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of The World Bank

Transport Policy Issues in Sub-Saharan Africa

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AN EDI POLICY SEMINAR REPORT • NUMBER 9

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AN EDI POLICY SEMINAR REPORT • NO. 9

Transport Policy Issues in Sub-Saharan Africa

Report on a Series of Roundtables
held in Rome, Italy
April 1-18, 1986

Hernán Levy
Patrick O. Malone

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Foreword

This document is one of a series reporting on policy seminars organized by the Economic Development Institute of the World Bank. Policy seminars provide a forum for an informal exchange of ideas and experiences among policymakers from different countries, leading experts in development, and World Bank staff, with respect to major issues of development policy.

Policy Seminar Reports focus on issues raised during seminars that may be of interest to a wider audience. They are not intended to be comprehensive proceedings. However, they seek to convey the essence of the discussions that took place and to bring out any principal areas of agreement or disagreement that emerged amongst those participating.

Christopher R. Willoughby
Director
Economic Development Institute
of The World Bank

Contents

Executive Summary

Fifteen countries, in sub-regional groups of five, participated in roundtables, conducted in English, held in Rome in April 1986. The country groupings were as follows:

Roundtable 1: (April 1-5)	Ethiopia, Kenya, Somalia, Sudan, Uganda
Roundtable 2: (April 7-11)	Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
Roundtable 3: (April 14-18)	Gambia, Ghana, Liberia, Nigeria, Sierra Leone

Ministers led the delegations of six countries; deputy ministers/permanent secretaries led most of the other delegations. There were, in addition, observers from the United Nations Economic Commission for Africa (ECA), the African Development Bank (AfDB), and the Eastern and Southern African Management Institute (ESAMI).

These roundtables, like similar gatherings conducted in French in March 1985, were organized by the World Bank—principally by the Economic Development Institute (EDI) and the Transportation Divisions of the African Regional Offices—in cooperation with the International Center for Transportation Studies (ICTS) of Rome, Italy. The transport policy issues on which these later roundtables focused, selected in consultation with senior officials from the participating countries, were essentially the same as those for the francophone meetings, namely, (a) economic prospects and transport sector resource allocation and utilization; (b) road maintenance; (c) management of transport parastatal enterprises; and (d) institutional development, training, and technical assistance.

Economic Prospects, and Transport Sector Resource Allocation and Utilization. Sub-Saharan Africa is undergoing a severe economic crisis. The economy of the region, taken as a whole, stagnated in the last 20 years, and actually declined in the last 10. During the early 1980s, GDP per capita, as a result of a fall in GDP and of high population growth rates, declined at an average of 3.6 percent per annum. While several factors of the crisis are *external* (deterioration in terms of trade, drop in the level of credits, rise in the value of dollar and of interest rates—although both have dropped over the last two years) plus very unfavorable climatic conditions, *internal* policies that caused distortions *within* the economies led to inefficient use of resources and contributed substantially to the crisis.

There was consensus during the roundtables that, with appropriate policies, the transport sector could make an important contribution in the national efforts to reverse the situation, mainly by reducing the drain on public funds through transport rates and fares reflecting the cost of services, by avoiding uneconomic investments, and by raising the efficiency of operations. Specific recommendations focused on policies geared to

- better utilizing existing facilities through more efficient pricing, reduction in overstaffing, and improvement in the management of transport parastatals;
- giving priority in allocation of resources to maintenance activities (which, in any case, generally have the highest returns);
- in most countries, limiting the road network to be maintained by government to a network compatible with available financing, and expanding this network only as financing improves;
- encouraging external finance to provide more funding for maintenance and to support use of local contractors;
- increasing international and regional cooperation where it may have a beneficial impact on cost and quality of transport services.

Road Maintenance. Recent surveys indicate that less than 50 percent of the approximately one million kilometers of roads in sub-Saharan Africa is in good condition, and that more than 25 percent is in a condition so poor that it requires rehabilitation. There is a backlog of about $1.0 billion[1] for periodic maintenance and $7.5 billion for rehabilitation. The situation is serious today, and may soon become catastrophic, if funding is not increased, if maintenance is not done at the levels and in the amounts required, and if roads as a consequence continue to deteriorate. A three-pronged effort seems to be required to tackle the road maintenance problem: (a) an improvement in efficiency of road maintenance operations to utilize better existing funds available for maintenance; (b) an increase in cost recovery of highway maintenance expenditures from road users, if road user charges do not currently cover such expenditures, and (c) an improvement in the financing methods to ensure that user charges are actually applied to maintenance, and that funds are released in an appropriate and guaranteed flow to the highway maintenance agency.

There was consensus on the critical situation facing the road networks if the maintenance problem is not confronted, and on the urgency for countries to take measures designed to

- improve the efficiency of maintenance operations by decentralizing responsibility and accountability, by strengthening programming and planning, by making increasing use of contractors, by making more use of labor-intensive methods in rural roads, and by better control of axle loads;

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1. Throughout this Report, "$" denotes US$ (1986). *Billion* denotes one thousand million.

- increase cost recovery, if necessary, mainly by raising fuel taxes supplemented by specific user charges for heavy trucks;
- improve the adequacy and flow of funds for maintenance, ideally by establishing road funds financed from earmarked taxes, or alternatively, by ensuring that high priority for maintenance is accorded in national budgets and that funds are released when needed.

The Management of Transport Parastatal Companies. The large parastatal sector, with its generally poor technical performance and large deficits, is one of sub-Saharan Africa's most prevalent and serious problems. Transport parastatals are particularly poor performers: possibly only 20 percent of them have revenues covering or exceeding operating costs plus financial charges (these are mainly ports, which generally enjoy a monopoly position). Parastatals' problems are largely rooted in the multiplicity of achievements expected of them—such as control of key sectors of the economy, provision of low-cost services, provision of employment opportunities—and in the limited real decision-making that their managements enjoy due to government intervention and tight control. In internal administration of parastatals, three areas merit special attention: management of human resources; financial management, including improvement of management information systems and of pricing policies; and better use of the private sector as a supplier of services to transport parastatals, or in related areas. Specifically in the provision of international air transport and shipping services, recent studies suggest that considerable cost saving to the region could be achieved through closer cooperation among national parastatals, particularly in the design and provision of services.

There were several points of consensus on parastatals, notably on the need

- to consider phasing out non-strategic, money-losing transport parastatals;
- to consider contracting more services from the private sector and to assess prospects of divesting management for provision of specialized services;
- for governments to provide managements with more freedom in tariff setting and in personnel policies, and to consider the use of company contracts as a tool for providing increased freedom of action, but with greater management accountability;
- to link subsidies directly with specific services provided below cost;
- to explore ways of increasing regional cooperation in the provision of international air transport and shipping services.

Institutional Development, Training, and Technical Assistance. Institutional development, despite extensive use of technical assistance, has proceeded slower than earlier expected, and the goals of institutional improvement are far from being attained. The situation is exacerbated by the changing nature of the development effort in Africa from, essentially, preparation/implementation of development projects in the 1960s and 1970s—for which the "traditional" technical assistance performed reasonably well—to the more subtle, less definable, but equally important goals of today, namely, institutional improvement and management of technological and social change. There was agreement that these latter are areas in which technical assistance has not been generally successful.

Technical assistance, judged by specific examples in the past, may have a bad image, but it was agreed that despite this, it was needed and could be useful, but had to be used selectively. It was agreed also that ministries and agencies have a crucial role to play in the areas of

1. defining policy on, for example,
    - relations between consultants and staff (and, specifically, which should occupy the line positions)
    - incentives for local staff
    - the trade-offs posed by (a) the need to fill positions versus institutional development, (b) training versus production goals, and (c) fewer goals (with a heightened probability of success) versus multiple goals;
    - the source of the technical assistance, namely, (a) external experts, (b) local resources, or (c) "twinning" with similar institutions;
2. liaising with other ministries/agencies that may be involved to avoid duplication of effort and to ensure consistency with national goals;
3. establishing clear and unambiguous terms of reference for the proposed technical assistance, and specific indicators to monitor performance.

Above all, the ministries/agencies must themselves *manage* the technical assistance from the outset.

There was consensus that

1. countries *can*, indeed, improve the use of technical assistance by integrating it with national manpower planning and development strategies, and by managing it centrally;
2. ministries and agencies receiving technical assistance must, at the outset, clearly define the objectives, the outputs required, and the indicators to measure those outputs;
3. qualified and motivated counterparts are essential, the counterparts should preferably be in line positions with the experts acting as advisors;
4. outside experts with direct production responsibilities should be expected to coach the local staff with whom they collaborate, but not to undertake formal training responsibilities too;
5. the whole range of forms of technical assistance should be explored, and greater emphasis than previously should be given to possibilities of "twinning" arrangements with similar institutions;
6. training included in technical assistance programs should be part of, and consistent with, agencywide and sectorwide training programs.

