of labour supply.

6. CONCLUSION

The paper presents a practical menu of institutional options. The government, communities, and other stakeholders must devise what will work for them given country circumstances. Local governments and communities are poor, and the private sector is still weak in many Sub-Saharan African countries. But given the right incentives, they will mobilize resources and seize the opportunity to break their isolation. Central governments can concentrate primarily on catalytic policy interventions to promote rural development and sector reform, and on sustaining the commitment to reform. Donors should support domestic reform efforts, facilitate the sharing of international experience, and provide the initial capital to implement the reform programs.

All countries have a boundary beyond which direct government responsibility for the road system ends and the network of community roads and paths begins. Private ownership can significantly increase the kilometers of roads that receive regular maintenance and reduce the cost of maintenance to less than half that of public roads of equal engineering standards and traffic. It is time to build an institutional framework to manage and finance the lowest level of the network. Such a framework should be based on the creation of appropriate incentives to engender community ownership and empowerment. These incentives include legal instruments, cost-sharing arrangements, and technical and managerial advice.

KEY REFERENCES

Barwell, I. (1996). *Transport and the Village: Synthesis of Findings and Conclusions from Village-Level Travel and Transport Surveys and Related Case Studies*. Discussion Paper 344. Washington, D.C.: World Bank.

Carvalho, S. (1994). *Social Funds: Guidelines for Design and Implementation*. Working Paper 34. World Bank, Human Resources Development and Operations Policy Department. Washington, D.C.: World Bank

Connerley, E. and Schroeder, L. (1996). *Rural Transport Planning. RTTP Approach Paper*. Working Paper 20. World Bank, Sub-Saharan Africa Transport Policy Program, Africa Technical Department. Washington, D.C.: World Bank

Dawson, J. and Barwell, I. (1993). *Roads Are Not Enough*. London: Intermediate Technology Publications.

Donkor, E. (1995). *Establishing a Clear and Consistent Organizational Structure for*

- Road Network Management. Paper presented to the SATCC/RMI Seminar, Pretoria, April.
- Elias, T. (1995). Community Participation in Access Planning: The Case of PIRTP in Malawi. Case Study for Rural Travel and Support Program, World Bank, Africa Technical Department. Washington, D.C.: World Bank
- Garnier, P. and Van Imschoot, M. (1993). The Administration of Labor-Intensive Works Done by Contract: A Practical Guide. Geneva: U.N. Development Programme and the International Labour Organisation.
- Gopal, G. and Marc, A. (1994). World Bank–Financed Projects with Community Participation. Discussion Paper 265. Washington, D.C.: World Bank.
- Green, D. B. (1994). Decentralized Public Service Provision in Sub-Saharan Africa: A False Start. Lessons from the Decentralization: Finance & Management Project. Associates in Rural Development, Inc. Washington, D.C.
- Heggie, I. G. (1995). Management and Financing of Roads: An Agenda for Reform. Technical Paper 275. Washington, D.C.: World Bank.
- Heggie, I. G., Donkor, E. O. and Malmberg Calvo, C. (1995). Establishing a Clear and Consistent Organizational Structure. Paper presented at the Road Maintenance Initiative Subregional Seminar, Nairobi, November.
- Henwood, B. (1995). Policy Guidelines for Provincial District and Local Roads. A Discussion Document. Kwazulu Nata Department of Transport, Durban.
- Hoban, C. Riverson, J. and Weckerle, A. (1994). Rural Road Maintenance and Improvement: Best Practice Paper. Report TWU 11. World Bank, Environmentally Sustainable Development, Transport, Water and Urban Development Department, Washington, D.C.
- Ivansson, S. and Ngdahl, B. (1995). Private Roads in Sweden. World Bank, African Technical Department, Washington, D.C.
- Ivansson, S. (1995). Development of Good Governance in the Road Sector in Finland. Working Paper 21. World Bank, Sub-Saharan Africa Transport Policy Program, Africa Technical Department, Washington, D.C.
- Kessides, C. (1993). Institutional Options for the Provision of Infrastructure. Discussion Paper 212. Washington, D.C.: World Bank,
- Lantran, J. M. (1993). Managing Small Contracts: Practical Guidance on How to Streamline and Manage Small Contracts for Public Works and Services. World Bank and Economic Commission for Africa, Sub-Saharan Africa Transport Program, Africa Technical Department, Washington, D.C.
- Louis Berger International Inc. (1996). Study to Improve Management and Financing of Roads. Final Report. Prepared for the Ministry of Communications and Transport, Government of Zambia, Insaka.
- Malmberg Calvo, C. (1998). Options for managing and financing rural transport infrastructure. World Bank Technical Paper No.411.
- Marc, A. Graham, C. and Schacter, M. (1993). Social Action Programs and Social Funds: A Review of Design and Implementation in Sub-Saharan Africa. Technical Note

9. World Bank, Africa Technical Department, Human Resources Division, Washington, D.C.

Msimbe, L. G. (1994). *The Organizational Framework for Community Transport Infrastructure in Tanzania*. Rural Travel and Transport Program, Dar-es-Salaam.

Parker, A. (1995). *Decentralization: The Way Forward for Rural Development*. Policy Research Paper 1475. Washington, D.C.: World Bank.

Riverson, J. Gaviria, J. and Thriscutt, S. (1991). *Rural Roads in Sub-Saharan Africa: Lessons from World Bank Experience*. Technical Paper 141. Washington, D.C.: World Bank.

Sabai, M. T. (1995). *Report on the Terms and Conditions of Service for the Road Staff*. Paper prepared for the Road Maintenance Initiative, World Bank, Washington, D.C.

Schroeder, L. (1994a). *A Guide to Sustaining Rural Infrastructure Investments*. Decentralization: Finance & Management Project. Washington, D.C.: United States Agency for International Development.

Schroeder, L. (1994b). *Provision and Production of Rural Roads in Developing Countries: A Synthesis of Research Findings*. Washington, D.C.: United States Agency for International Development.

Silverman, J. M. (1992). *Public Sector Decentralization*. Technical Paper 188. Washington, D.C.: World Bank.

Silverman, J. M. (1995). *Local Government and Participation*. World Bank, Africa Technical Department, Environmentally Sustainable Development Division, Washington, D.C.

Smoke, P. (1993). *Local Government Fiscal Reform in Developing Countries: Lessons from Kenya*. *World Development* 21(6): 901–23.

South Africa, Department of Transport, Road Classification Consortium. (1991). *Road Classification and Identification of Levels 3 and 4 Roads in South Africa*. Report PN040/01/91/09/1491. Pretoria.

Stowers, J. and Talvitie, A. (1994). *Highway Functional Classification Study Guidelines*. World Bank, Transport, Water, and Urban Development Department, Washington, D.C.

Taute, A. (1993). *Proposed Criteria for Road Proclamation*. Committee of State Road Authorities (CSRA), South Africa.

Wingfield, P. (1996). *U.K. Experience: Contracting Out Planning and Management of Local Government Roads*. Presentation at the World Bank Annual Road Agency Seminar, Washington, D.C., December.

Wingfield, P. (1994a). *Bank-Financed Projects with Community Participation: A Manual for Designing Procurement and Disbursement Mechanisms*. Africa Technical Department, Washington, D.C.

World Bank (Economic Development Institute) and Economic Commission for Africa. (1991). *The Road Maintenance Initiative: Building Capacity for Policy Reform*. Volumes 1–3. Washington, D.C.