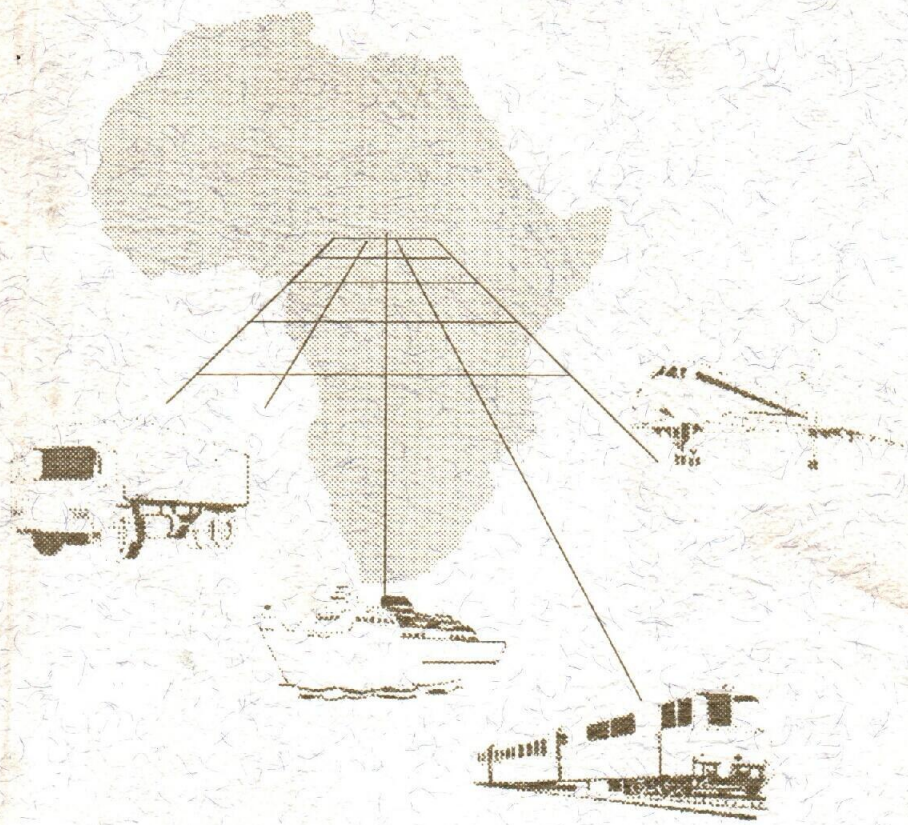


PERSPECTIVES FOR THE MANAGEMENT OF TRANSPORT AND COMMUNICATIONS IN AFRICA
Edited by Dr. Ngila Raphael Mwase and Sindiso Ndema Ngwenya—AAPAM



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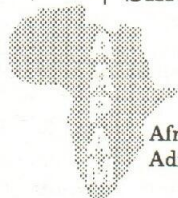


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**Perspectives for the
Management of
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Dr. Ngila Raphael Mwase and
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African Association for Public
Administration and Management

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**OPENING ADDRESS BY
HON COLONEL N.P. MOKHANTS'O
MINISTER OF TRANSPORT AND COMMUNICATION OF THE KINGDOM OF LESOTHO**

The Transport and Communications sector is very important in the enhancement of the development of a country's economy. It is a chain that links production to industry; industry to market; administrative centres to the rural communities. It enables communication between countries and indeed continents as well. But so often, if not always, it is always, it is always forgotten when major sectors of economic development are given priority in resource allocation. It is my sincere hope that this meeting will highlight the importance of this sector and recommend that your respective countries accord it due priority in the future.

The transport business depends on a well designed infrastructure in order to function properly. It is the responsibility of this conference to examine the factors which influence and/or facilitate efficient and effective systems. Look back and see what the colonial era provided. Are we developing better facilities now that we are independent or is the situation getting worse? I can proudly say there is progress in the case of Lesotho. Lesotho had only one kilometre of bitumen road at the time of her independence but she now has more than 475 km, a clear sign of self-determination to develop faster than the pace set by the colonial rule of 100 years.

This bitumen development example is cited in order to stimulate you to achieve more when you return to your countries. Don't allow foreigners to set your targets, but instead set them yourselves and move at your own pace which allows you to utilize your available resources on cost effective operations.

Mr. Chairman, this now leads me to the issue of good management which every healthy organization or sector needs for smooth as well as orderly development. You may have adequate infrastructure, strong linkages with other sectors, adequate human resources etc., but tangible results will not be attained if you have poor management. A well managed transport system is the one that ensures that the modes of transportation and communications are operational at all times. Maintenance and repairs should not be impeded by unavailability of spares, lack of trained mechanics or technicians or shortages of funds for timely procurement of the required materials. In other words, proper planning has to be done and monitoring of the system effected on a regular basis. Therefore, let us advocate good, efficient, as well as effective management of the transport and communications sector.

Let me now say a few words on who should manage the transport sector. In a healthy situation the private sector should run the transport business while governments take the responsibility of policy development and legislation of the sector's laws and regulations. But in most countries the private sector is not strong enough to meet the national requirements. For this reason, we encourage a joint venture between governments and the private sector. In Lesotho, Government has been concentrating on the support of inaccessible, remote mountainous areas of the country while the private sector is very active in the lowlands. However, there is very little role played by the private sector in the field of communications.

It is the policy of my government to get the services closer to the people. Government encourages a system which allows transfer of responsibility to the private sector once it is grown to the extent of being able to replace the government share of the business. By so doing, public funds are released for other more pressing programmes. It is my sincere hope that you persuade your governments to adopt this policy if your conditions can allow its implementation.

Allow me to conclude by reminding the participants that they should cover all modes of transport during their deliberations this week. In Lesotho we concentrate more on animal, road, and air transport because we have no railways, except for one kilometre at Maseru border, nor do we have access to a sea-port but for river boats.

Once again, I wish you success in your discussions and a pleasant stay in Lesotho.

I declare this round table conference open.

Khotso, Pula, Pula.

**AN ADDRESS BY
MR. W.N. WAMALWA, PRESIDENT,
AFRICAN ASSOCIATION FOR PUBLIC ADMINISTRATION AND MANAGEMENT (AAPAM)**

Your Excellency the Right Honourable Minister for Transport and Communications, Colonel Philip Monyane Mokhants'o, Your Excellencies, members of the Diplomatic Corps, Ladies and Gentlemen,

In 1975 the Government of this Kingdom was generous enough to host the AAPAM annual conference which had as its theme: Indigenization of African Economies. Today we are assembled here to inaugurate AAPAM's Eighth Round-table Conference on another important theme: "Policy and Management Issues in Africa's Transport Sector". Therefore I wish on behalf of the entire membership of the African Association for Public Administration and Management, the Executive Committee as well as on my own behalf to express sincere and heartfelt gratitude to the Government and people of the Kingdom of Lesotho for once more doing us the honour of hosting this conference. We are aware of what it takes to organize a conference such as this one and therefore for us this symbolizes the government's commitment to the ideals and proposes for which AAPAM was founded, that is, pursuit of excellence in Administration and Management.

This Kingdom is renowned, among other things, for its hospitality. This has been in abundant evidence since our arrival and is reflected also in the excellent arrangements made for the conference.

I also wish to take this opportunity to thank the many International Organizations, aid agencies, as well as African governments who have in one way or another made contributions to the holding of this Roundtable. Many of these organizations have supported AAPAM's activities in the past and we have been assured that they will continue to do in the future. Specially I would wish to mention the United Nations Economic Commission for Africa, the Commonwealth Secretariat, the International Development Research Centre, the Ford Foundation, the Canadian International Development Agency and last but by no means the least the Friedrich Ebert Stiftung Foundation of West Germany. As regards the African Governments, AAPAM has continued to receive moral and material support from many of them. This is today demonstrated by the fact that the majority of participants to the Roundtable are sponsored directly by their governments. We wish to assure African governments that we shall always be in the forefront of efforts aimed to improve the performance of management and Administration both in public and private enterprises.

This is our eighth Roundtable and the theme, as I have already mentioned is Policy and Management Issues in Africa's Transport Sector. It is our second sectorally focused review, coming after the Accra Roundtable in which we focused on the food and agricultural sector. The decision to focus for some time on the various sectors was taken two years ago out of a recognition for the need to bring together generalists, administrators and managers, who have in the past formed the bulk of AAPAM membership, on the one hand and the specialists, such as agronomists, engineers, economists, etc. on the other hand, so that they may share experiences and contribute to the resolution of Africa's development problems. Last year's experience in Accra showed that the approach is very useful and our hope is that the discussions will this year be as rich.

The decision to focus on the transport sector was taken by the Seventh Roundtable Conference in Africa after taking full cognizance of the important role which transport plays in Africa's development and the linkage which the sector has with other sectors. The pervasive influence of this linkage of transport with other sectors has on many occasions been dramatically demonstrated in situations of food shortage. Populations in some parts of a country have suffered serious food shortages because bottlenecks in the transport system make it impossible to have it moved to areas of need. We also know countries where governments have been unable to move aid food from ports of arrival while the target groups of the population actually starved.

This Roundtable is, of course, not the first forum to bring Africans together to discuss problems in the transport sector. Through the auspices of the United Nations Economic Commission for

Africa and subregional organizations such as ECOWAS and the PTA, experts in the transport sector have been meeting, they have reviewed the sector's bottlenecks and suggested requisite actions to improve and update the sector. Important pronouncements by Africa's top leadership including the OAU Heads of State Government meetings have emphasized the importance of improving the performance of the sector. Thus the Lagos Plan of Action and more recently the Programme of Action for Economic Recovery enjoins member States to take measures aimed at enhancing the performance and effectiveness of the transport sector. Many of these forums and documents, however, have tended to fall short of suggesting specific actions to be taken to enhance the transport sector performance. They tend to identify the constraints and problem areas within the sector, they list the ills which need to be cured but fail to proceed to the logical conclusion — the prescription of the positive measures which need to be taken to improve and rationalize Africa's transport sector.

My hope, Honourable Minister, is that discussions at this Roundtable will take the desired direction and identify the action to be taken by Africa as a whole, by individual African countries as well as Africa's friends to make existing transport infrastructures serve us more productively and effectively. We will thus be discussing and making recommendations on issues such as: The role of transport in rural development in Africa; institutional arrangements and staffing for efficient management of the transport infrastructure and operations; measures to ensure co-ordination of the various modes of transport in order to improve efficiency; promotion of greater integration of intra-African transport systems; and the transport needs of land-locked countries. It is our hope that the discussions on these issues will be enriched as we have noted before by the linking of minds between the transport specialists and the generalists policy persons attending the conference and allow us to examine the non-technical, essentially policy and managerial orientated constraints faced by the African transport sector. I would hope therefore that the discussions will dwell on questions of policies relating to the role of the State in operating, and guiding transport sector, policies relating to the division of labour between private and public initiatives in the sector; for publicly operated transport; enterprises policies relating to the relative autonomy to be enjoyed by management and supervisory organs and policies relating to measures for enhancing the operations of indigenous private entrepreneurship in the transport sector.

Many of these issues are not the exclusive concern of the transport specialist, indeed politicians, permanent secretaries, and other higher policy level making officials might have the key to their resolution than the transport specialists; might, hence the composition of the gathering attending the Roundtable.

Finally, I would want to conclude by emphasizing that over and above the technical and managerial constraints to the emergence of an effective and efficient African transport sector there are constraints that arise from the failure on the part of those of us who have been entrusted with running transport enterprises to serve as best we can. Many a time we lack requisite level of discipline, integrity, dedication, loyalty, impartiality and professionalism and so the service we render ends up falling far short of the expectations by our clientele and the citizens at large.

In this connection AAPAM did resolve in 1982 to fight those vices and as a result we adopted a code of Ethics. The code stipulates, among other things, the public officers should not "deny service", "delay services" nor "pervert services" to anyone. To the extent that all public officers in Africa including those in the transport sector commit themselves to these basic tenets of AAPAM's Code of Ethics, Africa's transport sector should become relevant to the needs of the continent and its people.

Originally, AAPAM sought to contribute to improvement in management in Africa by advocacy, organizing annual conferences for senior public servants and disseminating the proceedings. However, in recent years we have on a modest scale added operation project activities in carefully selected areas of the public sector.

As I said before, many African countries have given us not only moral support but financial assistance. Our host has in this respect been in the forefront of this effort and I would want to thank them sincerely and to call upon those who have not yet done so to come to our aid and join us in the

endeavour of making the public services effective instruments in efforts directed at raising the quality of life of the people of the continent.

May I once again on behalf of the members of the AAPAM, the Executive and on my own behalf our sincere and profound thanks to Your Excellency personally, the Government and people of the great Kingdom for the generosity in hosting this Pan-African roundtable and for providing such excellent facilities and such a memorable welcome.

CHAPTER I



Part I

Regional Co-operation in the Transport Sector in Africa

INTRODUCTION

The late 1970s and 1980s have experienced rapid and sustained deterioration of Africa's transport and communications infrastructure primarily because of the scarcity of resources required for both recurrent and capital expenditure. The secular decline in the quality and quantity of infrastructure has been compounded by inadequacies in government transport policies and management of transport enterprises, particularly parastatal companies. Yet, the transport and communications sector is pivotal to national economic development and the ultimate physical integration of the African continent. Hence, the emphasis accorded in the Lagos Plan of Action and most recently Africa's Programme of Action for Economic Recovery to the development of integrated transport and communications policies and systems. Within Africa at both regional and subregional fora transport and communication bottlenecks have been identified, discussed and proposed corrective measures either partially or fully implemented.

To implement programmes and projects in the transport and communications sector substantial investments are required. Indeed, the transport sector accounts for a large proportion of public sector expenditure in Africa. For example, out of the US\$13 billion required for the implementation of projects of the United Nations Transport and Communications Decade for Africa, 40 per cent has been financed by African countries out of their internal resources. Given the crippling external debt burden which is reflected in net capital outflows from Africa which has coincided with negative economic growth rates most African countries are finding it increasingly difficult to mobilize internal resources to finance transport infrastructure and enterprises. This combination of unfavourable international economic environment and scarcity of domestic resources has made it imperative for Africa to look for internal solutions for its transport and communications needs. As pointed out in several contributions to this volume, the solutions to Africa's debilitating transport crisis, *inter alia*, is crucially dependent on: adequate funding, clear policies and effective management of transport enterprises.

The African Association of Public Administration and Management (AAPAM) was convinced that sectoral solution to Africa's economic development requires the collective expertise and wisdom of public administrators, engineers, economists etc. The Eighth AAPAM Roundtable on Policy and Management issues in the transport sector was the second sectorally focused review, after the Accra Roundtable which focused on the food and agricultural sector. It was the conviction of the Association that the linking of minds between transport specialists and generalists policy persons would provide key solutions to essentially policy and managerial constraints faced by the African transport sector.

The format adopted in this book has departed slightly from the structure of the roundtable in order to group together papers with common themes. Consequently this volume is divided broadly into five parts.

In part one four contributors discuss the need for regional co-operation in the transport and communications sector in Africa within a historical and contemporary context with strikingly similar prescriptions.

Aleksander Virag highlights the rapid growth of demand and scarcity of internal and external financial resources. Within the broad category, Virag articulates the important tasks facing Africa in the 1980s of: strengthening transport planning and maintenance capacities; improving the performance of institutions and operating agencies in the sector; increasing energy efficiency in transport, expanding rural transport networks and services and development of regional transport and communications links to support international trade within and outside Africa. Given that transport is the largest user of public funds, he stresses that the current and prospective scarcity of resources makes it more important to efficiently invest available resources. In this regard, he argues that efficient utilization of resources can only be realized through concerted action by African governments, foreign lenders and donors. He further argues that reliable up to date statistical data is a prerequisite for sound policy formulation, transport planning, project preparation and evaluation.

