

POLICY TOOLS - INFRASTRUCTURE PROVISION

4.8 MANAGEMENT, PLANNING AND LOCAL CAPACITY

Problem: The increasing trend towards devolvement of responsibility for local roads is hampered by the institutional and financial weakness of local government.

Solution: More use of private participation, although the issue of finance remains an unresolved issue in the short-term.

BACKGROUND

Over-centralised decision making

Road infrastructure has for long been administered from the centre, though with varying degrees of regional devolvement. In more decentralised countries (like India), the regions (or states) will have their own sector ministries and roads executives which focus on regional or state highways, while the centre handles the national trunk network and other strategic roads.

A typical roads executive agency (i.e. ministerial department or highways agency) has a central headquarters handling most of the management, personnel, accounting and planning functions. The centre promotes standards and procedures. The centre may undertake some feasibility and design work, although this work may be more usually contracted out to local and international consultants. Local consultants are increasingly competent in this work, as well as in providing supervisory services.

The centre is also likely to provide a centralised contracts management facility, although tenders may be adjudicated through regional tender boards. It is the centre that deals (through its sector ministry) with budget negotiations at government level and also with donors. Major road and bridge development projects are likely to be planned, designed and project managed from the centre. Contracts for high value projects (particularly those funded by the donor community) will be awarded on the basis of international competitive bidding (ICB).



Regional or district offices (and perhaps sub-regional offices in some cases) represent the organisation at the local level. These offices are staffed by professional and support staff, largely mirroring the centre. The regional or district road engineer has an important role in monitoring his area road network; on the basis of this, the regions prepare their plans, programmes and budgets for routine and periodic maintenance, as well as establishment costs. These are submitted to the centre for collective processing and prioritisation. The regional engineer must work within the final budget that the centre negotiates.

Regional offices have traditionally employed their own labour (force account), with associated materials and equipment, to undertake basic maintenance tasks. They are also deployed for more complex maintenance tasks, although this work is also contracted out to private contractors. Local private contractors may be registered with the regional office (or centre), and are given a certain grading of competency dependent on their size (manpower and equipment), experience and financial status. Tender bidding documents will specify the grade of contractor eligible to bid for the advertised work. The quality and competency of local contractors is improving over time, and some of the larger companies are capable of competing on ICB projects.

Where local government is responsible for rural and urban roads, and where they do not have the required expertise (which is often the case), they may still rely on the regional road engineer for support in undertaking their responsibilities. Alternatively, the centre may second staff to local government for the same purpose.

With these typical organisational arrangements, central government agencies have repeatedly acted without consulting or co-ordinating with each other or with local governments. Such an arrangement absolves local government of accountability for rural infrastructure and other local services. *Centralised planning has marginalised stakeholders, and local people have not participated in the decision process.* Furthermore, centralised provision of rural roads has been accentuated by donor intervention which reacts to institutional weaknesses by channelling support through central government ministries, by-passing local government.

Inconsistent and uncoordinated planning

Planning of rural roads has been driven by a multiplicity of objectives and institutions, with lack of continuity, lack of sustainability, and generally poor use of resources. Roads get built by sector ministries aiming to meet their particular client requirements. As a result, roads are constructed as part of agricultural projects, by NGOs, marketing boards and by private companies, outside of any national planning framework, and with no consultation with the road administrations that are eventually to be responsible for the roads' maintenance. The lack of a comprehensive planning system assessing overall client demands means, in practice, that many of the basic access needs of rural households have not been addressed.

Uneconomic allocation of financial resources

There has been no analytical method available for determining resource allocation to rural roads, and no guidelines for the balance of expenditure between construction, rehabilitation and maintenance. There are problems in justifying road expenditures using vehicle operating cost savings when the majority of rural traffic has been non-motorised; equally, there are problems applying producer surplus methods where production data have been patchy. Planning has been concerned with route selection rather than with optimising resources over the entire network. It has paid insufficient attention to maintenance and has not fostered community involvement. Economic return computations have neglected increases in personal travel which have been one of the most striking impacts of rural road improvements. Non-transport solutions that could solve access problems more effectively and at lower cost have often not been considered. For example, a programme to rehabilitate and maintain grinding mills or water sources may cost less and have larger impact than rehabilitating a road. Projects undertaken by ministries of agriculture tend to have high construction costs, because of the costs of fixed equipment and overheads, and leave no institutional capacity for maintenance upon completion.

Unsuccessful management arrangements

As noted above, planning and management of roads has traditionally been carried out by public sector organisations. However, this has led to problems of supervision, poor motivation and inherent lack of flexibility which have been difficult to overcome. The resulting work has often been carried at high cost, and with poor quality and low durability. Inadequate local capacity is manifested in the form of:

- **Scale.** In-house management of rural roads at the local government level has not generally been successful because road networks are too small to justify adequate technical capacity in each local government unit. Local governments sometimes do not have the technical know-how that is required by ownership. Often the responsibility for work has been decentralised to a level below which a critical mass of skilled and experienced staff can be employed cost-effectively. Central sector ministries may have technical capacity, but they do not possess any sustainable interest or stake in maintaining rural transport infrastructure over time.