1
Introduction

This document reports on three meetings (roundtables) held in Rome, Italy, in April 1986 to discuss important transport policy issues in sub-Saharan Africa. These meetings, conducted in English, were part of the program of senior policy seminars conducted by the Economic Development Institute (EDI) of the World Bank, and were organized by EDI in collaboration with the Transportation Divisions of the Bank's Africa Regional Offices, and the International Center for Transport Studies (ICTS), Rome, Italy. The participants were ministers and senior officials of sub-Saharan countries, and staff of the World Bank and ICTS. A different grouping of countries participated in each roundtable, but the agenda was essentially the same for all three. These roundtables followed three with a similar agenda, also organized by EDI and ICTS, in Rome the previous year (February 1985), but addressed to francophone countries of the region.

Transport policy issues are prominent among economic questions in sub-Saharan Africa. Four particularly important questions were the foci of discussions in the roundtables:

1. *Economic Prospects and Transport Sector Resource Allocation and Utilization.* Given (a) the large share of resources allocated in the last 20 years to expanding road networks and other transport infrastructure and equipment, (b) the rapid deterioration of the road networks due to inadequate funding to meet increasing maintenance requirements, and (c) increasing financial losses of transport parastatals draining scarce budgetary resources and hindering savings potential, what can be done? How can the transport sector help to improve allocation of resources between maintenance and investments, and contribute positively to the national economies?

2. *Road Maintenance.* The deterioration of the road networks is causing heavy losses to both the road system itself and to its users and requires urgent action; yet, in most countries, there is little prospect that the national resources available for maintenance will increase. In these circumstances, it is possible to improve efficiency of highway maintenance operations, recovery of costs from road users, and financing--both in level and timeliness—of maintenance?

3. *The Management of Transport Parastatal Enterprises.* The increasing demands on transport parastatals to provide services priced below cost, and to fulfill roles unrelated to their main service objectives, are having severe negative consequences on the enterprises' financial situation. Managers have little autonomy to make key decisions on tariffs, services, and personnel; corporate objectives are not clear; many parastatals require government subsidies. What action can be taken in the areas of government-parastatal relationships and parastatals' internal management to improve the situation?

4. *Institutional Development, Training, and Technical Assistance.* Institutions in sub-Saharan Africa must change if they are to have the strength and flexibility that today's economic conditions require. Moreover, the change must be rapid if the demands throughout the region for accelerated growth are to be met. The management of rapid institutional change has traditionally been accomplished, in industrialized and developing countries alike, with the help of external assistance—"technical assistance." Sub-Saharan Africa has for the past few decades received massive injections of technical assistance, yet institutional development has been slower than expected. How can technical assistance, not generally successful to date even in relatively straightforward and definable areas such as project identification, evaluation, preparation, and implementation, be harnessed to help today's institutional development in areas as important as those of earlier years, but more subtle and less definable, for example, development and management of policy change? What are the ingredients for successful technical assistance, both at national and institutional levels, and covering the whole spectrum of human resource development?

The objective of this series of roundtables was to bring together ministers and senior officials responsible for, and intimately connected with, transport in sub-Saharan Africa, to discuss ways to confront these issues and to exchange views with each other and with World Bank staff. The agenda was essentially the same for the three roundtables. While the meetings were not primarily intended to lead to formal conclusions or recommendations, the discussions nevertheless indicated areas of general agreement. This report attempts to capture the essence of the discussions and of the areas of consensus. Chapters 2 through 5 cover the four main themes, in the order indicated above. Each chapter comprises the essence of the presentation of the main issues given by Bank staff or consultants, followed by a summary of the discussions, and points of consensus.

In order to preserve the frankness and free flow of opinion that were characteristics of the meetings, it was agreed that, in general, the speakers and the countries they represented would not be identified in this report. Countries are mentioned by name only in examples of policy or other measures being taken, and that were actually quoted by participants during the discussions.

Analysis and resolution of transport policy issues involve more than those within the transport and public works ministries and parastatal companies. Policies on investments, prices, cost recovery, and parastatals involve other economic ministries, such as those charged with national planning and finance. Thus, participants included not only representatives from the transport sector, but also from related economic ministries.

Fifteen countries, in sub-regional groups of five, participated in these rountables as follows:

Roundtable 1	(April 1-5):	Ethiopia, Kenya, Somalia, Sudan, Uganda
Roundtable 2	(April 7-11):	Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
Roundtable 3	(April 14-18):	Gambia, Ghana, Liberia, Nigeria, Sierra Leone

In total, there were 60 participants. Ministers led the delegations of six countries, and deputy ministers/permanent secretaries led most of the other delegations. In addition, representatives from the following three regional organizations attended as observers:

United Nations Economic Commission for Africa (ECA)
African Development Bank (AfDB) and
Eastern and Southern African Management Institute (ESAMI)

A list of participants and observers is attached (see annex A).

The topics discussed in the 1985 roundtables and in these later ones were essentially the same, and on both occasions they were selected after consultation with key government officials. These consultations signaled that the major transport policy issues were similar in both anglophone and francophone sub-Saharan Africa. The only significant difference in the agenda was the inclusion in the third anglophone meeting, and within the broader discussion on transport-parastatals, of a sub-topic on regional cooperation in international transport services. This topic was introduced following two recently-completed studies—one on liner shipping, the other on air transport—showing that the cost of providing international transport services could be reduced significantly by increasing cooperation among the countries of the region.

There was also some difference of emphasis on specific problems resulting from individual country issues, such as Ethiopia's resettlement policy, and its impact on transport network priorities, and on the feasibility and acceptance of policies and approaches stemming from the difference in administrative tradition between anglophone and francophone Africa. In the latter, the prevailing administrative and budgeting principle of "unicité de caisse" (all government revenues pooled and allocated under a national budget) makes it virtually impossible to establish a road fund that is financed by road taxes earmarked and channeled directly to the fund without reference to the national budget. In anglophone Africa, there is no such generalized overriding budgetary principle, although it is a legal procedure or administrative practice in some countries. Similarly, the concept of company-contract (developed in France[2] in the late 1960s) defining rules and mutual obligations between government and a parastatal company, is more easily understood and accepted in francophone than in anglophone Africa.

2. As the "contrat-plan."

2
Economic Prospects and Transport Sector Resource Allocation and Utilization

PRESENTATION

Several sub-Saharan African countries are making, or preparing to make, drastic changes in policies to confront the economic crisis facing them. The severity of the crisis is illustrated by the fact that the economies of sub-Saharan African countries, taken as a whole, stagnated in the last 20 years and actually declined in the last 10, specifically

- *aggregate gross domestic product (GDP)* grew by only 3.6 percent per annum during the 1960s, and by 2.4 percent per annum during the 1970s, and is actually declining on average by 1.0 percent during the 1980s;
- the weak performance in GDP growth, when combined with the region's high population growth, resulted in only a modest growth in *GDP per capita* (about 1.4 percent per annum) in the 1960s, but stagnation in the 1970s (or a decline if Nigeria is excluded), and a sharp decline (3.6 percent per annum) in the early 1980s;
- the *agricultural sector* has been particularly disappointing, with food production growing at only 1.5 percent per annum over the last 15 years, lower than population growth, resulting in increasing dependence on food aid; in addition, and as a consequence of the weakening agricultural export performance, Africa's share of world commodity export markets has declined for virtually every commodity in which it was a significant exporter in 1960 (e.g., cocoa from 76 percent to 63 percent, shelled groundnuts from 69 percent to 15 percent, palm oil from 55 percent to 14 percent);
- while aggregate investment as a percentage of GDP rose from 15 percent in 1960 to 23 percent in 1986, the GDP growth rate fell indicating *a declining efficiency of investments;*
- *a decreasing proportion of investments has been financed from domestic savings*, thereby increasing dependence on foreign finance; net capital inflows rose from less than $3 billion per annum in the early 1970s to $11 billion per annum in 1980-82, with only a slight decline (to about $10

billion) in 1986 (excluding financial assistance from the International Monetary Fund);

- as a result of this heavy borrowing in the 1970s, sub-Saharan Africa now has a severe *external debt* problem: medium- and long-term debt, outstanding and disbursed, increased ten-fold during 1970-82, from $5.4 billion to over $55 billion, and by 1986 had reached $71 billion. In short, today's generation is no better off than the previous generation.

The causes of the crisis are many and varied. They can be categorized as

- those related to *external* factors of unprecedented seriousness and magnitude, notably, the deterioration in the terms of trade, the reduction in the rate of growth of industrialized countries to whose markets Africa exports, the drop in the level of credits, the rise in the value of the dollar and of interest rates (although admittedly subsiding over the last two years or so), and very unfavorable climatic conditions;
- those related to increasing distortions *within* the economies, especially since the 1970s—a result of policies adopted by the countries themselves, many of which led to inefficient use of resources.