The availability of this information would minimize the proliferation of endless feasibility studies and risks of investment mistakes. Regarding poor management and performance of public transport enterprises, he sees no way out other than that management should be given clear financial targets and as much as possible flexibility in deciding how to achieve them. Overall, policy reforms and institutional changes are required to open the transport sector to new initiatives and enterprises.

Turning to the United Nations Transport and Communications Decade for Africa (UNTACDA) programme, he outlines the objectives of the programme and traces the implementation of the Decade (1978–1988). Regarding Phase I programme covering the period 1979 to 1983 he shows that (US\$ 7 billion out of US\$ 15 billion) was obtained. Out of the financing secured, about 90 per cent was for national projects and about 10 per cent was for regional projects, thus emphasizing pride of the place of the former over the latter notwithstanding the objectives of the decade which was to promote regional/subregional projects. Drawing upon the lessons of the Phase I programme, the projects in Phase II programme (1983–1988) were classified and priority ranked according to the following order: maintenance and rehabilitation, training and technical assistance, inter-state links, regional and subregional projects, and other national projects. Virag shows that in spite of the reclassification of projects in the Phase II programme, on a project by project basis, national projects continued to attract more external financing than regional and subregional projects. This bias is also reflected in implementation. The emphasis on national projects as opposed to regional/subregional projects was partly due to the fact that major donor countries and financial institutions preferred to finance national projects on a bilateral basis. This bias was also accentuated by some governments which presented exclusively national projects without a regional impact to external donors.

Regarding the mechanisms of resources mobilization, Virag emphasizes that the major mechanism adopted by the Economic Commission for Africa (ECA) during the Phase II programme, was through the medium of Technical Consultative meetings which were convened for each transport and communications subsector and brought together potential donor countries and financiers. Between 1981–1985 nine such consultative meetings were held. Although useful as a medium of resource mobilization for decade projects, experience had shown that over time, their effectiveness had declined.

To give an impetus to the resources mobilization and implementation of the Decade programme, co-financing meetings were proposed as an improved mechanism for co-operation among governments, UN-specialized agencies and African intergovernmental organizations, donor and financial institutions and the ECA as the “lead agency” in mobilizing the resources for the Decade projects. He explains that in the context of co-financing, each country would be responsible for making bilateral arrangements for financing and executing its portion of the project; thus making the co-financing method different from Technical Consultative meetings with regard to scope of activities, focus of attention, commitments, degree of preparation of documents and outlook. In view of the fact that only one co-financing meeting had been held by the end of 1986, it was premature to draw meaningful conclusions on the efficacy of this method of resource mobilization.

Virag argues that Africa’s transport and communications network remains the most underdeveloped compared to other developing countries mainly due to the inability of African countries to implement agreed policies at the national, subregional and regional levels. In spite of these limitations the author is convinced that the UNTACDA programme has strengthened co-operation among African countries; hence the modest achievements in partially realizing the objectives of the Lagos Plan of Action and the Final Act of Lagos.

Daniel Faux like Virag laments the lack of sound policies and poor management of the transport sector in Africa. In this regard, he suggests that Public Administrators have an important contribution to make and, observes that up to now public administrators have taken a peripheral interest in the formulation and implementation of policies in the transport sector. He highlights in broad terms the African transport system, which, *inter alia*, is characterized by lack of cohesiveness at the national and regional levels, due to the colonial legacy that give emphasis to the development of links with the metropolitan countries. This outward looking transport and communications system contributed to the effective evacuation of raw materials from Africa at the expense of

developing the internal transport network. Referring to road, rail, maritime, inland water and air transport, he states that the integrated and complementary development of these modes of transport has been hampered among others by under-capitalization of transport enterprises giving rise to supply constraints, stagnant and declining economic growth which has dramatically reduced resources available for investment and critical shortages of trained manpower.

Faux argues that regional co-operation provides a key to the crisis of underdevelopment in the transport sector. Within the context of the Economic Community of West African States (ECOWAS) the viability of transport enterprises that are subject to economies of scale can be enhanced through bilateral and multilateral co-operation. He cites potential areas of co-operation in the subsectors of air transport operations, training and maintenance; the manufacturing of vehicles and spare parts; the pooling of cargo services and co-operation in regional shipping services. In his view African countries in general and within ECOWAS in particular are aware of the need to co-operate but have been singularly unsuccessful in realizing the accepted ideas because of national self-interest. Among other things, this is due to differences in perceived costs and benefits between smaller and larger countries that are at different levels of economic development. There is also a fear that the larger and relatively prosperous countries may politically dominate the smaller and relatively underdeveloped ones. It is not accidental therefore that political and economic considerations at the national level stands in the way of harmonizing transport regulations, procedures and documentation at the subregional level. In the experience of Faux, African countries should muster the political will that transcends parochial national interests for regional co-operation to be effectively realized.

Sindiso Ngwenya examines the institutional arrangements and policy issues in regional co-operation in the transport sector. He traces the historical and contemporary developments of the transport network in Africa and argues that the spatial fragmentation of the transport system is a product of colonialism. During the latter era priority in resource allocation was given to transportation projects from coastal ports to the hinterland. Consequently, post-independence Africa inherited a spatially fragmented transport network that accentuated polarization in interregional development within the individual countries. At the inter-State level, underdeveloped transport links have hampered the promotion and expansion of intra-African trade. Due to easier access to markets outside Africa, political, cultural and economic relations with the metropolitan countries have flourished at the expense of intra-African trade and co-operation. Given this historical background, regional co-operation in the development of integrated transport and communications is a political and economic necessity.

Ngwenya argues that although institutional arrangements in regional co-operation may differ, the general rule is that the scope, objectives and *modus operandi* of co-operation are basically similar. In this regard, he explains that regional co-operation takes place at bilateral and multilateral levels among African countries. Like Virag and Faux, he cites the objectives of the United Nations Transport and Communications Decade for Africa (UNTACDA) and states that these objectives are compatible with those enshrined in the programmes of subregional organizations.

In reviewing the institutional arrangements for co-operation he attributes the failure to achieve meaningful and effective co-operation to the poor conceptualization and elaboration of projects and programmes by regional and subregional organizations. He argues that it is ironic that the majority of intergovernmental organizations in Africa have utilized similar paradigms of co-operation with donor and financial institutions that are based on bilateralism rather than regionalism. The only exception to this practice is the SADCC where donor and financial institutions have to a certain extent accepted regionalism by historical accident rather than design because of the need to delink the economies and transportation of independent African countries bordering South Africa from the abominable *apartheid* Republic of South Africa.

He further attributes the lip service that African countries pay to regional co-operation to the institutional orientation of national planning machineries which are not geared to formulating, preparing and evaluating national projects and programmes within the regional context. This has given rise to biased conclusions on costs and benefits because of the failure to take into account all possible economic opportunities. Regarding mobilization of funds for projects Ngwenya like Addy,

is in favour of national and regional development banks assuming the leading role. On the removal of non-physical barriers he argues that the unenviable record of African countries is due to neglect of modernization of national legislation as is evidenced by failure to implement international Treaties and Conventions to which the countries are signatories. The author concludes by stating that unless traditional paradigms are changed and technical deficiencies in programme formulation are resolved the imperatives of regional co-operation would remain elusive.

Andrew Addy in his paper argues on the need to give law the pride of place that is accorded to other disciplines in the promotion and consolidation of regional co-operation. In this regard, he explains that creation of organizations through treaties and protocols is essentially a legal phenomenon. A sound legal foundation is a *sine qua non* for effective regional co-operation, hence the necessity of well defined and binding obligations and a central enforcement machinery. In reviewing treaties and protocols he cites the treaty of the ECOWAS which imposes broad and loose obligations on its members towards compliance with its provisions. In contrast, the PTA Treaty provides for fairly binding obligations in some cases without an effective central enforcement machinery. Addy proceeds to distinguish a central enforcement machinery from a body that is set up to settle disputes and argues that the latter is merely concerned with the interpretation of the provisions of the Treaty in situations of dispute between members.

On financial mobilization he notes that the model of donor conferences has failed and supports the creative approach in mobilizing finance through national, regional banks and financial institutions. This approach would introduce at least in Africa, whole areas of International Development Banking and Financial Laws.

In the absence of the elimination of outmoded national legislatures that impinge on the transport sector, Addy strongly argues that the harmonization process would be difficult and slow in realization. The contribution of Law to the modernization and harmonization of Legislation could be acquired if regional and subregional organizations could set up permanent committees of Legal experts.

In part two, it is shown that the policy prescriptions proposed by Virag, Ngwenya and Faux for strengthening regional co-operation in the transport sector in Africa are critically dependent not only on policy but also on the effective management of the transport sector. Indeed there seems to be an emerging consensus between donor countries, financial institutions and African countries that a properly trained management cadre provides the best hope of rescuing Africa from the present debilitating crisis in the transport sector.

In addressing policy and management issues in the transport sector Hogg, Aziz Dia and Dadzie are unanimous that the failure to translate declarations into practical programmes in Africa, are not due to the absence of policy, formal and informal but due to the half hearted manner in which most African countries are closely linked to the micro-economic crisis and underlying population and urbanization. The problems are wide ranging and include technical, financial, managerial and policy aspects. The scope, nature and potential solutions to these problems are well known to managers, administrators and policy-makers; yet there exists a remarkable lack of political will in decisively administering the known prescriptions. In the assessment of Hogg this state of paralysis in taking decisions that are to the good of transport enterprises is due to the pervasive existence in most African countries of a bureaucracy that is politicized to the extent that it strives to satisfy and please party political bosses to the detriment of realizing corporate objectives. This attitude coupled with political interference by politicians in areas of decision-making that are the exclusive preserve of management has contributed to the poor performance of public enterprises. As a result, transport enterprises are characterized by institutional rigidities and inertia which have been compounded in the 1980s by scarcity of resources for capital and recurrent spending. In Hogg's view, the panacea lies in policy reforms that are based on allowing the market to allocate resources and the "privatization" of transport enterprises. In cases where the unleashing of market forces is not possible, he suggests that "contract plans" which establish enterprise performance targets and conditional government support should be experimented with. This method of enterprise management would contribute to improved financial planning, organization and management.

Abdoul Aziz Dia puts forward a thesis that public enterprises *per se* are not bad, but that the absence of clear policies and verifiable and measurable performance targets is the primary factor that contributes to the poor performance of transport enterprises. In order to incur optimum utilization of limited resources, he strongly argues in favour of "contract plans" in which the state establishes objectives and targets for transport enterprises and gives financial support to such enterprises on condition that they realize partially or fully the performance criteria enshrined in the "contract plan". He cites the Senegalese experience where the government of Senegal no longer has an open and automatic policy of subsidizing structural deficits of public transport enterprises, but support is conditional on the realization of the targets set in the contract plan that is entered into, between the government and the transport enterprise. The thrust of Aziz's paper is that contract plans are a management tool that *inter alia* enhance overall accountability of enterprise management, sound financial planning and control and the efficiency of transport operations. Although "contract plans" are relatively new, Dia hopes that this concept and policy could be applied to the various sectors of the economy.

In contrast to the global and management issues articulated by Hoggs and Dia, the focus of Ben Dadzie's paper is confined to the management of air transport institutions in Africa. Dadzie traces the historical development at the continental level of efforts to collectively exploit the social and economic opportunities of the air transport industry. The rationale for co-operation is to avoid wasteful duplication and rationalization of investment choices and competition. After 24 years of the first ever African transport conference which was held in November 1964 in Addis Ababa, Ethiopia, Africa has witnessed the establishment of intergovernmental and inter-airline institutions with the primary objective of promoting and implementing multinational airline projects. To date, few practical results have been registered whilst paradoxically the need for co-operation has become more crucial than ever before for the survival and viability of national and regional owned airlines. Perhaps the same obstacles that have been cited as impeding broader intra-African co-operation are responsible for the failure to realize the co-ordination and cross-country border investments that would eventually be the launching pad of a Pan-African Airline and regional aeronautical field information systems.

In Part Three the role of Transport in Rural Development in Africa is critically examined by five authors.

Ngila Mwase's paper begins by noting the orientation of transport routes towards the coast and/or mines or large plantations, at the expense of rural Africa.

The actual and potential political, social and developmental rural transport benefits are discussed. In particular rural transport should help integrate the country and ease its governance. It can induce the transformation of, and increase output from, the agricultural sector. Furthermore, it can widen markets both for agricultural commodities and for transport goods, as well as stimulating the use of new techniques.

Mwase warns against the dangers of transport cost savings not being passed over to the producer, as is the case under some forms of pan-territorial pricing. The paper discusses the project appraisal techniques conducive to minimization of drawbacks in decisions on road provision, etc.

It is recommended that greater emphasis should go to road maintenance especially of rural roads through improvements in recurrent expenditure planning. Furthermore road construction and maintenance under self-help schemes should be encouraged. And so should the use of traditional modes of transport such as animal and water transport.

Greater public accountability of "rural transport planners" and the involvement of the people through public debate especially on rural transport needs and development priorities would ensure that transport services so provided are responsive to the needs and aspirations of the people.

Chibwe Chibaye focuses on transport and rural development in colonial and post-colonial Zambia from a radical perspective. The colonialists, he argues, were the least interested in solving the transport problems of the rural population unless these were tied in with the interests of international monopoly capital. The colonial authorities responded to the demands of "capitalist imperialist production" in terms of the means of transport used, the routing of traffic and by

implication the areas traversed by the roads and railways, etc. In the case of Zambia the "line of rail" for example served essentially the mining areas and to some extent settler agriculture.

Examining the record since independence Dr. Chibaye notes that during the First (1966-1970) and Second (1972-1976) Five Year Development Plans, emphasis was on the linking by road of provincial and district capitals respectively. The Third (1979-1983) Plan gave priority to the development of feeder roads. Some districts are yet to be connected by tarred roads.

The author discusses the negative impact of the Rhodesian UDI in 1965; the ensuing boycott of Southern transport routes; and the costly provision of alternative rail and road transport through the TAZARA Corridor to Dar-es-Salaam.

Next we have a paper essentially on Kenya, by Wambura. After introductory remarks on the rural scene the author discusses the role of transport, particularly the roads subsector in rural development. Not only does transport networks "open up" the country, but the reduction of transport costs induces greater agricultural production and diversification into non-agricultural activities e.g. cottage industries.

To maximize the impact of rural transport network and facilities, the author argues for an integrated rural development approach whereby rural transport investments are seen as part of an overall rural development package entailing investments in transportation, extension services, farm credits, etc. Allocation of resources to non-transport activities should be viewed as complementary and not competitive to the transport sector. Since various organizations will have an input in the design and implementation of such a package, closer intra- and inter-institutional co-operation and co-ordination is called for. This may allow the adoption of appropriate contraction and co-ordination and maintenance techniques. The author argues that labour-intensive techniques are not only technically feasible, but also economically and financially justifiable.

Kenya's transport projects and programmes, we are told, are geared towards providing access to rural areas with high agricultural potential, the development of "poles of growth" such as some secondary towns and between these and large regional markets and export enclaves. This is done in the context of maintaining a rural-urban balance, and ensuring that the various modes of transport are developed for the services for which they are best suited, and fit into a nationally co-ordinated transport system. The objectives, implementation programme and outcome of Kenya's renowned 11-year Rural Access Roads Programme with its concentration on the improvement of unclassified farm-to-market access roads is discussed. It is noted that a total of 8,000 km. labour-intensive rural roads exist, of which 6,000 km. had been gravelled when in 1986 it was succeeded by the Minor Roads Improvement Programme. The latter targeted to improve 5,000 km. of roads in five years, fits in well with Kenya's District Focus Strategy for Rural Development entailing the identification of roads for improvement by the District Development Committee.

David Cowie discusses transport with respect not only to rural development but also the problems of transforming small-holder agriculture in North-western Botswana. The paper begins with an overview of the development of the road network from the neglect of the pre-independence days to the rapid expansion of the 1970s and 1980s — a result both of increased state revenue from minerals, essentially diamonds and the buying of political support from the electorate. The provision of infrastructure especially roads was as documented elsewhere, done as part of an Accelerated Rural Development Programme whose policies revolved around the development of the "progressive farmer" approach.