- **Lack of incentives for staff at the local level.** Poor government salaries have adversely affected the technical capacity of road administration staff, leading to high vacancy rates and poor motivation. This is a particular problem at local government level tend to have fewer career prospects and opportunities for training than staff working in a strong sector ministry. Furthermore, living conditions can often be harsh. As a result, many district works departments are headed by under-qualified and indifferent staff. However, even a competent cadre of local officials would be ineffective if they commanded few resources.
- **Weak private sector responses in rural areas.** Many countries wish to move to a market sector approach to procuring goods and services. This poses certain problems for rural transport infrastructure. Although, in many countries, there is considerable experience of using private contractors for large capital works on rural roads, few countries have much experience of the use of contractors for routine maintenance works. Local consultants have little experience of planning and supervising rural transport infrastructure contracts. This is partly because the small size of contracts that can be offered by local governments makes it unattractive for large and experienced firms to mobilise in rural areas, and partly due to a lack of experience of local governments in dealing with the private sector more generally. This has all resulted in a lack of private sector expertise for transport infrastructure works in rural areas.
- **Urban bias in the allocation of resources.** Centralised administration and poor communications between urban and rural areas have perpetuated an urban bias in allocating both human and financial resources. Policy makers tend to respond first to what they see close at hand and, since they tend to live in urban areas, the more visible urban issues take first priority. As a result, governments have inadvertently accelerated rural to urban migrations by failing to respond better to the needs of rural areas by building up local capacity.

KEY PRINCIPLES FOR REFORM

Three principles are driving the reform of the management of roads, namely:

- The separation of policy from administration and operations of roads development
- The devolvement of responsibility to the regions and local government
- The increasing role for private participation in the management and operations.

Separating government and administrative functions

Many countries have found it beneficial to separate the political role of government from the professional role of the road administration. This recognises that the role of government is to ‘govern’ and to frame overall policy for the road network, and that the role of a road administration is to administer and manage the network, making decisions based on professional considerations within the policy framework laid down by government. An example of how responsibilities could be split is shown in **Box 1**.

Box 1: Split of responsibility between a government and a road administration

Role of government:

- Framing policy
- Providing a legislative and regulatory framework
- Long term planning, including that between transport modes
- Allocation of budgets to the sub-sector
- General instructions to the road administration to undertake work on the network

Role of the road administration:

- Maintaining, developing and, more generally, managing the road network and the roads programme
- Setting detailed rules and standards for the road network
- Enforcing regulations for such things as traffic safety and axle loading
- Monitoring performance of the road network to improve the way that it is managed in the future, and to advise government on changes to policy that may be advisable

Source: Swedish National Road Administration

Within this context of improving organisational efficiency, the functions of a road administration can be further split conveniently into:

- those for the *planning and management of road operations* (the ‘client’ function), and
- those for *works execution* (the ‘supplier’ function).



The client role is concerned with specifying activities to be carried out, determining appropriate standards to use, commissioning works, supervising, controlling and monitoring activities. The supplier role is concerned with delivering the defined product to an agreed quality standard, to time and to budget. Arrangements between the parties is put on a more contractual basis. Such separation clarifies roles, and increases the focus and specificity of action, both of the management and the works execution functions. Both parties have incentives to increase operational performance. Greater benefits in effectiveness and efficiency have been achieved as a result of such separation than from virtually any other type of organisational reform.

At the policy level, policy and strategy for rural roads should recognise the need for close co-ordination with policies and programmes for main roads and for agricultural development. There is a need for multi-tiered planning and programming based on locally acceptable criteria and with participation of local communities.

Planning methods should include factors such as:

- population density,
- target road densities,
- improved traffic demand assessment for low flow roads.

Priorities should reflect the determinants of community demand for local travel including:

- population,
- area,
- production, and
- social, economic and cultural services.

Thus, economic return calculation should only be used to validate results based on multi-criteria analysis and local community involvement - see also the GTZ experience of financing rural roads and a full calculation of revenue and expenditure of roads for a whole country (Metschies, 2002). Planning, programming and budgeting should consider the balance of investment between maintenance, rehabilitation and improvements. Furthermore, investment decisions for rural roads should be made only after confirmation that existing transport services are available to operate on the roads, or that other measures will be adopted to develop such services. This requirement can be enshrined within the policy framework (see **Appendix J** for funding and funds allocation checklist).

Devolution of responsibility

Building the capacity of local government is a key policy of many countries. This is advocated as a means of empowering local interests, weaning the regions away from state support and dependence, and as a generally sustainable and democratic approach. The approach relies upon strengthening and developing the local institutions, and underpinning them with necessary legislation and funding. Establishing a strong local revenue base is a pre-requisite for this process. Undoubtedly, devolved responsibility is well developed and long established in many countries, but is still a goal yet to be achieved in many others.