Sub-Saharan countries admittedly have limited control over *external* factors. Nevertheless it is important for them to pursue (a) action on debt restructuring, (b) reduction in protectionism, (c) expansion of concessional flows, and (d) improvement in aid effectiveness. Meanwhile, *internally,* a radical reform of policies, macroeconomic as well as sectoral, seems necessary if the economic "scenario" is to be reversed. On the macroeconomic side the key is to eliminate price distortions, such as

- the overvalued exchange rate (which discourages production and exports);
- low government-controlled prices for basic food items (which discourage production by farmers);
- provision of public services below cost (which adversely affects the public savings rate).

The transport sector could help to reduce the drain on public funds and to raise the level of savings by charging tariffs and rates that would cover the cost of services, and by transferring to the private sector activities and services that could be done more cheaply by private enterprises, thereby releasing public funds for other uses. Similarly, through careful scrutiny of its capital and recurrent programs, the sector could strike an optimal position between construction, rehabilitation, and maintenance, ensuring that no investments were undertaken that did not have an acceptable economic rate of return. Also, the sector could increase its own efficiency by improving the management of its human resources and physical facilities, by promoting competition, and by making increased use of private enterprises for maintenance and construction works.

A number of African countries in recent years have taken concrete steps to improve resource allocation and utilization by adjusting transport rates to reflect costs, by pruning investment programs to exclude uneconomic projects, and by appropriately placing emphasis on maintenance and rehabilitation rather than on new construction. Also, there has been an increased awareness and acceptance that costs of investments and of providing services can and should be reduced, and output increased both in quantity and quality.

DISCUSSION

Transport policies and planning

Participants were generally in agreement with the major points and prescriptions of the presentation but, while recognizing the many factors within the controls of their countries, emphasized that the list of exogenous factors operating was probably more extensive than that which had been advanced in the presentation. They cited

- the *double* impact of increases in the price of petroleum over the last decade and half, namely, the *direct* impact on the cost of their petroleum imports, and the *indirect* impact, through the higher prices of imported goods and equipment from the industrialized countries, these higher prices themselves reflecting the increased cost of petroleum to those countries;
- the reduction in the market prices of their exports, particularly agricultural products and minerals;
- high interest rates and severe exchange rate fluctuations;
- the general decline in demand in the industrialized countries.

The participants posed the question, if Africa is to recover from its present situation, and given this formidable list of exogenous factors, is it equitable to expect that it should do so entirely with its own resources? Participants cited the vicious circle in which sub-Saharan Africa finds itself: a paucity of resources, leading to a worsening of the problems, which in turn leads to even fewer resources, and so on.

Improving policies—to encourage more efficient use of existing facilities and services—and strengthening planning to ensure economic rationality in the use of investible resources, were seen as key responses of the transport sector to the economic crisis facing sub-Saharan Africa. In several countries participating in the roundtables (Ghana, Kenya, Nigeria, Zambia, among others) policies had recently been strengthened or put into practice in the following areas:

- higher user charges for services and public facilities (despite a realization that they will translate into higher transport costs that may well have an adverse impact on many other sectors);
- reduction of staffing levels in transport parastatals and government agencies;
- divestiture of ownership and management in selected parastatals.

There was consensus that planning and coordination of transport investment and operations should be improved. Transport planning and coordination units should be strengthened; economic viability should be adopted as the key factor in deciding allocation of resources, compatible with social, environmental, and other objectives reflecting national policies and aspirations; and the concept of staging large investments in line with demand should be applied in all transport modes. Modal competition should be encouraged whenever possible, and tariffs should be such that each transport mode attracts and carries the traffic for which it has a comparative advantage.

Allocation of resources between investments and maintenance

Given the severe shortage of resources and the adverse economic effects being felt as a result of neglecting maintenance, there was general agreement that road maintenance—as well as maintenance of other infrastructure—should be given priority in the use of funds. Many countries in sub-Saharan Africa have in fact adopted this approach and it constitutes one of their key policies in the transport sector. There were, however, reservations about a complete halt to new investments in the transport sector, and a recognition that each country must assess the need for new infrastructure in the light of its own specific circumstances. Reasons cited by participants as being relevant to at least some countries in the region for undertaking new transport investments included the following:

- populated areas with practically no access because of very rudimentary road networks;
- resettlement of population to more fertile lands in isolated areas without transport links;
- changes in the economic role of the transport networks over the last 20-30 years, from carrying exports destined for the erstwhile colonial powers, to meeting domestic economic development and social needs.

Additionally, some countries needed to make new investments or to rehabilitate their networks, or both, to face constraints on their international traffic (e.g., trade transiting South Africa).

A particularly important need for new road construction was in support of programs for increasing agricultural output; however, some participants noted that inadequate information from the agriculture sector often hampers planning of highway investments or leads to misinvestments in feeder roads.

Many participants noted the difficulties of implementing a policy favoring maintenance over new investments because it was easier to obtain international financing for the latter; most external financiers had been reluctant in the past to provide funds for maintenance of infrastructure, or to finance purchase of spare parts. Participants stated that the World Bank, which in recent years had increasingly funded maintenance programs, should attempt to persuade other external financiers—multilateral as well as bilateral—to shift their policies toward maintenance. These policies should apply not only to highways, but to other modes also, and especially to port and railway equipment. Lack of maintenance of motive power was particularly serious, and locomotives in most African railway systems were lasting considerably less than the 20 years usually assumed with good maintenance. Identification of the problems hampering maintenance was not a trivial or simple task, and analysis more thorough than previously was required if the problems were to be diagnosed correctly.

Definition of the road network to be maintained

Participants agreed that limited resources for maintenance required governments to select only a part of the road network (the "classified network") to be maintained under the national budget. In countries with fewer financial constraints (e.g., Kenya) the classified network represents about 50 percent of the total road network; in others (e.g., Ghana) achieving the 50 percent level was a target to be reached gradually over a period of several years. The optimum size of the classified network should be decided upon by each country based on available resources. The problem of defining the road network that the national budget could support was considered especially difficult in the larger countries with scattered populations (e.g., Sudan).

Use of local contractors

Several participants deemed the use of local contractors, even for maintenance, to be one of the main policy issues in the transport sector. Most participants supported use of local contractors as a way to reduce costs of highway maintenance, and there was general agreement that developing local industry made good economic sense in most countries of the region. There was endorsement of international and bilateral lending agencies' programs that encourage such development (e.g., a USAID-sponsored program under way in Sudan).

Regional cooperation

There was agreement that improving efficiency of transport investments and operations required increasing regional cooperation in areas such as

- preparation of investment projects for international links, mainly roads and railways, requiring a feasibility study of the *whole* investment and *joint* submission to international and bilateral lending agencies;
- international land transport, particularly improving the efficiency of multimodal transport through better coordination in use of equipment and simplification of international transport documentation;
- standardization of railway and other transport equipment to facilitate and reduce the cost of spare parts and maintenance works, and to reduce training needs.

Some participants stated that in view of the large number of landlocked countries, and of other countries in the region whose geography required transiting a third country, international links were vital to their economies. External financiers should therefore make a greater effort than previously to support projects in such links.

Training

Most participants agreed that sound training programs were essential to help countries improve utilization of their resources and strengthen their institutions. Training should cover the whole range of personnel in the public sector—parastatals as well as government agencies—and in the private sector. Special emphasis should be placed on management skills and training for maintenance operations. The importance of setting up programs for *retraining* personnel, as an integral component of policies for reducing overstaffing in public agencies and enterprises, was also noted.

The role and operations of the financing agencies

Participants perceived the financing agencies, bilateral and multinational, as a major factor—for good or for ill—in the present situation in sub-Saharan Africa. While recognizing the useful role and good work of the agencies (and the World Bank received its share of the plaudits!), participants were outspoken in what they considered the negative aspects of the Bank and others, and in how the agencies' performance and image might be improved.

The financing agencies are sometimes seen as

- too simplistic in their approach to, and in their prescriptions for, Africa's current crushing problems;
- too slow in their response, reacting only when crises had arisen rather than anticipating them;
- harping too much on alleged mis-management in African governments and entities;
- overly committed to, and mesmerized by, the economic rate of return as the prime measure of viability (the World Bank was singled out here for criticism);
- exacerbating the situation in maintenance and equipment in that they, particularly the bilateral agencies, in aggregate, tend to provide a wide variety of makes of equipment, thereby increasing required inventories of spare parts, and the training needs of operators. The agencies at times even provide equipment that is quite unsuitable for local conditions.