The limited impact of this programme especially in dry-land areas prompted the government to launch an arable land development programme. The paper examines the impact of this strategy in the development of small-holder arable agriculture in Ngamiland (North-western Botswana); and in particular on the place and role of transport in this regard.

The study identifies a number of transport and transport-related problems notably: difficulties due to the isolation of Ngamiland; the long distances involved to and from the main input depots; difficulties of obtaining transport for extension activities; intra-regional transport problems, passenger transport difficulties implying increased administrative costs, etc. The author argues that save for drought relief-related road construction, given the high costs of road construction and low

traffic levels, the district roads are unlikely to be substantially upgraded in the near future.

On a positive side the increasing inter-sectoral co-operation and the possibility of a trans-Kalahari railway traversing the region could improve transportation and small-holder agricultural production.

In Part Four the role and contribution of training institutions in the transport sector is discussed by three authors. In his paper, Peter Chiwona focusses attention on the contribution of training and research to the development of the transport sector. More specifically the author pauses and tries to answer the following questions: What type of skills are needed to construct, operate and manage the transport activities? Can the skills so identified be effectively developed through formal training and/or informal training?

The author argues that deficiencies in skills and trained personnel was a more limiting constraint in transport development than lack of finance and capital. He argues that the skills needed for rural transport — dominated by traditional means of transport e.g. the bullock cart, the camel, the donkey, canoe, human heads and backs, bicycles, wheel barrows, etc. — are best acquired on-the-job, at the best through observation and practice. For more modern means of transport, such as air transport the use of, and therefore training in, computers in management information and planning systems is underlined. Transport research, it is argued, should be policy-oriented and more responsive to local transport needs. The author laments the virtual absence of transport research institutions in Africa. He favours higher resource commitments to research and the need to ensure dissemination of the research findings so that decisions particularly on transport investment can be based on sound data base.

Theo Wereko begins his paper with an overview of the Ghanaian transport sector in which its composition, and particularly its division into public and private sector components is shown. The author outlines some of the main issues in the development of the Ghanaian transport sector including the sectoral investment patterns. The general and specific problems facing this sector are raised. It is in this regard that the training aspects in general and the institutionalization of a transport management training programme in particular are discussed and the Ghanaian experience documented.

The transport management training capacity in Ghana is assessed. In this regard the role of three training institutions — the School of Administration, the Management Development and Productivity Institute and the Ghana Institute of Management and Public Administration (GIMPA) is discussed. A detailed discussion of the role of GIMPA in management training especially at various subsectoral levels altogether with the target groups and corresponding courses and course contents proposed, are presented. The benefits of, and the case for, a locally institutionalized transport management course at GIMPA, it is argued, far outweighs overseas training.

Part five examines the role of indigenous Private Entrepreneurship in the Transport Sector in Africa. The two papers presented under this theme argue that the absence of a strong and successful entrepreneurial class is the weakest link in the economic development equation. This weakness is partly due to the inherited socio-economic conditions at independence which did not harbour such a class and the attitude of governments especially socialist-oriented ones which were at least initially suspicious of private entrepreneurs.

Chileshe's paper discusses the various types of transport entrepreneurs, particularly those in the road transport industry. The important role of small one-vehicle transport operators is recognized. And so is the importance of initially "pirate" "matatu" type passenger transport. Comparing public- and private-owned transport fleets, the superior economic potential of the latter is underlined. This is verified by examples of successful private transport firms in Zambia, Kenya, Sierra Leone, etc. Save for Ethiopia, private transporters operate with less government support.

The constraints facing indigenous private transporters are discussed. This includes a weak capital base, an organizational and institutional setting not conducive to the development of indigenous private entrepreneurs, strong competition from State-owned transport monopolies, etc. These problems, it is argued, can be contained through State and private sector initiatives. The former pertains to the availability of soft loans, rationalization of the roles of State transport

monopolies and private transporters, promulgation of rules and regulations supportive of operational efficiency, the launching of training programmes, etc.

Private indigenous entrepreneurs could supplement such efforts through improved management and transport services, both of which could be enhanced transports' associations geared to the maximization of economies of scale through joint vehicle maintenance facilities, bulky purchases of spare parts, etc. Such associations could provide private transport entrepreneurs a negotiating forum with government and other agencies.

The country papers on Lesotho, the United Republic of Tanzania, Uganda and Zambia focus on the institutional, organizational and policy issues that are related to the management of the transport and communications sector. A common theme that runs through all papers *inter alia*, concerns structural underdevelopment, inadequate funding, institutional weaknesses regarding inter-modal operational co-ordination and poor management of transport institutions especially parastatal transport companies and/or organizations. There is a striking similarity of the issues and problems that are highlighted in the country papers with those that are articulated by the sectoral papers delivered at the Roundtable.

The paper on Lesotho highlights the geographical, economic and geo-political factors that have both constrained and influenced internal and external development strategies and policies of the transport and communications sector. Regarding the development of the road network impressive progress has been realized from one kilometre of bitumen road at the time of independence in 1966 to a total road network of 5,110 km in 1973. Due to the mountainous terrain, civil aviation plays a predominant role in interlinking remote, inaccessible mountain areas with the lowlands. The development of communications has also been spectacular as is manifested by the completion of the microwave network in 1985.

The policy of the government is to develop the transport and communications system in such a way that it is integrated and complementary. The main constraint that has hampered the full realization of this policy has been due to the scarcity of internal resources needed to finance requisite infrastructural projects. Efforts to get funding from donor countries and multilateral financing agencies have not been successful because some of the projects that are critical to the development process are not feasible by conventional appraisal methods. Finally, on the management of the transport sector, it is stated that the performance of the transport sector is incapacitated by the lack of spare parts and inadequate public assets.

In sketching out the policy reforms and programmes in the transport and communications sector in Tanzania, Reynold M. Minja among other things, details the development objectives and policies of the different transport and communications subsectors within the context of overall national development priorities and programmes. Regarding institutional and sector co-ordination he clearly illustrates the division of responsibilities between central government ministries and local government institutions. The improved performance of the transport and communications sector is seen to be critically dependent on high-level co-operation between different ministries and within the Ministry of Communications and Works. Minja states that poor co-ordination between ministries and within the same ministry has resulted in unco-ordinated investment decisions; for example, port investment in container handling without parallel investment in surface modes and motor vehicles, owners acquiring vehicles whose capacities exceed design roads bearing capacity etc. Cognizant of these weaknesses, the government of Tanzania has launched a project for the strengthening of planning and co-ordinating capacity in the transport and communications sector.

The decisions to allocate resources to the transport and communications sectors are taken at the national and the sectoral levels. In view of the scarcity of resources, the funding of programmes has been guided by the need to remove bottlenecks rather than expansion. Hence the policies of government have been characterized by crisis management. Given this state of affairs the main thrust of the policy reforms has been geared towards the improvement of the transport and communications sector through better management, co-ordination, funding and rationalization of inter-modal competition on the basis of competition and resources cost pricing.

In their analysis of past and present government policies and programmes in Uganda, Joseph Kabango and Ijuka Kabumba highlight the factors that have influenced the development of the transport and communications sector in Uganda. In this regard, they state that between 1971 and 1985 political interference caused havoc to the development and management of the transport sector in Uganda. During this period, political interference affected not only transport parastatals, but also government ministries. Qualified and competent managers were either retired "in the public interest" or suspended/dismitted and replaced with ill-qualified people (relatives, friends or political supporters). At the same time government did not allocate sufficient resources of the maintenance and development of the sector. To make matters worse, the little that was allocated was embezzled due to the absence of proper financial and managerial accounting and controls.

With the coming to power of the National Resistance Movement (NRM) in January 1986, the authors explain that the Ten Point Programme of the NRM recognizes that both the government and private sector are partners in the development of the transport sector. Regarding the policies and strategies in the short- to medium-term government places emphasis on the rehabilitation and maintenance of the existing infrastructure and assets that severely deteriorated over the past 15 years as a result of neglect by previous governments. Within this broad policy framework the government is committed to the strengthening and restructuring of transport institutions so as to improve performance.

The most pressing problems facing the government, among other things, concerns overstaffing, under-capitalization, shortage of qualified and experienced manpower and poor financial management of parastatals. These problems are being addressed through the contribution by government of the authorized capital and the training of manpower.

Finally the authors show that the government of Uganda is committed to regional co-operation in the transport and communications sector as is evidenced by its active participation in various regional bodies, such as the Kagera River Basin Organization, Northern Corridor Transit Agreement, Preferential Trade Area for Eastern and Southern African States and the Intergovernmental Standing Committee on Shipping.

The paper on Zambia shows that the historical development of the transport sector has closely followed the pattern of colonial exploitation, especially mining. In this regard, railway traffic was built first to cater for bulky mineral traffic and roads as feeders to the railway from agricultural farms which were developed to cater for the needs of the mining industry. The principal modes of transport of road, railways, air and water transport cater for internal, external and transit traffic.

Regarding organization and management of the transport sector in Zambia, the paper states that this is characterized by a multiplicity of institutions, thus making co-ordination difficult. These problems have been further worsened by the absence at the institutional level of a centralized transport planning and policy formulating unit. To address this problem, a multidisciplinary transport planning unit is in the process of being established in the Ministry of Power, Transport and Communications (MPTC).

Government policy is to regulate all transport pricing for all modes of transport. In this regard railway rates and other tariffs are submitted directly to MPTC for approval which is usually granted without any voting of the proposed increases. Road freight rates are more regulated than rail and air by the department of the Road Traffic Commissioner which comes under MPTC. The practice is that the private transporters under the Truckers Association of Zambia (TAZ) and Contract Haulage; the parastatal road haulage company often submit joint proposals for rate increases. The main limitation of road freight rates is that they are uniform throughout the country regardless of accessibility, condition of roads or availability of transport capacity in a given area. This has proved a disincentive to operators who are unwilling to operate in these parts of the country with poor roads to the detriment of agricultural and other economic activities.

Finally the paper identifies the shortage of qualified and experienced manpower as a serious constraint to effective management and development of integrated transport and communications network and policies.

CHAPTER 2

Transport and Communications in Africa's Economic Development: Issues, Constraints and Prospects; Examination of the United Nations Transport and Communications Decade in Africa (1978-1988)

Dr. Aleksandar Virag

INTRODUCTION

The general transport situation in Africa is characterized by a rapid growth of transport demand and a scarcity of financial resources to cope with the demand. In the 1980s attention has been given to five important tasks facing the transport sector in Africa:

- (a) Strengthening transport planning and maintenance capacities;
- (b) Improving the performance of institutions and operating agencies in the sector;
- (c) Increasing energy efficiency in transport;
- (d) Expanding rural transport network and services; and,
- (e) Supporting the growth of international trade within and outside Africa.

Proper transport policies and sound planning of transport investments, maintenance of existing transport infrastructure as well as proper management of available resources should be the rule of all African countries being the fact that the transport sector is often the largest single user of public funds. The current and prospective scarcity of resources makes it more important to overcome this problem quickly. More rigorous application is required of the principle of maximum social profitability stated in the Global Strategy and Plan of Action for Transport and Communications Development.¹

Existing transport assets must be used more productively and made to last longer in the light of resource constraints. Regular preventive maintenance and timely remedial intervention is needed rather than the too common practice of deferring maintenance to the point where more costly rehabilitation or replacement is necessary. This policy is no longer the easy option for many countries. Steady reinforcement is required, therefore, of institutions and organizations responsible for maintenance in all transport modes. Higher performance has to be achieved by manpower at all levels in maintenance, planning execution, supervision and evaluation.

Africa cannot afford low utilization and unavailability of expensively acquired transport fleets—whether trucks, locomotives, ships or aircraft. Almost new units are sometimes out of service for lack of spare parts or maintenance know-how. Low productivity in the transport sector adversely affects other sectors. It is also evident that in a number of cases the effectiveness of administration and other public services has declined because of transport difficulties.

Concerted action is also needed by African governments, foreign lenders and aid donors to reduce the uneconomic proliferation of different equipment makes and models acquired through tied aid but which compound the maintenance problem. Effective maintenance is a question of effective capacity to do the work. Contracting out a steady annual maintenance load to specialized enterprises also offers a base for the development of engineering enterprises and the spread of industrial skills, as envisaged in the Lagos Plan of Action. The large infrastructure component in transport similarly offers opportunities to encourage the participation of local contracting enterprises—public or private—in maintenance.

Two other aspects that affect maintenance and which need attention in many countries are safety and, in the roads subsector, axle load control. Rapid expansion of highway traffic has given rise to serious road safety problems in a number of countries. Accidents have many causes, but a major contributory factor is poor maintenance of infrastructure and equipment. The use and overloading of trucks with axle-load capacities exceeding the design standards of roads seriously compound the maintenance problem in some countries. More effective load control is essential for the preservation of existing pavements, otherwise massive capital consumption will be entailed.

To improve institutional performance and operating efficiency in the transport section it is important to improve the effectiveness of government departments responsible for transport and to increase the efficiency of operating agencies in all modes. This is partly a matter of extensive and better training in the field of technical and managerial skills using modern planning, financial and control processes.

In many parts of the transport system in Africa public responsibility and service to the public have come to be empty slogans. Thus, it is important to restructure responsibilities in a way that

provides staff with incentives to efficiently fulfill their tasks. This applies at the level of allocating responsibilities among transport agencies as well as within them. The management of transport service enterprises and agencies needs to be given clear overall financial targets and as much flexibility as possible in deciding how to meet them. Too often, managements are limited in performance by archaic regulations and procedures which inhibit initiative and erode managerial responsibilities. As a result, too many state-owned transport agencies and enterprises run more like outmoded public administrations than as efficient, cost-conscious service agencies for the public.

Thus, policy reform and institutional changes are needed in some countries.

- (a) To clarify and tighten the responsibilities of state-owned transport enterprises;
- (b) To enhance managements' freedom of action for fulfilling these responsibilities and running their affairs efficiently, without excessive outside intervention; and
- (c) To open up the transport sector to new initiatives and enterprise arrangements.

Policy reform is a long and slow process of taking a step at a time in the right direction. It also requires sound analysis before being formulated and implemented.

The dearth of reliable, up-to-date statistical and other information about transport operations in Africa is a serious handicap to all concerned with policy formulation, transport planning, project preparation and evaluation. This state of affairs, among other things, adds unnecessarily to the cost of feasibility studies and increases risks of investment mistakes. Thus the creation of more well staffed and qualified investment planning units is required. Increased attention is also required to strengthening costing units in, for example, railways, ports and airline companies. Equally important is the need to put road user taxation on an efficient basis. Policy reforms of this type will help to steer transport demands more efficiently and hence stimulate investment requirements. A number of aspects of the second phase Decade programme is related to these needed improvements in a variety of ways, especially those concerned with studies and training.²

Most African countries depend on oil imports in the range of 27 to 86 per cent of the total commercial energy requirements. A substantial portion of oil products is consumed by the transport sector. Therefore increase of energy efficiency in transport is of a high importance.

There is a considerable scope for reducing the transport sector's energy use in many African countries by better vehicle operation and maintenance (including driver and mechanic training), by more efficient utilization of vehicle fleets (empty back-hauls, including those caused by policy rules or regulations), by the gradual conversion of fleets to more energy efficient ones, by marginal shifts of traffic to less energy intensive modes and by better transport management. Since trucks and buses normally account for about half of the transport sector's energy consumption in developing countries, they warrant the most attention in Africa. Information on the opportunities for low cost fuel saving methods needs to be better distributed in Africa both by governments and outside organizations. Care is also required in introducing policy decisions or administrative controls which, in fact turn out to be inefficient ways of saving fuel or not to save it at all.