Devolution of responsibility for roads is part of this process. To some extent the management of roads has always had some element of regionalisation through regional roads engineers (see above), though the centre has always retained overall control. Under the new approach the devolution is more radical in that districts and urban centres are being given total responsibility for all roads (other than designated trunk and strategic roads) within their area. This development can put an enormous strain on local government that has neither the funds nor the professional expertise to meet this brief. As an interim solution, the centre continues to provide these resources. The longer-term solution depends on the development of sustainable local revenue sources, and a recognised local cadre of professional expertise. The latter, in turn, will also depend on appropriate educational moves that encourage the teaching of engineering (and related subjects), and the acceptance of these qualifications (at all levels) within local government. Professional and technical organisations have an important role to play in promoting this process.

Community road owners are likely to need some expert advice on road management, and the policy framework should make provision for this. More details are given in **Box 2**.

Box 2: Managerial and technical advice

Advice may be needed by typically in the following areas:

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| <ul style="list-style-type: none"> • Managerial areas <ul style="list-style-type: none"> – road maintenance management – information management and systems – financial accounting – procurement – contract management | <ul style="list-style-type: none"> • Technical areas <ul style="list-style-type: none"> – road design and standards – appropriate materials – work planning |
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Experience shows that the required skills in road maintenance at this level can be transferred to communities by a foreman in a period of days coupled with periodic supervisory visits. One option is for community representatives who have worked as labourers on local government roads to assume responsibility for supervising work on the access roads in their home villages. Another option is for technical advice to be provided to private road associations by the provincial road agency. With increased involvement of the private sector in physical works, this function will vanish because associations will purchase advice from private consultants. Advice may also be needed on contract management and procurement. Road associations need to keep proper accounts, and this may require that communities involved may need to strengthen village organisations.

Based on: Malmberg Calvo (1998)

Competition and private participation

Competition provides customers with choices that can improve the way that their needs are met, and that compels providers to become more efficient and accountable. It provides a mechanism for enforcing standards of both organisations and staff. In addition to external competition from others, competitive pressures can be exerted on an organisation by the political establishment, regulatory agencies and by road users, and by managerial measures that create a competitive atmosphere within the organisation. Thus, competition can be:

- *External*, such as between private contractors bidding for construction works
- *Internal*, as can sometimes be possible between different departments of an organisation, or
- *Mixed*, where a public sector organisation competes with organisations from the private sector, as is now common in several industrialised countries

The key issue is not whether the organisation concerned is in the public or private sector, but whether it operates in a monopolistic or competitive environment. A parastatal or private body operating in a monopoly position has little incentive to perform better than a government organisation, and both can be much less accountable in terms of price and level of service. *The key to effectiveness and efficiency is therefore competition, not privatisation.*

This principle is being increasingly applied successfully in the roads sector. Private participation can take many different forms from outright control of an organisation to providing consultancy and contractor services.

At the national level, the establishment of a highways agency is a first step towards running roads organisation on commercial lines. Part of this process usually involves the streamlining of staff numbers, taking a particularly critical view of force account labour. 'Market testing' is a competitive mechanism for comparing the costs of employing private contractors in place of force account; this often leads to the retrenchment of force account labour, and the down-sizing of the organisation. Commercialisation includes such features as (Heggie and Vickers, 1998):

- Identifying customers and introducing policies to ensure that customer requirements are met
- Functional separation of roles
- Operating the organisation like a commercial business, including having financial autonomy, with delegated accountability for managerial decisions and actions
- Introduction of appropriate management structures and operational procedures
- Addressing human resource requirements, including employing sufficient (and only sufficient) staff with adequate skills
- Improving access to information by implementing management systems in the areas of finance and accounting, road and bridge management, and personnel management

Changes to policy and legislation may be necessary to enable public sector road administrations to operate in this manner.

Some agencies now contract out complete maintenance package programmes; in effect the contractor takes a franchise for managing and operating the roads within his care. This is also a mechanism for developing new roads. For example, the Indonesian toll roads have been privately funded and maintained, with revenues being retained by the developer; ultimately (in say 20 years) ownership of the road reverts to government (who could then re-franchise its operation). Such schemes are more generally known as Build-operate-transfer (BOT) or similar terms.

Private participation may be a particularly attractive proposition for local government, which has very limited existing expertise. Using consultants to provide local road engineering design and planning services is a well-recognised model in many developed countries. Clearly, however, it requires that funding is available, and that local government has some mechanism for supervising the services.

There is no doubt that the scale of private participation will increase in all aspects of roads management and operations. This trend is supported by the growing strength of both the contracting and consultancy sectors. Some sector ministries and highways agencies are taking positive steps to encourage this by organising their own training programmes for the private sector, to promote a common understanding of the design, contracting and supervisory processes and expectations.

KEY REFERENCES

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