The participants thought that the impact of the financing agencies would be of greater benefit if, for example, they would

- channel foreign exchange directly to the transport undertakings (such as ports and railways) rather than to the governments. This would obviate the need for undertakings to go "cap in hand" to government, with all the delay that that entails, their equipment and operations suffering meanwhile for lack of (foreign) spare parts;

- be more supportive of regional projects. The World Bank particularly is perceived as being less than enthusiastic for such projects.

POINTS OF CONSENSUS

The following points of consensus emerged:

1. In the face of the economic crisis and shortage of resources with which sub-Saharan Africa is confronted, countries of the region should adopt policies in the transport sector geared to better utilization of *existing* facilities and to provision of services more cost-effective than previously, through adoption of cost-based pricing, reduction in overstaffing, and improvement in management of transport parastatals.

2. Economic analysis should be the basis for allocating resources to new investments and to maintenance, but to the extent possible, decision criteria should take into account social and other national priorities. The bulk of investible resources should be allocated in the first instance to maintenance activities (these, in any case, normally have the highest economic returns).

3. Even under the best scenarios regarding external assistance and locally generated funds, it is improbable that most countries in the region, in the foreseeable future, will have the resources necessary to maintain the whole of the existing road network. Therefore, each country should establish a network that it can maintain under the national budget and set up a program gradually to increase the size of this network as financing improves.

4. External financiers should be more sympathetic than previously to the use of their funding for maintenance and rehabilitation, and to employment of local contractors in such activities.

5. Countries would significantly reduce the costs of providing transport services if regional cooperation were strengthened in the areas of

- investment projects,
- international land transport facilities,
- operations and documentation,
- standardization of equipment and training,

and if the financiers played a significant role in regional projects.

3
Road Maintenance

PRESENTATION

Condition of the networks

Sub-Saharan Africa today has a network of approximately 1,030,000 km of roads, with a replacement value of about $34 billion. A survey carried out recently by the World Bank indicates that less than one half of the network is in good condition, while more than one quarter is in a condition so bad that it is beyond normal maintenance and requires rehabilitation. The survey also indicates that there is a backlog of about $1.0 billion of work for periodic maintenance and nearly $7.5 billion for rehabilitation.

The reasons for the present situation can be classified as follows:

network and traffic

- large increases in the road networks in the last 20 years, leading to correspondingly large maintenance burdens today;
- a reduction of design life from 20 years, the norm in the immediate post-colonial era, to 10 years in more recent times. The result is that many roads are now coming to the end of their design life at the same time;
- overloaded axles, shortening effective life even further.

funding

- shortage of funds, particularly of foreign exchange, for maintenance because of emphasis on investment;
- irregular flow of funds, making planning difficult.

efficiency

- low efficiency of direct labor maintenance organizations;
- poor attitude of politicians, engineers, and donors to maintenance;
- frequent changes in staff;
- low equipment utilization.

Future scenarios

The situation is serious today, but may soon become catastrophic if the required maintenance is not carried out. If adequate funding is not made available, the situation will inevitably deteriorate leading to a significant increase in road transport costs, with serious consequences for internal movements and for exports. If adequate funding is made available, much will depend on the decisions as to the allocation between maintenance and construction.

Scenarios for sub-Saharan Africa as a whole can be posed (a) in financial terms, and (b) in terms of the network, for example,

- if 90 percent of current road budgets were spent on maintenance, and just 10 percent on new construction, it would take virtually all of the countries at least 10 years to clear the backlog, and some would need 20 years;
- if current budgets were used to *extend* the networks by just 1 percent per year, then with current unit costs for construction and maintenance, for every kilometer of new road built, four or five kilometers would be lost because of lack of funds to maintain them.

A cost that is frequently ignored by highway departments (because they do not bear it), but one that must ultimately be borne by the economies is the cost to the road user. Poor or non-existent maintenance inevitably leads to a rise in vehicle operating costs up to 50 percent higher than those on a well maintained road. Over the lifetime of a road, vehicle operating costs, in aggregate, in many cases far exceed all the other costs (road construction and maintenance).

Technical efficiency

One obvious response is to improve the *efficiency* of road maintenance operations, that is, to utilize better the existing funds available for road maintenance. Productivity in maintenance operations can be increased substantially by: (a) improving the administration of maintenance organizations, and by increasing their autonomy regarding management of personnel, equipment, and utilization of financial resources; (b) streamlining procedures for procurement of spare parts and materials; and (c) providing highway agencies with the flexibility to decide on the most effective means to carry out maintenance operations, such as through contracting or independent force account units. A recent development in highway administration in several industrialized and some developing countries has been to separate the client, who has the programming and monitoring function, from the "executor," who implements the program. This latter activity is normally best left to independent force account units or to the private sector, since centralized highway agencies are not organized for the quick response required in coping with day-to-day problems that arise in road and equipment maintenance.

Cost recovery

Governments may meet at least part of any additional funding required for maintenance by increasing cost recovery; they can consider raising more money from the beneficiaries of road maintenance expenditures, namely, the road users. It will generally be worthwhile to road users to pay the additional charges if the alternative is poorly maintained roads causing higher vehicle operating costs. Fuel taxes are in most instances the largest source of revenue from road users and are the most direct way of charging according to road use. These taxes are easily administered, offer few possibilities of evasion, and are cheap to collect. However, fuel consumption does not vary in exact proportion to road use, and consumption per ton km decreases with gross vehicle weight. Thus, a fuel tax that would be appropriate for light vehicles would not be so for heavy vehicles, and heavy vehicles would tend to be even more undertaxed since road damage, and therefore road maintenance costs, increase exponentially with axle load. To account for this, additional taxes should be considered aimed at providing additional revenues mainly from heavy trucks, including one or more of the following: annual registration fees, axle load taxes, import and excise taxes. Tolls should be used only exceptionally, since they normally have high collection costs and tend to divert traffic to roads on which user costs are higher. In setting the structure of user charges, four important objectives should be kept in mind:

- efficiency in allocation and use of resources;
- competitiveness of the road with other modes;
- opportunities for general revenue raising, particularly regarding fuel taxes that apparently introduce less economic distortions than other (non-transport) taxes;
- equity and redistribution.

Financing options

Governments should ensure that user charges are used for maintenance and that funds are released in a stable and guaranteed flow to the highway maintenance agency. This desirable aim is rarely achieved in sub-Saharan African countries, but one way to achieve it would be by establishing road funds, which, if well administered, could provide the required level of funding and ensure that funds were available when required. Road funds allow effective planning and implementation of maintenance operations, and therefore reduce unit costs. Principles of economic allocation of resources argue, however, against earmarking taxes, and the argument becomes stronger the larger the proportion of government revenue generated by road user charges. However, a road fund may constitute a valid, practical solution in cases where chronic, inadequate funding of road maintenance has caused, or threatens to cause, a catastrophic situation, which, as noted earlier, is the case in most sub-Saharan African countries. The high returns from highway maintenance, relative to practically all other uses of funds in the highway sub-sector, provides further justification for earmarking road user taxes to finance highway maintenance. Three "rules" should be used when contemplating establishment of road funds: (a) the integrity of the agency that would use the fund should be proven; (b) the use of the fund should be limited to critical maintenance items, namely, fuel, spare parts, bitumen, contract maintenance, direct labor; (c) the revenues accruing to the fund should not normally exceed the costs of routine and periodic maintenance.

DISCUSSION

Allocation of resources

Much of the discussion returned to the issue of allocation of resources available for highways, between new construction and maintenance. This issue and that of reduction in the highway networks proved to be one of the most debated topics in the roundtables. No participant or delegation gave unqualified support to the principle that all new construction be halted until (a) the maintenance backlog had been eliminated, (b) the system was in a fully maintained condition, and (c) funds were available to keep it that way. The views advanced, sometimes vociferously, included the following:

- only when the highway network is fully developed and consistent with the country's aims and aspirations, and serving all sectors that need to be served, can attention be fully devoted to maintenance;
- the agricultural sector in particular cannot be expected to produce more if there is no road infrastructure available to transport the increased production;
- if only a country's classified network is maintained, this is tantamount to condemning rural communities, currently without road access, to continuing isolation.

In summary the consensus was for "flexibility," coupled with the realization that there is no standard solution. Countries differ in terrain, the network inherited at independence, the dispersion of communities, and the degree of development achieved, etc. Each country must decide in the light of its own circumstances.

Reduction in network

The option of reducing the total road network to be maintained as a means of reducing the funding necessary for maintenance was received skeptically. Participants cautioned that this is inevitably a sensitive political issue and that highway authorities, if they accept that a reduction would be appropriate, should move very cautiously.