Improvement of rural transport conditions became one of the critical areas of concern in the region because of the food situation in Africa. Overall food production trends have not kept pace with population expansion. Thus Africa has had to import increasing amounts of food either on a trade or aid basis. Food grains alone totalled 20 billion tons in 1980, costing Africa more than \$5.0 billion, excluding ocean transport costs. The increasing imports put burdens on ports and inland distribution systems. The transport sector, therefore, has an important role and responsibility to be efficient in meeting these needs.

Local transport everywhere accounts for the large majority of rural movements. More attention needs to be given therefore to building simple tracks and encouraging the use of non-conventional, multi-purpose vehicles. The expected doubling of urban populations will also require improvements in short distance networks in their immediate hinterlands. In addition, as ECA has pointed out "countries should conceive their food production plans in such a way that there is some complementarity with out neighboring countries."³ This will require improvement in inter-State

and subregional links. Equally, international food imports will require improvements in both ports performance and long distance inland distribution systems.

Rural access roads and transport services have great potential for triggering employment increases both in agriculture and related activities. Labour-intensive rural road construction and maintenance techniques—whether under the management of contractors, local communities or public works departments—cannot only be more efficient and lower in cost but also more reliable since they depend less on imports. Experience in Ethiopia, Kenya, Tunisia and several West African countries has demonstrated the feasibility and effectiveness of increased local participation in rural transport improvement in ways that ease the financial burdens on central government budgets. These include designs better attuned to local circumstances and improved chances of adequate maintenance.

For Africa to achieve its growth and development objectives trade must increase and be carried out efficiently. This is likely to impose larger requirements for transport investments as volumes increase, exports are diversified, self-sufficiency improves and trade movements are reoriented within Africa. The search for new energy sources is also giving rise to large investments in the production of fuels which will need transporting to export or intra-African markets. The containerization revolution is spreading more rapidly than expected some years ago and requires substantial improvements in many facets of the transport sector of a number of African countries. Finally, international trade across land borders is also likely to increase with the growing complementarity and specialization of African economies.

Thus substantial investments will be required in bulk handling facilities, in conversion of ports to handle containers efficiently, in expansion of airports, in strengthening road and rail facilities and so on. Efficient planning and staging of these investments will be particularly important since large capital costs are often involved and their timely availability can be a determining factor in successful trade expansion.

The capital-intensive nature of the new techniques for transport in international trade puts an increased premium on operating efficiency in ports and at other inter-modal exchange points. Slow bureaucratic procedures and restrictive labour practices must change if the benefits of new transport technology are to be realized. Transport policy and management have a significant role to play in this process. The improvement of transport in Africa depends not only on the available resources but also on a number of policy issues and how the available resources are managed. Therefore, policy and management issues in the transport sector, the theme that AAPAM eighth roundtable is addressing itself to, is of extreme importance.

THE UNITED NATIONS TRANSPORT AND COMMUNICATIONS DECADE IN AFRICA (UNTACDA) 1978–1988

Objective of the UNTACDA

The UNTACDA aimed at ensuring the independence, self-reliance and international co-operation among African countries in all fields and modes of transport and communications through:

- (a) Promoting an integrated transport and communications infrastructure to increase intra-African trade;
- (b) Enhancing the co-ordination and improvement of the various transport systems;
- (c) Opening up the land-locked countries and improvement of the various transport systems;
- (d) Harmonizing national regulations to reduce physical and other barriers to the movement of persons and goods, and standardizing network and equipment, research and dissemination of techniques suitable to Africa;
- (e) Promoting African industry in the field of transport and communications equipment and component; and

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- (f) Preserving existing African transport and communications infrastructures by establishing effective rehabilitation and maintenance systems.

Implementation

The implementation of the UNTACDA programme was divided into two phases with the Phase I programme covering the period 1979–1983 and Phase II the period 1984–1988 inclusive. The key results of the Phase I programme were that less than 50 per cent of total cost (US\$ 7 billion out of US\$ 15 billion) was obtained for the implementation of the first phase projects. Thus, of the planned 1,091 projects, only 476 (or 44 per cent) received partial or total financing. Emphasis was placed on financing national projects rather than regional/subregional impact projects which represented 26 per cent of the Phase I programme but were allocated less than 10 per cent of the available financing. Although the major objective of the Decade is to promote projects of regional/subregional impacts, the first phase results indicate that it is much more difficult to obtain financing for these than for national projects.⁴

Hence, based on the experience of the Phase I programme, the projects of Phase II programme were designed according to the nature of problems they were classified to address. The priority in the implementation was of the following order: maintenance and rehabilitation, training and technical assistance inter-State links, regional and subregional problems and other national projects. Progress in the implementation of the Second Phase of UNTACDA up to the end of 1986 is accordingly summarized on the table below which reflects actual performance of the above priorities. As can be seen from Table 1 below, 54 of the 578 Second Phase projects in the transport sector (9 per cent) were completed and 145 (25 per cent) are still under implementation. In the communications sector, a total of 472 projects were included in the Second Phase programme. Twenty projects (or 4 per cent) are reported completed and 66 projects (14 per cent) are still under implementation. In terms of financing, a total of US\$4,290 million has been raised to date, representing 23 per cent of the US\$18,255 million programme cost. Of this, US\$1,814 million or 42 per cent was raised from external sources. On a project basis, national projects continue to attract more financing than purely regional/subregional projects. Progress in the implementation also reflects this bias.

On the other hand, the African governments must be commended for the great effort they have put into the development of transport and communications systems in their countries. If the present levels of activities are increased, or at least maintained, great progress shall have been made in the implementation of the Decade programme by 1988. Progress in the implementation of regional and subregional projects continued to be modest, despite the general acknowledgement that this category of project is crucial for achieving the physical integration of the continent in accordance with the objectives of the Lagos Plan of Action and the Final Act of Lagos, and clearly articulated in the presentation of the Second Phase programme.⁵ The progress of the Decade was reviewed by the Conference of African Ministers of Transport, Communications and Planning at its fifth meeting in March 1986. It was noted that although considerable progress had been made in the development of transport and communications in Africa under the UNTACDA programme, developing Africa was still far from attaining the basic goals of integrated transport and communications system for the continent. The adoption of Africa's Priority Programme for Economic Recovery and its integration into the United Nations Programme of Action for African Economic Recovery and Development provided further support for the development of transport and communications sectors, as essential supportive sectors for food and agricultural development, the centre-piece of the recovery programme.

Factors influencing the implementation

There are several factors which inhibited the full implementation of the UNTACDA at the scheduled time. First of all, during the first phase of the Decade, tremendous efforts were made by

African countries to mobilize resources for the development of transport and communications. About US\$3 billion per year were mobilized during 1978–1983 of which three quarters came from the African countries themselves. During the first two years of the second phase, the economic crisis hit most of the African economies to the extent that it was difficult for the Africans to increase their contributions to the Decade to reach the planned cost of US\$24 billion during the period 1984–1988. The maximum amount of resources which could be mobilized from internal and external sources could reach only US\$15 billion. Furthermore the major donor countries and institutions preferred to finance transport and communication projects on a bilateral basis thus favouring mainly national rather than subregional/regional projects. There was also a bias in some African countries which organized resource mobilization meetings presenting to the external donors national rather than projects of a subregional or regional nature. To this, one should add other purely technical factors, namely lack of skilled expertise, long periods for feasibility studies, non-availability of transport and communications equipment and raw materials, etc.

Although the current Decade ends in two years' time, the development efforts in the transport and communications sectors in Africa are likely to continue beyond 1988 and the "momentum" needs to be maintained.

Table 1: Progress in implementation of Phase II programme (July 1986)

Sector	Projects with partial/total financing										
	Total projects		Projects completed to date			Projects under implementation			Total financing obtained to date \$ M		
	Number	Cost \$M	1984	1985	1986	1984	1985	1986	1984	1985	1986
Road	236	5,098	2	14	30	27	49	63	396	947	954
Rail	84	5,617	0	2	13	7	19	34	885	1,673	2,244
Maritime	38	483	0	4	2	0	0	0	0	0	3
Ports	70	18,500	0	0	4	14	18	71	503	565	–
Air	94	923	1	5	6	9	12	24	74	110	151
Inland water	45	326	0	0	1	3	3	4	26	26	26
Multimodal	11	27	1	1	2	0	0	0	2	0.1	0.1
Total transport	578	14,324	4	22	54	50	99	145	1,452	3,259	3,956
Telecommunications	216	2,692	2	11	11	19	45	33	157	484	272
Broadcasting	121	716	6	7	7	7	13	13	22	35	31
Postal	135	523	1	2	2	4	14	20	7	15	31
Total communications	472	3,931	9	20	20	30	72	66	186	534	334
Total programme	1,050	18,255	13	42	74	80	171	211	1,638	3,793	4,290

Source: ECA Secretariat

Mobilization of funds

Since the United Nations Transport and Communications Decade in Africa (UNTACDA) programme was launched in 1978, great effort has been expended by all concerned to mobilize the financial and other resources required to implement the numerous projects of the programme. ECA, as the "lead agency" for the implementation of the programme, led the efforts to contact financial institutions, agencies and donor countries in order to obtain financing for the projects.

One major mechanism adopted by ECA for mobilizing resources was the series of Technical Consultative Meetings, nine of which were organized over the 1981–1985 period. The experience from the nine technical consultative meetings shows that, although they had been useful, their effectiveness as a mechanism for resource mobilization for the Decade projects had declined. Co-financing meetings are hereby proposed as an improved mechanism for co-operation among governments. United Nations specialized agencies and African intergovernmental organizations, donors and financial institutions as well as for ECA in mobilizing resources for the Decade projects.

It is expected to be an effective arrangement especially for financing large subregional or regional projects. Each country involved would be responsible for executing its portion of the project and could make bilateral arrangements for funding. In brief, the co-financing meetings differ from the Technical Consultative Meetings in scope of activities, focus of attention, commitments, degree of preparation of documents and outlook. The first co-financing meeting for projects in the Trans-Cameroonian and Trans-Equatorial corridor, to open land-locked countries of Chad and Central African Republic via the ports of Douala and Pointe Noire was held in Pointe Noire (Congo) from 3 to 5 November 1986.⁶ Results were positive and ECA is encouraged to organize co-financing meetings in other subregions. Preparations are under way for a co-financing meeting in May 1987 for projects of Burundi, Rwanda, Uganda, Kenya and United Republic of Tanzania.

TRANSPORT PROBLEMS

The transport and communications sectors in Africa are still plagued with numerous problems, some of which were already mentioned, namely the inadequacy of equipment and rehabilitation of existing infrastructure, lack of trained personnel at all levels, inefficient management and operations. Distinctions must be made between specific problems related to particular modes of transport and those having a spatial dimension.

Modal problems

With regard to roads and road transport, the most significant problems apart from the backward and underdeveloped road transport infrastructure and service, is the lack of reliable information and data on the condition and development of road and road transport in general, policy developments, vehicle fleets' age and capacity and the fuel efficiency of road transport fleets in the region. Other major problems relate to the low priority and attention laid to human resources development especially lack of training policy and programmes in the sub-professional category as well as the lack of effective measures for preventing motor vehicle accidents.

Despite serious efforts made in the past in the maritime ports to resolve port problems in developing Africa, the following largely persist: shortage of skilled manpower, obsolescence and inadequacy of cargo handling equipment, cumbersome and inappropriate managerial and organizational structure, inadequate port infrastructure, lack of unified port procedures, statistics and documentation, unjustified port tariffs and lack of co-operation with other transport modes and among ports. These had resulted in low productivity. In addition, most shipping companies in Africa are relatively small, operating from one to a maximum of about five vessels. This small size coupled with limited financial resources, adverse conference line practices and lack of expertise and management skills in shipping had induced most vessels to incur financial losses and to depend on national subsidies for their existence.

The African railway system is characterized by unconnected individual national systems, with different gauges and other technical characteristics. There are a total of nine gauges of the African railway network. The normal European track gauge is used in North Africa (Morocco and Egypt), while the standard Union of African Railways (UAR) track gauge is in use in most parts of Africa (Ghana, Nigeria, the Sudan, United Republic of Tanzania, Zaire and Zambia) and the metric gauge is used in most West African railways (United Republic of Cameroon, Senegal, Côte d'Ivoire, Mali, Burkina Faso and Guinea). This may explain the difficulties in inter-connecting different railways systems in Africa. The track gauge system could be adopted in each African subregion to facilitate subregional inter-connections and trade.

The problem with air transport is its smallness to be viable. The operations, schedules and other activities are largely unco-ordinated and unharmonized with the result that advantage cannot be taken of economies of scale and other cost-sharing arrangements, which can reduce operating costs and enable the airline to be more profitable. Another major problem relates to the fact that air control and safety in Africa are still poor and underdeveloped. The international safety and reliability

standards set for civil aviation call for skills in handling modern and sophisticated air navigation equipment, which should be properly maintained if air transport services are to serve the public and play their role effectively.

With respect to multi-modal transport in Africa, lack of foresight in judging the magnitude of the development of containerization has caused many African countries to be unprepared for multi-modal transport. This situation has been aggravated by a parallel lack of regulations concerning multi-modal transport and a very poor level of information and/or understanding in the region of the entire concept of multi-modal transport and its influence on national transport capabilities. Another obstacle to the operation of multi-modal transport in Africa is related to the incompatibility of individual insurance systems in the transit countries. This again calls for co-ordination among the countries involved such as that pursued now in some integration groups in Africa, i.e. Preferential Trade Area (PTA) and Economic Community of West African States (ECOWAS).

Spatial problems

One of the objectives of the Transport and Communications Decade is the minimization and facilitation of procedures to permit easier access to land-locked, semi-land-locked and isolated regions in Africa and to make possible rapid movement of people and goods among African countries in general. From the point of view of a land-locked developing country, the dependence upon a transit country for access to the sea has a number of basic implications which can be inherently adverse. The transport and freight rate policies within the transit country are formulated and administered primarily to support its overall domestic development strategy. Such a strategy may not be congruent with that of the land-locked neighbour.

The major difficulty in the African transit-transport is posed by the lack of adequate facilities. The inter-country road transport arrangements governing vehicle dimensions, axle load specifications and other legal and administrative questions relate to licenses and insurance may be either non-existent or their enforcement and surveillance are weak and ineffective. Storage for transit cargo raises a number of difficult problems which can be a source of friction between landlocked and transit countries, particularly with regard to the capacity and predictability of inland transport and the length of time required for cargo documents. Communication links with various ports and commercial centres in landlocked countries continue to be a major handicap inhibiting the speedy movement of transit cargo which leads to enormous delays in getting the cargo in and out of the ports. The complex formalities, procedures and paperwork may have a very important cost factor which constitutes a serious impediment to the expansion of international trade.

Another problem of spatial dimension relates to the development of trans-African highways initiated by ECA to inter-connect major parts of the African continent. The five major trans-African highways include a total length of 84 inter-State links estimated at about 104,300 km. The problem is that only 44 per cent is paved, 16 per cent being gravel and 40 per cent partially improved and unimproved earth tracks and trails. The limited financial resources, equipment and number and quality of technicians in road construction are among the factors that inhibit the full achievement of these trans-African highway interconnection.

TRANSPORT POLICY ISSUES

Africa's transport and communication networks remain the lowest and the most underdeveloped compared with the developing and developed countries in the world. The transport policy issues do not result from a lack of national, subregional or regional policies, but from the inability of African countries to implement current policies at all three levels.

National level

The transport and communications policy issues related to the decentralization of responsibilities in decision-making involving local authorities. The poor condition of existing infrastructure in the

rural areas requires that much investment should be devoted to the development of transport facilities in the rural and maintenance of existing infrastructure and equipment. Inadequacy of infrastructure in the rural areas, its maintenance and rehabilitation continue to cause heavy losses of the agricultural production which cannot be evacuated because of the road transport problems. Policy decisions and policy changes are therefore required, favouring improvement of the rural areas' transport and communication networks.

The modernization of port and railway equipment remains a critical policy issue since the solution requires financial commitments by African governments. The policies governing most African ports and railways were established some decades ago and have not been revised despite the tremendous changes which have occurred since their establishment. The co-ordination of rail, road, sea and river transport programmes at the national level by apportioning traffic among the various modes is another policy issue that troubles African governments in view of limited human and financial resources.

Subregional level

The issue here is now to link the various African transport system having different particular characteristics or conditions so as to form an integrated transport and communication network, in view of existing unharmonized and unco-ordinated activities between the various modes, and the existing physical and non-physical barriers. Government restrictions, controls and regulations on road transport investment, services and financing for instance, do not facilitate inter-country road integration. Subregional port rationalization through feeder and trans-shipment services, the problems of subregional railway line inter-connections, harmonization and extension constitute another policy issue facing African countries.

Regional level

The policy deals with the harmonization of the various African plans in the field of transport and communications. In air transport, the African Civil Aviation Commission and the African Airlines Association have established policies for the optimum development of air transport services in Africa. Some of these policies have resulted in the conclusion of an African Air Tariffs Convention and good prospects for the establishment of subregional airlines. The outstanding issues during 1986 are that the convention has not yet been ratified by a sufficient number of countries so as to come into effect and no firm decisions have been taken yet on the establishment of the subregional airlines.

Another problem relates to multi-modal transport where regional policy and measures to promote its development and growth in the region do not exist. The ongoing research and technical assistance from UNCTAD and ECA aimed at improving Africa's transport capabilities and intra-African trade through: (a) advice on the establishment of multi-modal transport organizations; and (b) elaboration of multi-modal transport container tariff rules.

It should be noted that existing policies related to the development of regional transport infrastructure, harmonization and co-ordination of the various transport modes and services, co-operation in establishing multinational transport enterprises and industries, accord priority to the maintenance and rehabilitation of infrastructure and equipment and also priority to the special transport problems of land-locked countries. In all the above, it is the execution of the various identified projects that results in the implementation of the policies. Thus, it is the slow progress in the execution of the various projects which accounts for the lack of progress in achieving objectives. The poor rate of project implementation also means that policies on transport facilitation have not and cannot be properly implemented.

CONCLUSION

In examination of the UNTACDA programme at this point the key question is whether transport and communication development accelerated in Africa during the UNTACDA? The answer is yes.

Co-operation between African States in transport and communications was given a boost by the Decade, even though the results fall short of the ambitious objectives originally intended. Transport and communication infrastructure is growing and improving following the traffic growth. These developments may be attributed to a great extent to the Decade programme. The Decade programme has succeeded in focusing the attention of governments on the important role of transport and communications in the overall economic development of each country. Unfortunately, it is not possible for us at this time to quantify the proportion of these development that may be attributed strictly to the activities of the Decade programme.

In spite of the considerable progress discussed above, it is also clear that not all the objectives of the Decade have been achieved so far. The progress towards some of these objectives is as follows:

- (a) Improving the level of services by better maintenance of the existing infrastructure and establishment of missing links for an integrated transport and communication network in Africa; and
- (b) Proper utilization of the available manpower at the national level establishing policies for manpower development regarding training institutions, programmes, career development, incentives and overall working environment. This must continue to receive high priority.

Harmonization of transport modes, non-physical barriers, tariffs and international accounting procedures is an important objective for the efficient integration and utilization of the African transport and communication system to be achieved. In particular, the current serious under-utilization of some transport capacities and the PANAFTEL network is in most part due to these problems.

Establishment of industries for production of basic equipment has been one of the objectives of UNTACDA that is the most difficult to pursue. This still remains the critical factor which will determine, to a significant degree, the pace of transport and communication development and indeed the general economic development of Africa.

Today, the African economy is a dependent economy. It is dependent on foreign factor inputs and this has serious repercussions on Africa's cost structure, production efficiency, exploitation of natural resources, state development of domestic technology and the comparative advantage of surplus labour relative to capital.

In order to attain a minimum degree of self-reliance in transport and communications, as well as all other sectors, African countries must actively promote the establishment of industries in the field of transport and communications equipment manufacture in order to reduce dependence on imports, the governments must create the environment conducive to these developments.

In summary, progress in the production and service sectors and indeed in the rate of economic recovery in Africa could crucially depend on how effectively the transport and communications problems have been tackled or resolved through the implementation of the second phase programme of the United Nations Transport and Communications are critical factors for improving the economic and social infrastructure.

Improved transport and communications facilities could be achieved not only with new investments, improved public administration and management of existing resources will also add to a great extent to successful accomplishment of the Transport and Communications Decade objectives.

As it has been identified from the examination of the implementation of the UNTACDA programme, issues and constraints are calling for improvement in the area of public administration and management to support the efforts done in the transport and communications sector to meet the principal goals of the strategy for the Decade defined in the Lagos Plan of Action for the Economic Development of Africa 1980-2000.

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CHAPTER 3



Institutional Arrangements and Policy Issues in Regional Co-operation in the Transport Sector in Africa.

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INTRODUCTION

The development of transport and communications infrastructure at the regional level cannot be fully understood without briefly recapitulating the historical perspectives that stimulated and inhibited its development. It is a truism that the colonial powers developed railways/roads from the coast to the interior primarily to realize two objectives. Firstly, to enhance military and administrative control of the territories that had been annexed. Furthermore, such an infrastructure was used strategically as a spring-board for further territorial expansion. Secondly, the railways and roads were used to evacuate the mineral and agricultural produce from the colonial territories to the metropolitan countries.

The geopolitical and economic considerations that motivated the colonial powers gave rise to a linear development of transport and communications routes. This, in turn, largely explains the linear pattern of population settlement, urbanization, industrial and commercial development along the line of railways and roads.

In the wake of the establishment of unchallenged political control, huge tracts of land were parcelled out among colonial settlers and in most cases the majority of the African inhabitants were forcibly removed and resettled on less productive land. In order to integrate settler commercial farmers with the rest of the economy transport and communications infrastructures were developed only to these settlements. The consequence of this development was that the countries were not physically integrated through the medium of transport and communications.

In view of the fact that the balkanization of Africa was done by competing colonial powers, the existing transport and communications network has the following distinctive characteristics. Firstly, there is an absence of inter-state links. Secondly, in some cases there are links which were developed primarily to meet the transit requirements of land-locked countries. Thirdly, there are inter-state gaps with the case of railways which are not due to the absence of physical infrastructure but to the existence of different rail gauges. These gauges, in some cases, cannot be explained by a mere reference to colonial powers, because the same colonial powers built different gauges in countries under their control. Finally, direct telecommunications links were developed with the metropolitan countries and not with neighbouring countries. This gave rise to the absence of direct inter-state telecommunications services. Notwithstanding the proximity geographically of quite a good number of countries, communications are through a transit centre in Europe, thus resulting in costly communications.

Given the legacy of a transport and communications infrastructure that is characterized, *inter alia*, by discontinuity at national frontiers and in some cases even the absence of serviceable transport infrastructure to national frontiers, the post independence African governments have been and still are faced with the tremendous challenge of developing integrated transport and communications networks at the national level which are seen as instrumental in promoting monolithic social and political consciousness as well as physical and economic integration. At the regional level the challenge facing governments has been to mobilize internally and externally the financial resources required to develop inter-state transport and communications links and to coordinate programmed implementation. To realize these objectives, the development of inter-state transport and communications links has been carried out as an integral part of regional co-operation in various sectors.

FRAMEWORKS FOR REGIONAL CO-OPERATION IN TRANSPORT

In Africa, regional co-operation in transport takes place under different institutional set-ups and arrangements. Notwithstanding the differences in institutional arrangements which may exist, it generally holds true that the scope and objectives of such co-operation and the articulated *modus operandi* for cooperative action are similar.

Essentially, regional co-operation in transport is carried out at three levels. First, at the bilateral level co-ordinated development of inter-state transport and communications is seen as a necessary adjunct to the wider field of co-operation aimed at boosting bilateral trade and other socio-economic activities. The second level of co-operation is at the regional level. At this level, the areas of co-operation are broadly defined or provided for in the Treaties and Conventions to which the member States have acceded. In the context of subregional co-operation in Africa, the following organizations, among others, have specific programmes in regional co-operation in transport and communications: the Economic Community of the Great Lakes (CEPGL); Economic Community of West African States (ECOWAS); Kagera River Basin Organization (KBO); Mano River Union, Southern African Development Co-ordination Conference (SADCC) and the Preferential Trade Area for Eastern and Southern African States (PTA). These intergovernmental organizations have established specialized committees and policy institutions which select subregional priority projects designed to facilitate the movement across country boundaries of persons and goods and institution building. Finally, at the third level regional co-operation in transport is promoted and co-ordinated under the aegis of the United Nations Economic Commission for Africa (UNECA) and specialized United Nations Agencies and the Organization of African Unity (OAU).

In order to effectively co-ordinate the development of integrated transport and communications network in Africa, the United Nations General Assembly proclaimed (1978–1988) as the United Nations Transport and Communications Decade for Africa (UNCTAD) in resolution 32/160 of 19 December 1977. The objectives proclaimed for the decade were as follows:

- (a) Promotion of the integration of transport and communications infrastructures with a view to increasing intra-African trade;
- (b) Ensuring the co-ordination of the various transport systems in order to increase their efficiency;
- (c) Opening up of land-locked countries and isolated regions;
- (d) Harmonization of national regulations and reduction to a minimum of physical and non-physical barriers with the aim of facilitating the movement of persons and goods;
- (e) Stimulating the use of local human and material resources, the standardization of networks and of equipment, research and dissemination of techniques adapted to the African context in the building of transport and communications infrastructure;
- (f) Promotion of an African Industry in the field of transport and communications equipment;
- (g) Mobilization of technical and financial resources during the decade with a view to developing and modernizing transport and communications infrastructures in Africa; and
- (h) Restructuring of the transport sector to ensure African trade with the rest of the world under the most favourable conditions for the continent.

The order of priority for the implementation of the Decade was as follows:

- (a)
 - (i) Regional projects;
 - (ii) Subregional projects; and
 - (iii) National projects with a regional or subregional implication/impact.
- (b) Projects for the least developed landlocked newly independent island and front-line countries;¹
- (c) Projects of concern to other countries.

It is not the intention of this paper to comment on the efficacy of the decade programme, suffice to say that an evaluation of UNTACDA by the Joint Inspection Unit of the United Nations has concluded that "the implementation was seriously handicapped by a combination of the following difficulties: conceptual (ambiguities in the formulation of the programme); institutional (the role

of ECA lack of criteria for the acceptance of projects); and financial and practical (for example, difficulties in obtaining information from African governments on project execution)".²

REGIONAL CO-OPERATION IN THE TRANSPORT SECTOR: OPPORTUNITIES AND PROBLEMS

The focus of this paper is however on regional co-operation in transport in respect of institutional arrangements, co-ordination, programming and mobilization of finance to implement inter-state projects that have subregional and regional impacts. In addition, the paper will highlight the opportunities afforded by regional cooperation in the simplification and harmonization of rules, regulations and procedures as well as operational co-ordination of different modes of transport.

In view of the fact that transport plays a functional and permissive role in promoting socio-economic activities and contributes to this process most effectively as a unified network, it logically follows that there should be co-ordination in the planning and programming of regional infrastructural investment programmes. In this connection, concerted efforts by African countries have been and are still directed at promoting the implementation of those projects that have a subregional dimension.

INSTITUTIONAL MECHANISMS FOR CO-OPERATION

As already indicated above, African countries have established institutions that are charged, among others, with the tasks of promoting co-operative activities aimed at the development of integrated transport and communications networks. The ECA also plays a crucial role by not only fostering such developments, but also by ensuring that the co-operative activities among the subregional groupings do not ignore the regional perspectives and imperatives which cut across the frontiers of various subregional organizations.

Generally, co-ordination and monitoring in respect of implementation of the agreed programmes and projects are through specialized intergovernmental committees and Ministerial Conferences. These institutions decide on the priority projects focusing on the short, medium and long term programmes. In so far as projects are concerned, an eligibility criteria is established which is used for screening the projects with subregional and regional impacts.

The detailed formulation, design and implementation are left to individual countries. Co-operative action at the regional level is in respect of the collective submission of these projects to potential donor countries and multilateral financing institutions. Some subregional institutions have institutionalized donor conferences as instruments for mobilization of financial resources for transport and other projects. In this regard, the only organization that has been relatively successful in mobilizing finance using this method of mobilizing project finance has been SADCC, otherwise a general evaluation of other organizations in Africa indicates that this method of mobilizing projects, finance has not been that successful. There are three possible explanations why SADCC countries have been successful. Firstly, there is political solidarity of donor countries with political and economic objectives of SADCC countries of lessening their dependence on the Republic of South Africa, in particular by developing alternative transport and communications routes. Secondly, better project identification, formulation, design as well as the capacity of the member countries to implement has been facilitated by the availability of funds, usually soft loans and grants to carry out pre-investment studies and project implementation. Finally, the articulation of projects in a regional context, that is, the formulation of projects in a systems context from ports to the inland countries has made the rate of return for the projects attractive. This is especially the case when the anticipated traffic to be diverted from the Republic of South Africa transportation routes are loaded onto the alternative rail/road corridors.

An assessment of the projects in other parts of Africa, however, reveals that the systems planning approach to the development of regional transport routes has been and still is lacking. This weakness

which is of both conceptual and planning nature, has been compounded and financing institutions to appraise these projects within a regional framework. The tendency and practice are that these projects are appraised from purely national perspectives, thus giving rise to the perception of heterogeneous projects that are not interrelated.

It is, therefore, evident that regional co-operation in the development of integrated transport networks offers opportunities to link up countries and thereby promote and facilitate intra-regional trade. The problems and constraints that affect the regional programmes that have been identified, formulated and designed for implementation are due partly to institutional inadequacies that are of a policy nature and to the failure of some African countries to vigorously pursue the implementation of these projects.

At the policy level, the institutions that have been established are by their very statutes not autonomous in that member States have not delegated their rights in respect of permitting the institutions to actually negotiate the financing of projects with potential lenders. A further constraint is that these institutions have no authority or instrument, to use to ensure that the countries discharge their obligations. This has led to situations where countries default in their regional undertakings by not only failing to incorporate regional projects into their national development plans, but also by failing to furnish information on the status of projects implementation. In some cases, it has been found that there is lack of consistency in regard to the priority that governments accord to projects with a regional dimension and those that are purely national without subregional or regional impact. This partly explains why national projects have been relatively more successful in attracting finance than subregional and regional transport projects. This state of affairs is also a reflection of the institutional orientation of planning machineries at national levels which give priority and emphasis in resource allocation to national projects as opposed to priority regional and subregional projects that countries have undertaken to realize. This is suggestive of the lack of co-ordination in planning and implementation at the national level of national, subregional and regional programmes and projects. To resolve this problem it is necessary that the formulation, design and implementation of these programmes should be integrated.

In addition to the institutional inadequacies other factors constraining regional co-operation in the development of transport are due to, *inter alia*, administrative incapability and sheer inertia on the part of those charged with the task of promoting these programmes. The administrative incapability is mainly due to the absence and/or shortage of competent manpower to handle such projects, whilst the inertia could be caused by perceptual problems in that the benefits of subregional and regional projects may not be easily apparent to the planners and policy makers. The exception to this are situations where the economic and consequently the political imperatives of the country dictate that practical action be taken immediately. In this regard, there is need within the relevant government ministries involved to create a nucleus of specialists whose tasks, among others, would be to relate to and integrate national projects and programmes with regional ones.

The provision of transport infrastructure and facilities at the regional level is further constrained by the fact that the interest of the countries to be transited may not be identical to those of the transitor countries. This is because the benefits of such transport infrastructure may not be apparent or immediate to the countries to be transited hence their reluctance and at times unwillingness to embark on expensive capital investments.