Efficiency of highway maintenance operations

Most participants agreed that many of the problems of inefficiency stem from *inadequate management*, and that there is a need to change existing procedures and regulations if efficiency is to be improved and the cost of maintenance operations is to be reduced. Several countries are currently streamlining procedures, increasing delegation of responsibility and accountability to local maintenance districts, and strengthening programming and planning.

Many countries represented have adopted or are moving toward *contracting out*, at least for *periodic* maintenance operations such as regravelling or resurfacing of paved roads. As regards *routine* maintenance operations, participants were divided, but many favored the use of force account as being cheaper and because of the high costs of supervising contractors in these relatively low-cost activities; however, it was noted that force account works often appeared cheap only because equipment and overhead costs were not fully accounted for, or not accounted for at all. A few countries are sub-contracting routine maintenance to *lengthmen*, with significant cost savings. In the lengthman system, an individual is awarded a contract for routine maintenance of a section of a gravel or earth road. In Ghana, for example, lengthmen on average cover 5 km of road (these contracts have been given to public works personnel to avoid lay-offs); a pilot scheme under way since 1984 has proven successful and is being expanded. Lengthmen are also being used successfully in Kenya, Malawi, and Tanzania.

Several participants noted that contracting out was important in helping to develop local entrepreneurs in the construction industry. A steady workload of construction and maintenance works was considered a key factor in developing and keeping contractors in business. In some of the smaller countries, a steady workload was not considered feasible, and this provided a justification for the creation of highway maintenance parastatals, which enjoyed more managerial autonomy and were generally more efficient than public works departments. An example from a large country was cited of the failure of a national construction company that, although supplied with good equipment, was inefficient and could not compete with smaller indigenous private contractors.

Some participants noted that in their countries the *local contractors were locally-based foreign enterprises*, but that this situation should not prevent application of a policy of sub-contracting. Indigenous contractors would develop over time. In any case, the country benefited from taxes paid and profits retained in the country by the foreign enterprises. Some participants noted that when indigenous contractors existed, they tended to use less sophisticated equipment, which was easier to repair and to operate, and therefore more suited to the region than the equipment of the foreign enterprises.

Many participants noted that indigenous contractors often do not have the capital to buy equipment or cannot get the foreign exchange for importing it. It was suggested that governments and external financiers should assist in the development of the local contracting industry through, for example, the setting up of an *equipment rental agency*.

On the general issue of contract versus direct labor, it was pointed out that "private" is not necessarily synonymous with efficiency, and that "public" (or "departmental") is not necessarily synonymous with inefficiency. Much depends on the quality of the management, the type of work involved, and other factors.

Some participants noted that *labor-intensive* methods were being used and had proven cost-effective, particularly in construction and maintenance of earth roads. In Kenya, for example, for construction and maintenance of rural access roads, which are funded at the district level and are not included in the classified network, labor intensive methods, using local labor and practically no equipment other than trucks, result in cost savings of up to 50 percent compared with conventional mechanized works. In most cases the work is of better quality. In addition, the skills acquired by the labor, and the identification of the community with the road during construction, is valuable later for maintenance.

Regarding productivity bonuses, currently used in Zaire and other francophone countries in the region, most participants felt that these would indeed encourage higher productivity, but that government regulations precluded their use in most anglophone African countries.

It was generally agreed that the cost of highway maintenance was raised substantially by *high axle loads* of trucks operating in many countries in the region. High axle loads stemmed from vehicles overdimensioned for African roads, or from overloading, or from both. Most countries found it difficult to control import of overdimensioned trucks; in some cases these vehicles are donated, in others they are financed under bilateral programs. Most countries lacked weighing stations to control overloading, and in any case, a shortage of trucks made it impracticable to attempt it. A recurrent problem for transit countries was overloading of trucks carrying trade through a neighboring country. It is costly to install and operate weighing stations at all border crossings, moreover, it was politically difficult to enforce axle load limits for international traffic. It was noted that one option for transit countries was to design their international roads to higher axle-load standards to account for the heavy trucks used in long distance, international transport, and to set up a system of user charges adequate to recover the increase in maintenance costs caused by such traffic.

Cost recovery

Most participants agreed that user charges and cost recovery principles were essential for economic efficiency and to finance road maintenance. Others noted, however, that road user charges would not normally be sufficient to cover all road maintenance costs, particularly given the substantial increase and improvement of the road network since independence and the maintenance commitments stemming therefrom. Some delegations noted that user charges were theoretically covering costs, but government used the monies collected for purposes other than road maintenance. Most agreed that this diversion of road user funds was common. One delegation challenged the practice that user charges should be levied on the vehicle or the transporters, and their country was considering a variation whereby the *generators of traffic or owners of the freight* (farmers, mining companies, industrialists) would be charged directly for the costs of road use.

Another view was that tolls could play an important role in helping generate funds for road maintenance. In one country, an experience that had started with tolls on fixed structures and later extended to selected main roads was working successfully.

Several participants noted that the issue of road user charges was intimately linked to road-rail competition. They felt that road users, especially heavy trucks, seldom covered the infrastructure costs, while the railway had to maintain the track and other infrastructure from its revenues. These participants felt that competition between the two modes was not fair under these circumstances, and that governments should intervene in the transport market and allocate traffic if necessary. Others argued that it was preferable to levy special taxes on heavy trucks rather than to have government dictate traffic allocation.

Financing of road maintenance

There were mixed views about the best way to finance road maintenance. Some participants stated that a budgetary allocation was the only feasible way; this was so because of the legal and fiscal frameworks, also because under their political systems it was for government to decide on the allocation of all available resources. Priorities in the social sectors, for example, could take precedence over road maintenance needs. Some participants supported the establishment of road funds as the only way to guarantee adequate and timely funding of maintenance. There was consensus that where Road Funds could not be set up, governments needed to be more aware than they are of the serious economic consequences of inadequate funding of maintenance.

In most countries, lack of foreign exchange was seen as being as serious as insufficient allocation for road maintenance. Highway maintenance operations were likely to be greatly hampered by lack of foreign exchange to pay for needed materials and equipment. One way to remedy this was through funds provided by external financiers.

Several participants noted that the question of user charges and financing could not be considered apart from the efficiency of highway maintenance. Adequate organization, programming, and costing of highway maintenance activities were vital if costs were to be reduced.

POINTS OF CONSENSUS

The following points of consensus emerged:

1. The road maintenance problem needed to be confronted by adopting a variety of measures, including as appropriate,
   - reducing the *cost* of maintenance operations by improving efficiency,
   - raising user charges,
   - improving the level and timeliness of maintenance funding.
2. If not already in place, countries should consider adopting all or some of the following measures to improve the efficiency of maintenance operations:
   - increasing delegation of responsibility and accountability to local maintenance districts;
   - strengthening programming and planning of maintenance operations;
   - increasing the use of contractors for carrying out periodic maintenance in all classes of roads;
   - introducing the use of the lengthman for routine maintenance of earth and gravel roads;
   - transferring maintenance responsibility from public work departments to *ad hoc* parastatals in small countries where development of a local contracting industry does not appear feasible;
   - making more use of labor-intensive methods for construction and maintenance of rural access roads;
   - assessing the feasibility and cost effectiveness of installing weighing stations to control axle loads, and the desirability of designing international roads to higher axle load weights.
3. Countries should increase cost recovery, generally, by raising fuel taxes and establishing or raising additional specific user charges for heavy trucks.
4. In view of the critical condition of the road networks, and of the substantial adverse effects of inadequate maintenance financing over the years, countries should consider establishing road funds, where they do not already exist, as an exceptional and temporary measure to guarantee an adequate, stable, and timely source of funds. In countries where road funds are not feasible because of fiscal and budgetary procedures, governments, and especially the financial and planning agencies, should be made fully aware of the importance of providing adequate financing for maintenance.
5. International and bilateral lending agencies should be encouraged to increase financing for road maintenance and to assist countries in establishing appropriate financing mechanisms.

4
The Management of Transport Parastatal Enterprises

PRESENTATION

In the period since independence, most sub-Saharan African countries have experienced a proliferation of parastatal companies in all sectors of the economy, and the transport sector has been no exception. The proliferation has been accompanied by declining technical and financial performance and increasing deficits of the parastatals, requiring governments to provide ever-increasing subsidies from already scarce budgetary resources. The increasing deficits and the consequent government intervention in the finances of the parastatals have in turn militated against unfettered and responsible management of these enterprises. A 1985 World Bank survey of transport parastatals in francophone sub-Saharan Africa showed that only 20 percent had revenues covering operating costs plus financial charges—and these largely in ports that traditionally have enjoyed a monopolistic position—whereas in 60 percent of the enterprises surveyed revenues did not even cover working expenses.