Within the framework of regional co-operation there are two possible solutions. The first is that the countries concerned could come together and agree that the countries in need of the facilities could either individually or in collaboration with the countries to be transited provide financing for the facilities. This model of co-operation is not generally favoured on one hand by the countries to be transited because there is a general perception that if the country were to allow these investments, then its security and political sovereignty could be compromised. On the other hand, the countries requiring the facilities are generally reluctant and/or unwilling because they would not have control over the capital investments on foreign soil. In spite of these constraints, some land-locked countries have found it advantageous in recent times to provide financing for handling equipment and storage

at ports as well as participating in the management. It is important to note that these investments have been of an operational nature involving modest investment when compared to fixed infrastructural investments. There are however, examples of massive capital investments which occurred during colonial times. To mention a few, the East African Railways, Posts and Harbours Authority which predated the formation of the East African Community and the Rhodesia Railways which operated as a unitary system in the then Southern Rhodesia, Northern Rhodesia and Nyasaland. It could be argued that these institutions worked well during their time because they were either under one authority or had adequate institutional arrangements for the sharing of costs and revenues. If this was the case there is therefore nothing to prevent such joint investment projects from actually benefiting both the land-locked countries and the countries to be transited provided an agreeable formula for the equitable sharing of costs and benefits is worked out. In this connection cognizance has to be taken that a formula which does not take into account the totality of benefits and costs may actually result in one country subsidizing another as happened during the erstwhile Central African Federation when the high rail rates for copper from Northern Rhodesia made it possible for Rhodesia Railways to carry other minerals below the cost of transportation³. This enabled the exploitation of marginal mines in Southern Rhodesia.

Regional co-operation in the provision of transport facilities and services could be enhanced if the countries that require or need transit facilities could undertake to utilize them. This would go a long way towards allaying the fears of the countries to be transited in that there would be a steady stream of income from the transport facilities that are provided to recoup the investment. To reciprocate the countries to be transited should also desist from taking unilateral action in respect of operations of the facilities on such matters pertaining to rates and charges. It is therefore essential for the sustenance of goodwill and trust that decisions on the use of the facilities should be mutually agreed upon.

In the other subsectors of transport co-operative activities in such areas as civil aviation, air transport and maritime transport have been frustrated by the practices of countries which pursue narrow national interests. This state of affairs has given rise to excess capacity in the air transport industry and protectionist practices in respect of the granting of traffic rights. This has happened in spite of the fact that the commercial benefits of co-operation are demonstrably obvious and quantifiable. In such circumstances one cannot but conclude that the institutional frameworks and modalities of co-operation have been and are still inadequate. This is due to, *inter alia*, the absence of specificity and presence of sloppiness in the formulation of regional co-operation programmes. Furthermore, this problem has been compounded by the systematic failure of African Experts and Consultants to identify the specific factors involved on the basis of which specific co-operative programmes could be formulated and implemented. The majority of studies have therefore tended to be general, hence recommendations emanating therefrom have been difficult to implement.

In respect of non-physical barriers regional co-operation in the transport sector has focused on programmes aimed at the harmonization of national regulations and reductions to a minimum of barriers to intra-African trade. In addition, co-operation has been aimed at the harmonization and standardization of technical specifications which include, among others, road design standards, vehicle and railway wagon specifications.

The procedural aspects pertaining to the physical distribution of goods arise from legal and administrative controls that authorities in transit countries enforce. Within a country there are different institutions that play a role in enforcing these controls. Transit requirements, vary from one country to another and include, among others, customs, phytosanitary, traffic rules, regulations and procedures. It is universally accepted that all stages of the transit transport chain regulatory and surveillance procedures are necessary. The moot point, however, relates to the nature and scope of these controls. Is it for example, necessary to have different sets of trade documents containing similar information just because different governmental ministries or agencies require it?

National transit requirements regulating international trade have given rise to a proliferation of procedures and related documentation. This undesirable state of affairs has been partly due to the

imposition by transit authorities of procedural transit requirements that are normally applied to the movement of national imports and exports. These cumbersome rules and regulations coupled with voluminous documentation give rise to the increase in the direct and indirect costs of shipping and distributing goods. In the majority of cases, these controls have no relevance to the monitoring of transit cargo because all that the transit country requires is to verify that the transit goods correspond with the ship's manifest in respect of quantities and destination.

For the African region as a whole progress in the implementation of programmes aimed at the gradual elimination of non-physical barriers has been slow and unsatisfactory. This has been due to a large extent to the existence of anarchistic legislation which have origins in the colonial era. This is therefore a policy issue which needs urgent attention of African countries. It is a serious indictment of post-independence governments that they have not vigorously pursued and implemented legislative policy reforms hence the anachronistic practices that abound. This situation is even more surprising when one takes into account that the majority of these countries have acceded to international conventions whose objectives are to facilitate the movement of transit traffic. This in itself confirms the conclusion that reform and modernization of legislation at the national levels has not been synchronized with the international conventions to which the countries are parties. Finally, the failure to streamline and harmonize the existing multiplicity of rules, regulations, procedures and specifications can be attributed to general approaches that have lacked specificity when it comes to implementation. What is required is that programmes and measures designed to simplify and harmonize procedures should be better formulated and take into account both legal and technical considerations.

POLICY ISSUES

It is quite clear from the preceding analysis of the problems and opportunities emanating from regional co-operation in the transport sector in Africa that institutional and administrative factors of a policy nature constitute the main constraints to effective regional co-operation. Broadly speaking the factors that are a prerequisite for effective regional co-operation can be divided into internal and external requirements.

Internal requirements

Inevitably, internal requirements relate to co-operation in implementing regional infrastructural projects and specific programmes whose object is the elimination of legal and administrative obstacles to the movement of inter-state traffic. Regarding physical projects, governments should incorporate subregional and regional projects in their national development plans. This would at least ensure that these projects are priority ranked with the rest of other projects and are allocated the local financing component with indicative target dates for implementation. With respect to legal and administrative obstacles to the inter-state movement of traffic, it is evident from the plethora of rules, regulations and procedures that have their origins in the colonial era, that the *sine qua non* for the elimination of these barriers is the overhaul of archaic legislation which should be replaced by uniform legislation. This would not be a difficult task in view of the existence of international conventions that are compatible with the requirements of regionalism in the transport sector.

On top of these requirements, it may be necessary to reorganize ministries that are responsible for either carrying out or overseeing maintenance and excursion of works by introducing financial planning for both national and regional projects. In this regard, planning units that are charged, among other things, with formulating, designing, supervising and co-ordinating project implementation of national and regional programmes need strengthening.

External requirements

Effective regional co-operation in the transport sector depends among other things, on availability of external financing and the *modus operandi* that a group of countries use for resource mobilization. With regard to the latter, new institutional cooperative arrangements between regional banks and regional and subregional intergovernmental organizations should be established for purposes of mounting concerted efforts in promoting regional projects. This, *inter alia*, would entail agreements that once projects are identified by subregional and regional organizations, then resource mobilization for implementation should be the responsibility of the banks. Given their technical and financial expertise, the banks are in a better position to ensure that projects are formulated and presented in bankable formats. Furthermore, the banks are ideally suited to identify potential donor countries and financing institutions for regional projects whose requirements may be beyond an individual lender. This institutional arrangement would ensure project consistency and coordination by financing institutions, thus removing the existing duplication of projects between intergovernmental organizations on one hand and the United Nations organizations in Africa on the other.

CONCLUSION

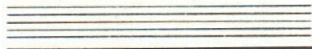
Clearly this paper has attempted to examine the strengths and weaknesses of existing paradigms of regional co-operation in the transport sector in Africa. In the process, it has drawn attention to some important features which will require definition, and indicated those policy aspects of institutional managerial and organizational nature which should be taken into consideration in drawing up programmes of regional co-operation.

The fact that regional co-operation in the development of integrated and complementary transport and communications systems is high on the agenda of African countries is a clear evidence of their political commitment. The paper has suggested that the shortcomings of most regional co-operation programmes in transport are due to technical deficiencies in programme formulation. These programmes more often than not are general and not specific. It is an indisputable fact that specific paradigms for each transport subsector constitute the basic framework for the realization of practical and operational co-operation among member States.

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CHAPTER 4



Part II

Transport and Management Policy Issues

"Whither Transport Policies in Africa"

V. W. Hogg¹

INTRODUCTION

Most African countries do not have a transport policy if, by that, we mean simply there is no formal, published official statement on the subject. In practice, however, transport investment decisions, the patterns of ownership that prevail and major features of operational activities, as well as the mix of policy instruments used (taxes, subsidies, rules and regulations, etc.), all reflect whatever transport policies are currently being pursued — difficult though these may be to identify and interpret and the objectives they are intended to serve unclear. The policies followed and instruments used are, in reality, the balance of compromises made by the key internal and external actors in the sector and in the light of the particular political and economic forces upon them.²

Transport problems of many African countries stem, however, not from the absence of official policy-statements or similar directives but more from the fact that critical issues are either not being addressed or are being tackled in a half-hearted way. Lack of action by administrators and managers responsible for formulating policy is sometimes excused by the claim that the issues are “too politically sensitive. The politicians know what they want, so that’s what they get”. In other cases and places inaction is explained by arguments that “government will not release more funds, raise taxes, cut services or subsidies, open the industry to competition” and so on. In such cases where questions lying at the heart/transport policy are, in effect, answered by the Ministry of Finance then the officials in ministries responsible for transport have little incentive to do good work in policy analysis and formulation.

The key issues are often recognized by transport specialists in most countries and, in many, these people are aware of the solutions, at least on paper. The bookshelves of Africa are, in fact, full of transport sector studies and reports made by governments, consultants, international financing agencies and other organizations — regrettably, however, the majority of these documents cannot be found in any single place in Africa or elsewhere. Transportation doctors — domestic and foreign, modern and traditional, academic and practicing — have written prescriptions to cure the malaise of Africa’s 44 countries but many have got worse rather than better. This is because they refuse to take the medicine or they take it in smaller doses than recommended and not for the full recommended period of treatment. In our discussions we may wish to explore why this is so and why the transport wheel in much of Africa has to be re-invented so many years.

Extensive quotations are not necessary in this forum to demonstrate that many African countries are faced with a wide range of problems — technical, financial, managerial and policy planning — in their transport sectors. Many colleagues here live with the problems everyday and can well illustrate cases where transport capacity, service quality, equipment utilization and labour productivity as well as enterprise discipline and organizational morale have declined in recent years. They know too that many public sector transport managers are increasingly concerned about being in a “no win” situation. That is, if established financial, personnel and operating rules and performance standards are strictly enforced enough, hostility may be generated — from above or below — as to threaten their professional careers. Yet, if the organizations for which they are responsible do not deliver what is expected by political or party managers, their personal performance and prospects are adversely judged. Thus, in the words of a recent Nobel Prize Winner in economics, it seems there is a strong tendency for managers to “sacrifice”. That is, do enough to survive in terms of one’s own objectives and agenda — which is not likely to be that of the public to whom they are ultimately responsible.

Discussion of transport policy for an area as large and diverse as Africa runs the risk, however, of quickly becoming vacuous in the extreme. Transport is a place of specific activity. It deals with moving X tons of freight or Y number of passengers from here to there or somewhere else, at a combination of price and service quality, as expressed by the willingness of users to pay and is economically efficient. Efficiency in this context means producing the transport output required at minimum economic and social cost to the society or, alternatively — and as being practiced in some countries where reshaping the size of the transport system is difficult — maximizing the output of ton-km/pass-km from a given set of appropriately priced inputs. Efficiency is not merely a matter

of finding technically optimum solutions. However, it has another distinct but critically related aspect: efficient resource allocation through prices, markets and administrative interventions. This search for internal economic efficiency in the sector is at the heart of traditional national transport policy statements and discussion of the elusive concept of "transport co-ordination".³ Governments have to start with existing institutions that have their own inertia and interests. The reform process, therefore involves negotiation and compromise, accepting "second-best solutions" that, while not ideal, are good and politically feasible.

In practice, transport systems and services are used in many countries to serve objectives rather than those of sector economic efficiency. These objectives may relate, among others, to foreign or defense policies, to domestic electoral politics (including regional balance and social equity), or, as in southern Africa today, insurance against the risk of economic and political domination. This use of transport usually conflicts, however, with the frequently stated aims about economic efficiency and running parastatal transport enterprises on commercial principles, as their founding legislation often says. The role of the transport sector and the way transport policy is implemented in the different countries will, therefore, be conditioned by internal political, economic, social and ideological objectives and constraints. It is influenced also by the different roles and capacity of their administrative systems, as well as by the number and quality of transport experts and managers. The country's transport problems, and the policies it adopts, are the product of a unique set of physical, historical, economic and other factors.

Emphasis on uniqueness has a danger. However, it encourages, as one distinguished economist observed years ago, "a belief — extremely useful to politicians — that somehow one's own country is a unique specimen to which the ordinary laws of economics do not apply... and the belief that the judgement of civil servants, on all kinds of economic issues, must be superior to the judgement of the market".⁴ While transport problems and policies are, admittedly country specific — and must be solved in national terms — the evidence of much experience in Africa and elsewhere is that many transport policy issues and problems have common origins.

Experience also suggests that where the causes can be uprooted then significant improvements can take place both in internal transport efficiency and in the effectiveness of the sector in serving national objectives.

The remainder of this chapter — which concentrates on sub-Saharan Africa (SSA) falls into three parts:

- (a) A very brief, background review of the current economic situation of SSA. This is necessary to put the near future tasks and prospects for the transport sector in perspective;
- (b) A sketch of some areas on the transport sector which seems of strategic priority for major policy thrusts, given the likely continuance of tight economic and human resource constraints. The themes related to:
 - (i) Improving maintenance throughout the sector, but especially in roads;
 - (ii) Strengthening one financial and overall managerial performance of parastatal transport enterprises;
 - (iii) Making greater use of markets and prices as the way to improve resource allocation and increase efficiency within the sector;
 - (iv) Using combinations of capital and labour which are more appropriate to current and expected employment conditions;
 - (v) Alleviating urban transport problems, especially through low cost measures and greater use of informal para-transit systems; and
 - (vi) Laying a firmer organizational basis for the process of transport policy and analysis and formulation.
- (c) A summary of key suggestions. These, however, do not and cannot form an "Agenda for Action" for the different countries even though in many cases these are long overdue and should be prepared as soon as possible.

THE PAST IS PROLOGUE (SHAKESPEARE)

Living standards in much of sub-Saharan Africa have declined over the past decade, with per capita incomes now being below their 1970 levels in many countries. This tragic situation is the outcome of adverse external forces over which African countries had little or no control and wrong or delayed internal policy responses to changed economic circumstances. The following external factors include:

- (a) Serious drought;
- (b) Lower volumes of exports and falling export prices;
- (c) Higher prices for oil and imported capital goods;
- (d) Burdensome interest rates, especially on funds borrowed from private banks keen on recycling "petro-dollars";
- (e) Smaller net flows of aid, in part because of larger debt service payments; and
- (f) More limited market opportunities as a result of growing protectionism in industrialized countries.

At the same time, many African countries "shot themselves in the foot" through:

- (a) Slow policy responses;
- (b) Heavy borrowing from their central banks and abroad to avoid the pains of economic/social re-adjustments;
- (c) Extensive use of prices controls and consumer subsidies with an urban bias and which affected adversely agricultural production and rural people;
- (d) Overvalued exchange rates which had the effect of: discouraging the search for new export markets; encouraging black-markets and reduced revenues for governments; and distorting investment choices towards imported capital technology;
- (e) Negative interest rates that discouraged saving, encouraged capital flight abroad and stimulated borrowing for low priority purposes; and
- (f) Domestic and external strife and violence.

The particular mix of these internal/external factors and their impacts varied with the different countries. It must also be stressed that the performance in SSA has not been uniformly poor. Some countries managed their economies well in most difficult circumstances. Welcome improvement signs can be seen. Rainfall has been good generally this year as in 1985. Past policy errors are being recognized increasingly by key political leaders. And, with external financial assistance, a growing number of countries are taking the first steps to correct them. Higher prices for some commodity exports (e.g. coffee) and low oil import prices have improved the terms of trade of low income African countries somewhat. More flexible exchange rates and more realistic interest rates are being adopted, but this process has a long way to go. Efforts are being made in some countries to reduce the size of public sector activities and the operating deficits and subsidies that these have often required. Much more positive attitudes to management training are becoming evident. Finally, higher agricultural producer prices seem to be stimulating positive production responses.

Welcome as these developments are, the short and medium term outlook for renewed economic growth remain poor for many parts of sub-Saharan Africa:

- (a) Terms of trade projections suggest their renewed deterioration;
- (b) Rapid population growth continues;
- (c) The time lag for newly initiated policy reforms to start biting will be long;
- (d) The overall investment rate in SSA has fallen from 18 per cent of GDP in the late 1970s/early 1980s to 14 per cent in recent years. This is too low to provide for new productive capacity and the maintenance/rehabilitation of existing stocks of infrastructure and equipment; and,

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- (e) Domestic savings have fallen to the extraordinarily low figure of 6 per cent of GDP as compared with 15 per cent in the early/mid 1970s.

Some key facts are set out below, in telegraphic style, to help focus on their implications for transport policy makers/planners and managers:

Population

- (a) Increased by nearly 100 million people in SSA during the 1970s;
- (b) Present total of just over 400 million is projected to rise through 500 million in 1990 to 675 million in year 2000;
- (c) Seventy per cent (280 million people) live in rural areas where another 200 million people will be added by year 2000;
- (d) Urban population presently total 100 million and is increasing by 5–6 per cent per annum. Thus, by year 2000, it will be around 250 million people. In 1980 there were only three cities in SSA with populations over 550,000. Today, there are 28 and 70 which are projected for year 2000; and
- (d) Population of working age (15–64 years) is increasing at 2.9 per cent per annum. Thus work will need to be found in agriculture, industry and the service sectors for another 200 million.

Food Supply

- (a) Food production over the past decade or so has increased at only half the rate of population increase;
- (b) Thus the food self-sufficiency ratio has fallen from 98 per cent in the late 1960s to 80 per cent in the 1980s; and,
- (c) Food imports have increased. For example, the amount average import volume of food cereal was 8.7 million tons at an annual cost of \$2.3 billion.

Excluding Nigeria the total food import bill for the rest of SSA has been running at \$5.0 billion in recent years.

Energy

- (a) The real price of petroleum rose by 520 per cent in the 1970s;
- (b) The share of fuel imports in the total value of merchandise imports of low income African countries rose from 6 per cent in 1965 to an average of 21 per cent in 1982. In extreme cases (Kenya) the figure reached over 35 per cent. 60 per cent of Tanzania's earned export income in the early 1980s went for oil and product imports; and,
- (c) Over 50 per cent of import fuel goes to the transport sector with three-quarters of this going in the roads sector and only 5 per cent (or less) to rail in the different countries.

Trade and Finance

- (a) In 1984 the deficit on merchandise trade for 25 low income African countries was \$4.0 billion. Deficits of this magnitude have been financed through foreign borrowing;
- (b) SSA's total external debt increased ten fold from \$5.4 billion in 1970 to \$56.9 billion in 1984; and,
- (c) For the 25 low income countries' total obligation including long term debt, short term arrears and IMF purchases were \$45.0 billion.

This amounts to 74 per cent of their GNP and 34 per cent of export incomes. For some countries debt exceeds GNP.

The figures above raise questions for transport policy and planning. How, for example, can the mobility needs of another 200 million people in the rural areas be met? How are the food

requirements of 250 million in urban areas, and their journey-to-work needs, to be met? Since the largely individual (private car) solution is impossible in Africa's immediate future, how can passenger movement best be met by collective transport means? Can the transport sector play a direct role in generating some employment opportunities by different construction, maintenance and operating techniques? What is transport's role in making possible increased and more regular supplies of food to growing urban area and export commodities in the transport sector generally, and especially in road use? Even assuming increased debt relief and debt re-scheduling; in what ways can the transport sector do anything significant to:

- (a) Economize in the use of foreign exchange (at a time when funds are short to buy spare parts to replace worn out equipment and rehabilitate infrastructure); and,
- (b) Generate new foreign exchange?

AREAS AND OPPORTUNITIES FOR IMPROVING POLICY

The transport sector is closely linked to the above sketched macro-economics crisis and underlying population, urbanization and other trends affecting substantial parts of Africa. Transport is part of the problem; partly a victim, and also part of the solution. The linkage with the overall economic crisis is strong in at least six ways. These are discussed in turn in the following sections.

Overcoming the road maintenance crisis

A few countries in Africa achieve good maintenance performance in the transport sector. This is especially the case in aviation where the penalty of poor maintenance is all too obvious and fatal. The more common feature however, is that of under maintenance of infrastructure and equipment. This results in a high rate capital consumption and increased transport costs which not only adversely affect other economic and social activities but also waste scarce foreign exchange.

The suspicion that large parts of the road network were in a poor and deteriorating condition was confirmed by a survey carried out by the World Bank in 1984. The enquiry found that less than half of the paved road network could be described as being in good condition. Of the gravel roads, 75 per cent were described as being only in "poor to fair" conditions. Excluding Zaire, only 5 per cent of the earth roads could be classified as "good". The survey suggested that some two thirds of the earth roads had been "virtually abandoned" for lack of maintenance. In only three out of the eighteen countries surveyed actual maintenance expenditure were 85 per cent or more of the amounts required, while in 12 countries they were less than 50 per cent of what was needed. Resealing was not carried out in just over half the countries and 25 per cent of them did not do any regravelling.

The economic costs of poor or neglected maintenance can be very high. To illustrate this the Bank took the example of an African country which has a paved network of 4,500 km that carried an average traffic of 250 vehicles per day. Budget allocations for the maintenance of this network have averaged about \$1,000 per km in recent years: a sum barely sufficient to pay labour and overheads. Road conditions have deteriorated in quality and, as a result, vehicle operating costs are 25 per cent or more higher than they would be if the network was properly maintained at an annual average cost of \$2,600 per km. The short term "saving" to government's budget of under-maintenance is about \$6.4 million per annum. The extra vehicle operating costs, however, borne by users amounted to \$23 million per year, with a substantial part being foreign exchange consumed in extra spare parts, accelerated vehicle depreciation, unnecessary fuel consumption, etc. The current situation in the country is that before maintenance can be resumed a \$400 million road reconstruction programme is required.

This sum is 60 times the "saving" to the budget: "saving" which in fact is only expenditure deferred. The numbers may be larger or smaller elsewhere in Africa but the main point that poor maintenance does not economize on foreign exchange remains.

Numerous explanations are offered below for this phenomenon of poor care of public assets:

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- (a) The political benefits from good maintenance are low as compared with new construction; therefore, there is little political advantage in increasing funding;
 - (b) Maintenance lacks glamour for young, as well as ambitious engineers;
 - (c) There are shortages of skilled personnel and the incentives for good performance by maintenance staff are weak;
 - (d) Capital is easier to obtain than maintenance funds from foreign lenders and aid donors;
 - (e) The resources made available for maintenance are poorly utilized because of inadequate management skills in this area and poor management information systems;
 - (f) Controls on overloaded, speeding vehicles which usually damage roads;
 - (g) There is insufficient standardization of equipment fleets; and,
 - (h) The "If it ain't broke, don't fix it" and the "If funds are scarce generally cut maintenance" attitudes.

The serious maintenance crisis caused, in part, by the major renewal cycle of large investments made a decade or two years ago — has been discussed at two important but different sets of meetings recently. One set took place in Abidjan in June 1985 and were convened by the ECA/ADB/IBRD. At these meetings maintenance specialists from 27 SSA countries discussed the problem with representatives of international financing and other agencies (including the UK TRRL, CIDA and IMF). The participants were united in their conclusions that improvements of road maintenance requires:

Financing aspects

- (a) Preparation of multi-year maintenance need programmes that are based on a defined priority network in relation to the economic requirements of national development;
- (b) Provision of an adequate budget for this selected network;
- (c) Assurance of the regular availability of such funds and exclusively to meet road maintenance needs;
- (d) A better distribution of total highway funds away from investment in favour of maintenance;
- (e) Allocation of an adequate share of highway user (fuel and other) tax revenues to the maintenance budget and, wherever these are not sufficient to cover maintenance needs, taxes should be increased;
- (f) The setting up of sufficiently flexible financial management structures so that available funds can be used efficiently (creation, continuation or improvement of road funds, establishment of revolving funds, etc.);
- (g) Increased external assistance is needed to complement national efforts and especially to obtain foreign exchange for equipment renewal, spare parts, etc.; and,
- (h) Greater co-ordination of transport sector strategies and highway financing programmes among the different donor institutions.

Organization and management aspects

- (a) Greater domestic political will and education to consider road maintenance as a priority activity;
- (b) Increased autonomy for the managers of road maintenance organizations, in particular for personnel matters, procurement and day-to-day operations;
- (c) Implementation and development of incentives for more efficient performance;
- (d) Promotion of competition between the different modes of maintenance execution, giving a larger place to private contractors; and,
- (e) Establishment and improvement of systems for the management of equipment, personnel performance monitoring and budgetary control.

The other set of meetings took place in two stages in Rome (February –March 1985 and April 1986). These were roundtables organized by the Economic Development Institute (EDI) of the World Bank in collaboration with the Italian International Centre for Transportation Studies

(ICTS). The eight small meetings were extremely important not just because they were attended by ministers and senior policy makers for the transport, public works, finance and planning ministries of over 30 African countries, but also because of the active, constructive participation and interaction of these political and policy advisory levels people. The participants were in broad agreement that at this time of shortages the highest priority in the use of highway funds should be given to road maintenance, with a highly selective and restrained approach to new investment. The importance of these policy level meetings was also that they arrived independently at the same broad conclusions and recommendations as those of the technical specialists.

They were another example of sound diagnosis of a transport problem and full understanding of the appropriate prescription. The practical issue, however, is how can the patient be persuaded to take the medicine which, intellectually, he knows will make him better. This needs to be considered in discussion.

Transport parastatals: Better financial management

Autonomous or semi-autonomous parastatal organizations are found in almost every transport activity in Africa. Their particular mix and relative political importance in the different countries varies with historical and other circumstances. Most commonly they appear as (a) railway, national airline and ocean shipping corporation; (b) urban bus companies, and (c) port authorities. Some are found in inter-city road freight and passenger traffic, but the private sector is usually more important in these activities nearly everywhere. A few are multinational African enterprises (e.g. TAZARA, RAN and Air Afrique).

The majority of the transport parastatals are in a deficit or weak financial position. The World Bank recently collected information which suggests that in SSA as a whole one third of the transport parastatals cover their operating expenses and financial charges — and, of these, most are port authorities. Very few of them generate sufficient revenues to service the debts outstanding to their governments or foreign lenders, or to make meaningful contributions to their renewal and capital expansion needs. One-half of them did not cover their operating expenses and one-third did not cover even their direct working expenses (i.e. labour, fuel and other materials costs). The poor financial condition of so many transport parastatals means they rely heavily on government budgets to meet their operating deficits, debt servicing and investment needs. The total sums involved are, in some cases, a serious drain on the nation's financial resources.

Once again, several reasons can be offered to explain this serious position. In practice, not all apply in every case. And there are examples of well run, financially viable organizations. The circumstances of poor financial performance in any particular case may be found in:

- (a) Unclear and often contradictory objective which dissipate managerial effort and which cannot be met or monitored;
- (b) Excessive political (and personal) interference in issues and decisions which, quite properly, should be taken by the appointed managers or boards of directors;
- (c) Overly frequent rotation of top managers, with the new appointee either not being given sufficient time to understand the transport industry or being totally inexperienced in managing large business operations;
- (d) Limited numbers of experienced middle managers, technical specialists and skilled supervisors;
- (e) Overstaffing and nepotism at all levels;
- (f) Government imposed or dictated pricing policies that have perverse financial effects and, in some cases, results which are opposite to intentions. Subsidies aimed at the poor, for example, often end up being of benefit for the less poor but financed by regressive taxation on the poor;
- (g) Growing "accounts receivable" situation caused by the failure or tardiness of other parastatals and government departments to pay their bills to the transport enterprises; and,

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- (h) Excessive concern by parent ministries on legalistic/bureaucratic aspects of the input side rather than on evaluating output and financial performance.

Some countries are making serious efforts to tackle the broader policy and practical aspects of these financial issues. This is especially so where there is project financing or structural adjustment support from international organizations such as the IBRD, IDA and ADB. The growing emphasis both by these leading agencies — and some bilateral agencies — is more than a response to a situation where transport enterprises need to generate more funds internally because aid funds and domestic support are unlikely to be as easily forthcoming as they were in the past. There is also a growing concern for efficiency in terms of overall resource allocation and use. Potential lenders are increasingly worried also about the cumbersome procurement procedures and weak financial controls which slow down loan disbursements and make it harder for them to justify greater support from government, private banks and other supplying funds to assist poor countries.⁵ They see a need for example, to break the evaluation and contract awarded procedures as well as reduce the long delays that often occur in reimbursing contractors for work done and, in turn, discourages further speedy execution of projects and disbursement of loan/credit funds.

Staffing problems are particularly acute in the spheres of financial analysis and control, though there is usually no lack of routine bookkeepers and traditional accountants. Shortages of the latter are serious, however, in some countries. The real scarcity is that there are few tough-minded financial analysts who can not only put parastatal senior executives “through the hoop to force them to say what they propose will be value for money... but also whose impulse is not to save money but get the most for it”.⁶ The financial weakness to be overcome, therefore, is not the narrow one of accountability for public expenditure (though this is a problem in some instances) but rather the wider one of wise stewardship in the use of public funds.

There is growing recognition that better financial management is but one element in a bigger reform process of improving all-round performance by parastatals. There is, of course, no precisely set general formula for parastatal reform but, based on several experiences in Africa and elsewhere in poor countries, the broad outline of an acceptable approach is taking shape. This proceeds in two main phases, with each being divided into three discrete stages:

Rehabilitation or performance improvement

Phase 1 — Preparation

- Stage 1 Diagnose
- Stage 2 Devise improvement plan
- Stage 3 Prepare a contract plan

Phase 2 — Execution

- Stage 1 Implement and monitor 1 (2) and (3)
- Stage 2 Evaluate results
- Stage 3 Revise 1 (3) on basis of experience.

Key staff of the enterprise must be involved from the outset and they must understand the diagnostic process as well as agree with its conclusions and recommendations. The process cannot, and must not, be alien to them even though outsiders may be closely involved in it. The diagnostic step examines transport sector and parastatal enterprise objectives; the legal, institutional and regulatory environment; and the non-commercial constraints placed on the transport enterprises. These latter show the extent that particular financial losses are caused by using the enterprise having to fulfil specific social activities and meet political objectives. Cynics may say that policy makers do not want to know the costs of their decisions. But the fact is unless they are aware of the magnitudes involved no meaningful transport policy dialogue can take place.

The important step is to develop and implement a *Contract Plan* (derived from French "contract plan" found in Senegal and elsewhere). This defines the reciprocal commitments of government and the transport parastatal for several years in advance. It spells out goals of the enterprise which are measurable — if possible. It spells goals of the enterprise whose performance results can be gauged. It also fixes governments responsibilities and obligations to the contract in equality precise ways, particularly with regard to, for example, the legal and institutional changes needed to improve the parastatals operations; the size, timing and pricing of tariff changes, employment target levels; type of resources to be accorded to the parastatal, including capital injections, loans and/or loan guarantees.

Such reform actions are, admittedly, administratively intensive activities which will demand more from weak and, at times, already overtrained administrative system. They can only be successful also in an improving macro-economic environment. Complexity of the issue is daunting and quick and easy solutions are not available. The reform effort will be lengthy, painful, expensive but in the final analysis, unavoidable. It will demand much significant political will from African governments and substantial financial, technical assistance, research and training support from the aid-donor community.