Difficulties with transport parastatals arise from the multiplicity of often conflicting objectives that they are required to achieve. Parastatals had been established in the region with one or more of the following objectives in mind:

- to establish public control of key sectors of the economy, especially those involving national resources, infrastructure, and essential services;
- to provide basic infrastructure, credit, research, promotion, new technology, managerial expertise, and other vital factors in order to encourage more rapid economic growth in productive sectors, especially in the absence of sufficient private initiative;
- to develop an operational structure for government operations, less cumbersome and more flexible than that provided by the civil service;
- to plan the patterns and stages of economic growth and control its implementation, both in terms of objectives to be achieved and in the pattern of ownership;
- to maximize foreign exchange earnings for reinvestment within the country by taking equity positions in major export industries or to earn dividends for government in profitable companies.

These reasons may be legitimate, but the question arises: could the same ends not be achieved more efficiently and more cheaply by other means at government's disposal, such as by legislation, permit systems, or tax and incentive policies, rather than by direct government involvement? Moreover, the multiplicity of reasons put forward for establishing parastatals gives rise to a multiplicity of objectives for the parastatals themselves, and for their managements, a number of constituencies and "owners" who have the right, or perceive themselves to have the right, to interfere with the organization's management practices, financial matters, and services without any corresponding accountability or financial responsibility. Typically for a transport parastatal,

- the ministry of commerce may request low transport rates to encourage trade;
- the ministry of labor may request an increase in staffing to reduce unemployment;
- the ministry of planning may request that available external financing be used, irrespective of the merits of a proposed investment;
- social ministries and provincial governments may request below-cost (or even better, free) services for "social" reasons.

"Program contracts"[3] are being used increasingly to improve relations between governments and parastatals, and especially to give parastatal managements greater autonomy. The program contract defines in clear terms the parastatal's objectives and the rights and obligations of both parties, these latter being typically the government (generally involving the responsible technical ministry, the ministry of finance, the president's or prime minister's office) and the parastatal company. In Senegal, for example, the government has negotiated program contracts with several parastatals, including some in the transport sector. The process of negotiation of these contracts produced a number of successful outcomes, including redesign of parastatal services, reduction or elimination of unnecessary investments, and focus on efficiency and rehabilitation. Program contracts, however, are not always easy to negotiate and involve hard choices and compromises between economic and financial considerations on the one hand, and political and social realities on the other.

Regarding internal management of transport parastatals, three areas are of special concern. First, *management of human resources*; people are the most important resource of any organization, and their management can and should be improved at all levels of the enterprise. All staff, from top management down, should be made accountable for their performance. Second, *financial management;* the key area for improvement is in the availability of accurate information to make better and faster

3. Much of the impetus for this concept of the "program contract" originated in the francophone world, and the equivalent French term, "contrat-plan," is widely used even in anglophone countries.

decisions affecting costs, controls, and prices, and to support requests for tariff increases. Third, a *commercial orientation*, for services offered and their prices.

Pricing and cost recovery policies in important parastatals such as railways and ports raise special issues. In *railways*, tariffs frequently do not cover costs, and the deficits have to be funded by the railway owner, the government. Subsidies, in addition to blurring financial performance, are inequitable since non-users subsidize underpriced services; moreover, the subsidies are a drain on normally scarce national budgetary resources. For cost recovery to be an effective pricing strategy, railways must have an efficient cost base appropriately sized for the level of their operations. In sum, (a) cost recovery is essential for efficient operations of railways; and (b) a strategy on cost recovery forces management stringently to control costs and investments, and governments to provide a clear and constructive set of objectives.

The particular feature of *port services* should be reflected in their tariff structure. Charges are levied against the ship, also against the cargo, since the beneficiary of port services can generally be identified. A good cost accounting and financial management system is essential to establish cost-based tariffs. When a port undertakes the complete range of services to ships and cargo, it may well be inefficient and have high costs. In these cases, consideration should be given to privatizing some services—a practice increasingly being adopted in industrialized and developing countries alike.

Two recent studies of West African parastatals providing international transport services show that the cost of providing efficient service could be reduced significantly by increasing regional cooperation. The first study, on liner shipping, focused on general cargo to and from West Africa. The analysis showed that this traffic, the annual freight bill for which is about $1.5 billion, suffers from several factors, notably, (a) imbalance and fragmentation of the trade resulting from small shipment size and the many small, relatively expensive vessels serving this traffic; (b) lack of competition, as trade is dominated by one maritime conference; and (c) high port costs. A better organization of the trade and of liner shipping services could result in savings in the freight bill of some $300-$375 million annually; beyond this, substantial additional savings could be achieved in inventory, transit, and land transport costs. The main measures that would need to be taken to achieve such savings would be (a) improving regional or sub-regional cooperation to reduce trade fragmentation and explore non-conference alternatives; (b) phasing out of inefficient vessels and operators; (c) streamlining customs clearing procedures (particularly for containers); and (d) improving port performance through, *inter alia*, privatization of selected port services.

The second study dealt with air transport and was commissioned by the Economic Commission for West African States (ECOWAS). The study concluded that the present airline system is not serving the region's needs adequately. For example, of the 120 possible city pairs connecting the 16 national capitals, only 7 have daily services, 77 have no non-stop service at all, and 53 have no service whatever. Only in a small fraction of all city pairs is it possible to reach the destination the same day. The study showed that by changing and harmonizing schedules it would be possible to provide same-day connection between 90 percent of the capitals, with a substantial reduction in total airline costs compared with today, and without the need to purchase additional equipment. Better connections between ECOWAS members, moreover, would facilitate trade and political and economic integration.

DISCUSSION

Role and size of the public and parastatal sector

Several participants noted that the current role and status of parastatals in sub-Saharan Africa had to be looked at in their historical context. The severe shortage of qualified manpower and of capital at independence had forced many governments to take control of most of the economic activities, either through government departments or through creation of parastatals. In transport, there had been a compelling need for governments to ensure adequate provision of freight and passenger services. Over time, parastatals had proved to be efficient organizations and governments had thus created many more to take over functions previously served by government departments. As a result, in most countries in the region there was a large number of parastatals; in one country a figure of 140 was cited. Transport parastatals are among the more numerous and employ large numbers of people; in fact the railways are often the single largest employer in a country.

Several participants stated that, in the majority of cases, creation of parastatals had been inevitable and had fulfilled an important function. For example, in many countries, in addition to meeting their main substantive objectives, parastatals had carried out a significant amount of training for their personnel, generating an important cadre of qualified technicians and managers. Others noted that many parastatals were audited annually by international consultants, thereby setting precedents of financial discipline and accountability. Conditions prevailing at independence had, however, changed substantially over time, and there was now a growing burden on the national budget stemming from large and increasing parastatal deficits. As a result, many governments were reassessing the role of parastatals, refocusing them or even pruning the parastatal sector. Participants from several countries reported that their national authorities had recently created task forces to look into this question. Most participants stated that their public sector was overextended and, at least in the case of transport, public intervention—through government departments or parastatals—should be trimmed and left only in key strategic areas, or where monopolistic conditions (such as the railways and ports) or unavailability of capital in the private sector made public ownership divestiture impracticable. However, in many areas in the transport sector parastatals were already facing competition from private enterprises (or if there were no competition it could easily be established), and in most of these cases there was no longer an economic rationale for the continued provision of parastatal services. Examples were trucking, buses, some port services, and river freight and passenger services.

It was noted also that several countries were considering, or had already adopted, a policy of selectively retaining ownership but divesting management. Cases in point were a container port terminal and port berths owned by the state but operated by private firms on a concessionary basis.

A further example was quoted of successful urban and rural road transport services provided by cooperative companies formed mostly by association of individual owner-operators.

Framework of government-transport parastatal relationship

Several participants reported that a major source of problems in the management of parastatals was the board of directors. Board members were appointed by governments and, unfortunately, people appointed often had no personal qualification or lacked knowledge about the parastatal's service and financial objectives, or both. Another recurrent issue was the large number of authorities to which the general manager had to respond and that often interfered in day-to-day operations. A participant noted that in his country a recent law had streamlined hierarchies and had practically eliminated the problem of multiple "masters."

Several participants supported the idea of the program contract, and expected that it would soon be introduced in their countries. Transport parastatals, particularly those subject to conflicting objectives and those being requested to provide non-commercial services priced below cost (and hence receiving large subsidies), were considered to be prime candidates for experiment with program contracts.

Internal management

Most participants shared the view that internal management was hampered by excessive government interference. Tariffs, recruitment, and employment policies were seen as the areas where interference was most damaging. Tariff adjustments were excessively delayed by governments, and the adjustments when approved were generally inadequate. Overstaffing, which was common to most transport parastatals in the region, hampered technical as well as financial performance. Participants noted that general managers had little autonomy in dealing with this problem, unless government took the initiative and supported measures aimed at reducing redundant staff. Several participants stated that some transport parastatals in their countries were reducing staff by attrition; however, in most cases this approach was considered insufficient and should ideally be combined with retraining to reallocate staff in the company or allow them to gain outside employment; no cases were cited where such retraining was under way.

Cost recovery and subsidies

Most participants agreed that transport parastatals were prevented from pursuing a cost recovery policy because governments held tariffs low, and the compensating subsidies they provided were too small and came too late. There were divergent views as to whether subsidies should be provided at the end of the fiscal year based on actual working capital needs or tied to specific services provided below cost; most participants seemed to favor the latter because it allowed better financial planning and imposed some sense of accountability to both the treasury and the parastatal.

Participants noted that, because of insufficient and late payment of subsidies coupled with difficulties in obtaining foreign exchange, parastatals could not buy spare parts and maintain infrastructure and equipment. This hampered operations, reducing revenues and further undermining the entities' financial positions. An additional detrimental effect of subsidies was that staff did not necessarily relate financial losses to poor technical performance, but rather to the non-commercial services requested by government at below-cost tariffs. One paradoxical consequence was that staff sometimes were awarded productivity bonuses in the face of financial losses!

Regional cooperation in international transport services

Participants generally agreed that there was merit in increased regional cooperation in *shipping*, although difficulties would be encountered in practice, given the existence of inappropriate vessels in the national fleets, and given the adverse effect that rationalization would have on employment. Some participants, however, queried the benefits of regionalization because in their opinion, national shipping lines, even if inefficient, had a restraining influence on maritime freight rates,[4] and regionalization would remove that constraint.

Participants likewise agreed that rationalization on a regional basis was desirable and theoretically feasible for *air services*, but here too, without overly emphasizing the negative aspects, practical difficulties were foreseen, specifically those relating to

- currency exchange and convertibility,
- absence of a regional financial "clearing house,"
- the benefits of regionalization falling unevenly between the national carriers,
- conflicts with bilateral air transport agreements.

Problems were also envisaged in the harmonization of landing fees and air navigation charges.

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4. A questionable assertion, given the predominant share of the traffic carried by conference shipping.

The importance of increasing regional cooperation was noted with respect to other areas, notably

- standardizing expensive transport equipment (such as locomotives) and establishing pools of spare parts, which would lead both to reduced purchase prices (through the increased leverage of larger purchase orders) and to lower equipment maintenance costs;
- improving facilitation and documentation for international land transport;
- organizing and carrying out training programs for technical and managerial personnel;
- organizing meetings for officials of the region to exchange information about parastatals' technical and supervisory personnel in the areas of operations, finance, and management.

POINTS OF CONSENSUS

The following points of consensus emerged on parastatal management:

1. Conditions requiring the creation of many parastatals at the time of independence have changed substantially and, at least in the transport sector, public resources could be better utilized by phasing out loss-making parastatals in areas where the private sector could perform at least as well.

2. In circumstances when state ownership of transport parastatals is essential, or at least highly desirable, the option of divesting management should still merit consideration.

3. Parastatals' managements should be given considerably more freedom than they currently enjoy in matters of tariff setting, recruitment, and general personnel policies.

4. Program contracts can be useful instruments to bring about managerial freedom, but coupled with increased management accountability.

5. Governments should provide parastatals with subsidies for specific services that governments want provided at below commercial rates.

6. The costs of a continuing lack of regional cooperation are unacceptable, and despite inherent difficulties, strong regional cooperation is a goal that should be actively pursued.

5
Institutional Development, Training, and Technical Assistance

PRESENTATION

Institutional development in sub-Saharan Africa, despite extensive use of technical assistance (TA) in many forms over 20 years, has progressed substantially slower than expected, and the basic goals of improving institutions and transferring knowledge are still far from being attained.

Technical assistance has traditionally been, and is still, an important tool used by managements in both industrialized and developing countries for pursuing institutional change. The challenges currently facing Africa for accelerated growth will necessitate further reliance on TA, but ways must be found to make such assistance far more effective than heretofore.

The problem is complicated by the changing form of development efforts in Africa over the last 10-15 years and the implications for the type of external expertise now required. At least until the mid-1970s, "development" was essentially the preparation and implementation of development projects, and much of the assistance required for these tasks came from engineering and other technical consultants. Although the problems faced were often technically complex, the nature of the consultants' tasks was relatively easy to define and the expected output was tangible. Performance was clearly measurable, although in practice monitoring of performance was often weak.

While investment projects are still important, the development focus over the past years has been shifting to the strengthening of institutions, the management of technological and social change, and the study and implementation of policy reform. These new directions have important consequences for the way a country should manage TA, for the nature of relationships to be established, and for the type of expertise required.

TA furnished by consultants, whether individually or from engineering, economic, or management consulting firms, can be categorized as follows:

- *TA for preparation or execution of specific projects.* This is the most traditional form of TA. It utilizes specialized or highly technical skills, and the goals are precise and usually measurable. It is not specific to Africa, but is used in all countries and by many entities, public sector as well as private enterprises.

- *TA in an operational (or substitution) role.* This is the most common type of TA in developing countries, particularly in sub-Saharan Africa. It involves tasks of a routine nature, of a medium technical level, and usually fills needs in national structures, substituting for national personnel where the numbers or experience of management, supervisory, or technical staff are insufficient. This type of TA accounts for the majority of the 80,000 experts working in all sectors in sub-Saharan Africa. This form of assistance has generally *not* lived up to the countries' expectations, the main reason being the failure to manage the assistance within the framework of an overall national program based on a coherent personnel management policy. An additional reason is that often undue expectations are set on the potential for the transfer of knowledge, which in fact has been low, since meeting operational responsibilities has taken precedence, and is generally a full time task.

One country, Botswana, has been successful in dealing with this type of TA by managing it in the same way as all other branches of government. Expatriates occupy both line responsibility and adviser posts, and are subject to the same system of evaluation, performance monitoring, and training as local personnel. At the same time, a process of internal evaluation allows necessary adjustments to be made in the composition of the TA to accommodate both short-term and long-term needs. In addition, a program of selection of counterpart staff from new graduates has been instituted. The graduates are trained in specific disciplines and gradually extend the range of their responsibilities as they acquire the requisite experience, until after a number of years they take over from the expatriates. While Botswana's experience is interesting and has worked, other approaches are possible.

- *TA for institutional development.* The crises currently being experienced by many developing countries have necessitated a move toward far-reaching reforms. In most situations, the reform process has been hampered by lack of reliable data and of coherent programming, coordination, monitoring, and evaluation of development activities; there is an urgent need to consolidate national institutional systems. The TA required to accomplish this is therefore particularly important and experts entrusted with this type of assistance must be divorced from operational, day-to-day, management tasks. Experts provided can be categorized according to the activities required of them:

  - those responsible for dealing with organizational problems and for developing structural reforms;

  - those responsible for establishing procedures, methods, and operational rules for organizational structures and for installing decision-making aids (data collection and processing, and evaluation, monitoring, and control systems);

- those responsible for training national staff, who will be called upon to use the instruments developed in a process of continuous adaptation of management to current requirements.

• *TA to provide the "outsider's view."* This is a management technique used in developed and developing countries. Staff coming as consultants from outside a country or an institution can be useful for introducing new ideas and new experiences, but they can be useful also when staff from inside the country or the institution cannot, almost by definition, function effectively. For example, in a country with few resources, a new primary school can be an important financial as well as scholastic asset for a community, and the government official responsible for approving new schools can be subject to heavy pressure. A country can therefore decide to choose someone from outside the education system or from outside the country to have the responsibility of issuing school permits. There are also situations where it is necessary to ask someone from outside to come into a position to restore order and improve performance, and management literature is replete with examples of the "turning around" of poor performance. This is a result, in part, of the use of "outsiders" to take the more difficult decisions. Finally, there are occasions when expertise is needed in a special area, but an institution of government does not want to hire this expertise permanently. In short, using outsiders, be they nationals or expatriates, is a normal tool of government and of institutions, and should be viewed as such.

The achievements in *training*, both on-the-job and formal training, have been, as with technical assistance, well below expectations, for two main reasons. First, the money devoted to training has been clearly insufficient. The funds allocated for training are less than 10 percent of the $5 to $6 billion that are spent annually for TA. Second, seldom is training taken as a key element in improving development institutions. Training ought to go beyond the simple assurance that a development project will be executed correctly. It should cover the whole institution, the sub-sector (ports, railways, etc.), and increasingly the entire transport sector, at all levels, with appropriate ties to the private sector and to the country's formal education and training systems.

DISCUSSION

Objectives and institutional framework of technical assistance

There was agreement that the main objectives of TA were to help strengthen institutions and to raise their productivity. The countries of the region are in the process of consolidating the changes that have been required to adapt institutions to post-independence national aspirations and objectives. TA was needed to assist in this process since there was a lack of trained personnel, and evolving objectives and conditions required highly skilled personnel in management, economics, and finance. TA could be very useful, but it was imperative to define the needs carefully and unambiguously.

At the outset, ministries should, for every TA task, define the objectives and the nature of the proposed assistance, and prepare detailed terms of reference. Ministries should, at an early stage

- *consider trade-offs*
  - developing an institution versus filling a vacant post,
  - training versus production goals,
  - establishing procedures and systems versus managing,
  - changing mentalities versus acquiring knowledge,
  - setting few objectives (and a high probability of success) versus multiple objectives (and a low probability of success);
- *consult with other relevant ministries* to confirm that the proposed assistance is really necessary, and consult with local staff who will be involved with the consultants;
- *develop indicators* against which progress in achievement of objectives can be measured.

Participants reported that effective use of TA was sometimes hampered by inherited institutional systems that retained generalists in top positions who do not always appreciate technical requirements, and who constitute a barrier between technical specialists and decision-makers. To eliminate these problems associated with the traditional civil service structure, one participating country was cited as having restructured ministries on "company lines."

It was reported also that another factor hampering TA was its bad image. The pay scales of expatriates are common knowledge, and national civil servants are generally unwilling to accept the large discrepancy in salaries and fringe benefits. Several participants felt that ways must be found to provide incentives for local counterparts, such as providing opportunities for study tours abroad or regrading staff as international staff when the entity operates a reciprocal scheme with a regional partner. Staff could be assigned as visiting staff a few weeks each year, and their remuneration increased as a consequence during that period.

Several participants shared the view that most countries in the region had reached a mature stage in the use of TA, and were using it selectively and more effectively than previously. Governments, therefore, should not be discouraged by the failures and the bad image of earlier times.

The experience of Botswana in managing TA was seen as valuable. Countries should assess the possibility of addressing the management of "substitution" TA within national manpower development procedures.

The use of external consultants as a means of delaying government decisions was criticized as expensive and inappropriate.

Sources and selection

There was agreement that countries should explore various sources of, and even different approaches to, TA before arriving at their decisions. There were many sources and options, each with different costs and institutional implications, for example, there was sometimes a choice

- between bilateral and multilateral financing;
- between a team of individuals or a team from a consulting firm, or of twinning with a similar institution from another country with a reputation for efficiency.

Twinning was a relatively little-used approach that appeared to have significant potential. A suggestion was made to go further by establishing a *triple* relationship between the receiving and twinning institutions and a consultant. The point was made that interviewing staff of the twinning institution, as part of the recruitment process of experts to be seconded was essential, since twinning is a long-term relationship. It was important for the receiving institution to know corresponding officials in its twin so that direct contact could be made, official to official, to discuss problems and solutions.

It was emphasized that commitment of the expert to the job was a vital factor in the selection process, and that in this regard it was essential sometimes to interview spouses as well as the experts themselves.

Several participants suggested that international agencies (such as the World Bank and the African Development Bank) should maintain files on consulting firms covering their performance, commitment, and other relevant information, and make such files available to member countries. It was noted that these agencies already provide informal advice, but that the setting up of a system to provide performance information on consulting firms might pose legal issues, and the agencies might be liable to lawsuits. Participants also remarked that their countries wished to have a greater say in the selection of consultants financed under *bilateral* assistance; those financed by *multilateral* agencies are selected by the country with only consultation with the agency concerned.

Implementation

It was noted that both client and supplier of technical assistance must be in frequent contact to review progress, performance, and expectations, and possibly to assess the need to refocus the assignment or replace experts. A recurrent source of problems was experts' lack of knowledge of local practices and activities. Contentious issues in the experts' terms of reference (such as proposals to reduce manpower) should be discussed early in the assignment and the government should provide guidelines.

Another important issue was whether experts should be in line or in advisory positions. Use of expatriates in line positions was difficult and should be limited to cases where quick improvement in productivity was an overriding objective. The participants shared the view that experts in line positions should not be assigned formal training responsibilities, but should nevertheless be willing and have the disposition and willingness to pass on their knowledge to local counterparts.

There was consensus that governments should closely monitor consultants' performance and be uncompromising when performance was unsatisfactory. Governments should, however, know exactly what they want to achieve, be reasonable in their expectations, and respect the terms of contracts.

The counterpart was a particular issue in implementation of technical assistance programs. Assignment of good counterparts to work with consultants was vital for the success of the task; however, it was difficult generally to find or attract counterparts with the right experience and commitment. Often counterparts are assigned only a few weeks before the end of the assignment. When suitable and sufficient counterparts cannot be found, experts in advisory positions with responsibility for on-the-job training ended up as doers rather than as trainers. There was merit, therefore, in viewing the expert as the counterpart of the local staff, rather than the reverse. Another approach used by some countries was to let consultants express an opinion during the selection of nationals working with them.

It was noted also that it is not wise to go too fast with the replacement of expatriate personnel. Young professionals with only two or three years' experience should not be expected to move straight into managerial positions.

Use of local consultants

The use of local consultants was considered by the participants as a particularly important issue. There was consensus that no country could do without some outside assistance, but that an effort should be made to help strengthen domestic consulting firms and make more use of them. The use of local consultants was part of a country's development objectives, and was cheaper than use of expatriates. Moreover, local consultants were more likely than foreign consultants to prepare recommendations in tune with the economic, political, and social environment of the country.

Several participants stated that international and bilateral agencies should agree to finance *local* experts as part of their projects. It was noted that World Bank policy did not exclude financing of local consultants, in fact there were many examples of this in Africa. The only criterion was adequate professional skills and experience, and competence on the job. In many cases, however, it was difficult to find the highly specialized skills demanded locally.

There was agreement on a suggestion that joint ventures should be insisted upon, so that in, say, ten years, domestic firms would be able to submit their own proposals based on the experience acquired during the joint venture. A note of caution was injected in connection with joint ventures. If the local partner was not professionally active and was in the consortium purely for the profit, no experience would be gained and there would be no development of the local industry.

Training and manpower development

There was agreement that training programs were vital if the benefits from the country's resources were to be maximized. Training programs to be embarked upon, whether under a TA program or separately, should be designed in the context of a comprehensive manpower development plan; otherwise training may be irrelevant and become a source of future unemployment. As part of a manpower development plan, training should be considered an important factor in career development and promotions. This was considered not only as a sound personnel practice, but also as a needed inducement for training, particularly for younger professionals.

Participants felt that external financiers should give more attention to training in their projects and should focus on a *complete* training program for an institution rather than limiting themselves to the training of a few individuals.

Several participants commented on the lack of opportunities in transport training for African countries, particularly the absence of formal academic training in transport economics, management, and planning. In most countries, there were neither the facilities nor the human resources to teach these subjects, and in addition, the potential audience was too small to justify regular, national courses. In these cases, *organizing* regional training courses was seen as more appropriate. On-the-job training by attachment to operational entities (consulting firms, international agencies) was suggested as probably a second best option to formal courses.

Concern was expressed about the difficulties faced by an institution in retaining newly-trained staff. Bonding had been tried in several countries, but had not proved effective. In one country participating, the government is trying to harmonize remuneration in the public, parastatal, and private sectors to be able to attract and retain better qualified staff. This would help to retain newly-trained staff as well as to reverse the "brain-drain" and bring back well-trained nationals living abroad. This approach was not perceived as feasible in most countries given the shortage of budgetary resources and the large public sectors.

POINTS OF CONSENSUS

The following points of consensus emerged:

1. Countries *can* improve the use of TA by integrating it with national manpower planning and development activities, and by managing it centrally.

2. Agencies receiving TA must, at the outset, define clearly the objectives to be achieved and the outputs sought.

3. Qualified and motivated counterparts are vital for the success of TA programs. When counterparts meeting these criteria are available, ideally they should be given line responsibilities with the outside experts acting as advisers.

4. Outside experts in line positions or with a main responsibility for production goals should *not* be given formal training responsibilities.

6. A variety of TA methods exists and should be considered by governments before making decisions or specific programs. Twinning, one of the methods, has generally been underutilized.

7. Training included in TA programs should be part of, and be integrated with, broader agencywide and sectorwide training programs.

Annex A

List of Country Participants

Roundtable No. 1: April 1-5, 1986

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Roundtable No. 2: April 7-11, 1986

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Roundtable No. 3: April 14-18, 1986

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Guest Speakers

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Simon Feldman	Director International Cooperation (ORT)
Richard Robinson	Responsible for Overseas Work on Road Maintenance Transport and Road Research Laboratory United Kingdom

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