Markets, prices and subsidies

There is a trend worldwide to increasing reliance on market forces as a spur to enterprise efficiency and the better allocation of scarce national resources. This is most evident industrial market economies where some large public sector transport corporation are being sold (privatized) e.g. Conrail in the USA, Japanese Railways and British Airways. It is also taking place, in whole or part, in developing countries of Asia — e.g. Bangkok Bus Company; Sri Lankan (Ceylon) Transport Board; Malaysia Container Terminal; and Bangladesh (Biman) Airways. The move to privatization in poorer countries, and especially in Africa, will not be easy or swift. This, in part, is because domestic capital markets are not big enough to absorb the cost of privatization of the large transport parastatals that exist. There is also the question of where to find entrepreneurs and managers to run them in countries where the option of inviting foreign participation/management is ideologically unattractive. Nevertheless, countries such as China and now the Soviet Union are making efforts to follow the market socialism of countries such as Hungary and Yugoslavia. Economic progress is increasingly being pursued through whatever seems practically possible rather than ideological correctness and acceptability.

In the short run, major "sell-offs" of transport parastatals in Africa appears unlikely. What does seem feasible and desirable, however, is for governments to encourage competition by deregulating the road, coastal shipping, river and lake transport industries, including the greater use of sales or concessions to private operators of State-owned assets. Other instances where there are opportunities for feasible private management activities in the transport sector of Africa include:

- (a) Execution of road rehabilitation and maintenance works by private contract (as in Nigeria);
- (b) Equipment maintenance on contract to private or socially owned competitive enterprises;
- (c) Maintenance and operation of container terminals through multi-year contracts (Cameroon);
- (d) The provision of a variety of port and airport services; and,
- (e) Divestiture of some activities such as road transport and hotel operations by railways.

These and similar initiatives should be pursued as part of the wider process of reducing the role of the public sector and its burden on the limited financial and administrative resources of governments.

More market-oriented price setting is both desirable and happening. Apart from sending better investment signals and stimulating cost-consciousness and operating efficiency, it reduces the drain that many transport parastatal services and activities are on public funds.

A basic proposition in economics is that prices should reflect costs. If the price for a transport service/journey is less than the economic costs of producing it, people will consume more than if

price reflected costs and their willingness to pay. Additional resources will be diverted from more valued activities to meet the artificially stimulated demand. The relevant costs in this case are "marginal cost" (i.e. those which follow from the decision to increase transport output or keep a service in operation) and not the average financial costs of accounts. This basically simple point has not swept pricing behaviour in the transport world for arguable reasons. What is evident, however, and needed in Africa is to take advantage of opportunities for more flexible pricing to reflect differential cost and demand conditions, e.g. peak/off-peak prices (APEX type fares) including congestion charges; group size fares; differential prices for front-hauls, from back-hauls; volume freight rates; "take-or-pay contracts" for railway equipment and so on.

While the intellectual logic of greater pricing freedom and flexibility is clear for transport enterprises, to influence policy makers, more work is needed by policy advisers on:

- (a) Developing pricing rules that depoliticize pricing decisions as much as possible and which reflect the opportunity costs of real resources used in providing particular transport services;
- (b) Analyzing and prescribing pricing techniques that have built-in flexibility for handling congestion effects (particularly, in ports); and,
- (c) Devising political and administrative strategies for implementing such changes.

These are policy areas where African governments could make greater use of African consultant and academic resources, including members of professional transport associations/institutes.

Greater reliance on market forces, private or socially owned business operations, and competition is likely to lead to great self-financing by transport enterprises. "Budgetary equilibrium" by enterprises can be defended on many grounds, but the compelling reasons in Africa are to be found in administrative spur to managerial efficiency. Virtually all economic studies agree subsidies tend to generate wasteful projects, erode efficiency, increase costs, politicize transport decisions and promote collusive action (including by employers and unions) to exploit transport users and tax payers. A common argument, for example, is that transport prices have to be held — or inputs such as fuel subsidized in order to reduce the rate of inflation; (A "*reductio ad absurdum*" argument would be if that is the case then simply increasing subsidies for all commodities and services would eliminate inflation). Increasing subsidies can be met only by one or more politically unattractive options — raising taxes; diverting funds from other uses; borrowing from the central bank; or printing money. The inflationary effects of the two latter options are well-known.

What is needed in transport policy work in many African countries is, therefore, careful analysis of existing transport subsidies and the consequences of their abolition — what are they? What are their objectives? Who benefits and in what ways and to what extent? To have a fruitful dialogue with government it is important that transport policy advisers show, unequivocally that abolishing subsidies will reduce and not increase the rate of inflation. It is also necessary to demonstrate that policy packages which, among other things, involve eliminating subsidies and wasteful regulations will reduce prices to transport users. Transport policy formulation work, therefore, should be concentrated on:

- (a) Providing an analysis of the likely effects of reducing or eliminating subsidies on transport prices and the prices of final products;
- (b) Producing well-reasoned arguments to show the effects of removing subsidies on inflation, on the borrowing requirements of the public sector, etc.; and,
- (c) Developing alternative forms of subsidy where their retention is most likely, particularly with the view to building in incentives to productive efficiency performance, administrative efficiency and "self destruct" characteristics (sunset rules).

Capital and labour: factor choice and employment

The relative scarcity of capital and skilled labour and the abundance of unskilled labour in many African countries have two important implications for transport policy. One issue relates to the

choice of appropriate technology in the construction and maintenance of transport infrastructure, especially for roads in rural areas where there may be permanent or temporary large excess supplies of labour. The other flows from developments in the technology and distribution process of international trade and transport.

Many have argued that a greater use of labour in moving earth and handling goods could, in certain circumstances, lead to employment creation and other advantages. It would both ease the foreign exchange constraints on development and would put purchasing power into the hands of people whom economic studies have shown display a propensity to spend on domestically produced foods and services rather than on imports. Increased use of labour-based techniques would, therefore, have a multiplier effect on general economic activity and, particularly, those of a small-scale nature in the informal sector.

Major transport infrastructure civil engineering works have been built in Africa and elsewhere in the past using large labour forces and relatively simple equipment and tools. Studies by the World Bank have shown that where the cost of labour is less than US\$4.00 per day (in 1982 prices) it is economic to use labour in a number of rural road construction and maintenance activities. Practical experience in African countries such as Kenya and Lesotho have also demonstrated the viability of the solution. The Kenya Rural Roads Programme, for example, is recognized both in that country at the political level and in the international aid community as a valuable employment example. Good use was made of labour resident in the areas of the roads improved. A flexible approach was adopted to the application of the official minimum wage and innovative organizational arrangements were introduced. Experiences such as those of Kenya and other African countries need to be better known and more widely understood by policy advisers and makers in Africa. Here there is a role for international organizations such as the ILO, ECA and the World Bank to assist in "spreading the message" and in direct assistance.

In addition to their likely employment and economic benefits, labour-based techniques can form an important base for the deliberate encouragement of small contractors and local mechanical workshops. However, to achieve the objective of extending entrepreneurial attitudes and increasing business know-how in contracting experience has shown it is necessary to:

- (a) Remove obstacles in public sector contracting procedures which are often loaded against small indigenous firms;
- (b) Increase the training both of supervisory technicians and managers involved in labour intensive operations; and,
- (c) Give explicit recognition to the fact that the contracting industry is an important economic activity with its own development needs and potential.

The contribution by the transport sector to easing the growing unemployment problem facing many African countries can, at best, be only modest for in many transport activities and operations labour-based techniques are inappropriate. Nevertheless, as one well-known African politician observed "heavy investment in capital forms of production... not only results in a heavy waste of the labour force which lies idle (but also), politically, it is a most important course since providing employment opportunities for the masses must be a major consideration".⁷ At the policy level, therefore, every effort should be made to test this option in specific cases. Contracts, for example, can be awarded with employment target numbers. In investment project analysis, appropriate use should be made to adjust input prices to reflect the fact that economic wage levels for unskilled labour employed in a project may be below the financial minimum wage being paid.

In some parts of Africa rapid and far reaching changes are being introduced into the technology and business procedures of international trade and transportation. This is most evident in the so-called "container revolution" the economics of which requires that fast and expensive container ships limit the number of port calls they make. Many African governments are installing container handling facilities which, in most cases are intended to serve hinterlands wider than those of their conventional break-bulk cargo facilities. Container shipping companies welcome this flexibility

and profit potential. The port investments, however, are large and lumpy. They involve providing capacity for areas in the same hinterland. Therefore, they are risky investments and particularly so at this time of capital scarcity.

Prudence and good economics suggest a more co-ordinated regional/subregional approach to container facility investments whether at the ports or an inland container depots (ICDs). This is particularly important in the light of Preferential Trade Area (PTA) and similar arrangements intended to encourage interregional and international trade. If decision makers in particular African countries are to make better port investment choices these risks (and arguments about the "price of progress" and national security and pride) will need to be clearly measured. Only in that way can the benefits claimed be traded-off rationally against the economic costs involved. Port investment policy must be seen, therefore, more in a regional perspective and beyond narrow national decisions. Similarly, port pricing to recover part of the benefits accruing to vessel owners and transit countries from container facility investments also needs careful re-examination.

New techniques for moving goods in foreign trade are accompanied by the need to simplify, transmit and process the relevant invoices, bills of lading and bank documents more quickly as well as the introduction of more efficient management systems. African countries are slow, bureaucratic and, at times, hand-processed through numerous officials for checking and rechecking and final authorization. This, at a time when the costs of computer and telecommunication transmission facilities technology are falling rapidly. While present processes are often labour intensive, trade facilitation measures would seem to be one area where transport policy should move towards the faster implementation of well-known techniques and procedures in use by much of the rest of the international trading community. Greater efforts will be needed under ECA and other regional initiatives — to standardize documents, terminology, technology standards, measurement, statistical reporting and so on. Changing the present systems will be slow, difficult and threaten vested interests. Nevertheless, the best strategy for many African countries in the international trade and transportation areas should be to encourage the most modern business practices since these may be the engine to more efficient business and marketing generally.

Alleviating urban transport problems

Solving transport problems in capital cities has been one of the major tasks confronting a number of African governments because of both their economic and political importance. In many countries urban sector activities can account for up to 50 per cent of GDP. This concentration of economic activity spills over into political sensitivity about urban mobility and bus fares. Pressure on the urban transport systems is likely to continue increasing as the cities grow in population size by 5–7 per cent per annum.

Although circumstances differ considerably from city to city some basic trends are influencing the magnitude and nature of urban transport demand:

- (a) Large increases in population accompanied by a more than proportional increase in transport trips by all modes;
- (b) Physical expansion of the size of urban areas which results in a need to extend road and street networks, make longer journeys and consume more fuel;
- (c) Greater availability of motorized transport in the shape of cars, buses and motorcycles;
- (d) Increases in household income which, as many studies shows, generate a greater propensity to travel and buy vehicles with a resulting demand for more road space; and,
- (e) Increases in industrial and service activity leading to greater volumes of urban freight traffic and delivery vehicles type of traffic movements.

The speed with which demand for vehicles and pedestrian movements has grown in some cities has overwhelmed the financial resources and management capacity of institutions responsible for urban transport. Yet, despite the longer run implications, demand for urban road use has been allowed to grow virtually unrestrained everywhere, even though within a framework of limited foreign exchange allocations for vehicle purchases.

In only a few African cities is urban traffic congestion so serious (Lagos and Cairo are well known exceptions) as to warrant road pricing or area licensing schemes of the type used in Hong Kong and Singapore. It is clear, however, in many cities of Africa greater use could be made of:

- (a) Physical restraints to discourage movements of private cars across city centres at certain times of day;
- (b) More efficient parking controls to prevent long-term parking commuters in central business district;
- (c) Heavier vehicle use and ownership taxes (fuel taxes, import duties, sales taxes, annual licensing or other fees); and,
- (d) Selective use of land planning controls to influence the size and type of major urban transport demands or traffic flows.

Traffic congestion in many African cities take place at vehicle population levels often well below those found in industrial country cities. This, in part, is the result of inefficient use of existing streets and highways. Here again, well-known traffic management measures are available to urban transport planners and policy officials and managers — though, obviously, there is no ready made uniform policy solution for all cities. These measures include:

- (a) Selectively managed and enforced restrictions on parking, stopping and street trading;
- (b) Priority measures for public transport, e.g. bus-only lanes;
- (c) Better control of traffic movements through a long list of low-cost traffic management systems (signals, pedestrian walkways, inter-section improvements, one-way streets, etc.); and,
- (d) Road safety measures, including accident data collection and analysis, vehicle inspection and driver testing systems, etc.

In addition, the often fragmented and unclear responsibilities for urban traffic management and enforcement of traffic rules including traffic policy responsibilities, need to be revised and strengthened.

After walking, bus services are the major mode of movement in African cities, especially for poor people. Experience in the large cities of many developing countries has shown the public welcome a choice in urban transport, and they are well able to make rational “trade-offs” between time and discomfort with the price of the services provided. Yet, despite the proven need for variety in the supply of urban transport services, municipal and national governments have a strong tendency to establish or favour large, costly public undertakings. These not only offer limited choices but also are heavily subsidized and a burden on local or central budgets.

It is most striking that nearly everywhere the benefits expected from urban transport subsidies — e.g. better services, reduced car use and lower congestion, and higher patronage leading to improved financial viability — are slow in appearing, if at all. One explanation is that the way subsidies are provided and managed reduces managerial incentives to cut costs and improve operational efficiency. There may well be instances where clearly defined subsidies are justified, provided the economic and social benefits have been identified and measured. Otherwise bus subsidies quickly become rhetoric and ideology rather than the sound analysis needed.

Worldwide studies of urban bus systems show that these are most likely to be financially viable and capable of meeting growing transport demands where some, or all, of the following conditions are present:

- (a) Systems are owned by private operators or, exceptionally, by public corporations which rigorously follow commercial practices;
- (b) Competition exists between services, with this leading operators to be innovative in cutting costs and be more responsive to public needs;
- (c) Operators are free to vary the size of vehicles to meet different levels of demand;
- (d) Services are regulated informally by co-operatives and route associations formed by the operators themselves; and,

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- (e) There is a minimum of government regulation over fares and routes — but with strict safety standards.

These are all policy options which need analysis and experimenting within African cities. They also include wider use of "matatu" (Kenya) type of operations as well as collective taxis.

The authorities in some large African cities are under strong pressure to find solutions urgently to their mounting urban transport problems and are leading to investment in capital-intensive express way or rail transit systems. Where the funding for such high cost solutions will come from in the near future is not evident. And, given the competing domestic demands for resources and the pressures of some governments and the aid-community to reduce the urban bias which has prevailed in the past, cities and national governments will have to pay more attention to low-cost solutions as part of their transport policy. This, however, will require more careful transport planning and the more transparent examination of options, despite the dearth of data and uncertainties of future trends. In the final analysis, increasing urban transport efficiency and effectiveness needs more and better trained people, stronger political will and increased public involvement in the process.

Strengthening the transport policy, planning and administrative base

This is an AAPAM Roundtable. It is perhaps appropriate, therefore to end this chapter with some comments on administrative and institutional machinery.

In any country, improvement of transport conditions requires in addition to operating enterprises government institutions that can perform the following functions effectively:

- (a) Policy formulation on such issues as the forms and extent of public/private ownership;
- (b) Identification of unprofitable activities which need subsidy, pricing and investment rules for public undertakings financial targets for transport parastatals and provide appropriate powers, and constraining obligations on, them, etc.;
- (c) Sector planning and research analysis of transport problems;
- (d) Establishment of a legal and social framework for the industry;
- (e) Collection and dissemination of statistics and other information to the public via government and to international bodies;
- (f) Advisory research and technical services in, among other areas and engineering;
- (g) Training of transport sector personnel; and,
- (h) Administrative co-ordination of transport policy with policies in other sectors as well as with those of other governments — local, national or regional.

The exact institutional arrangements a country adopts to handle these topics will, of course, vary in complexity and efficiency. No single blueprint is possible for all countries at all stages of development and transport complexity. Equally, much the same problems of transport policy can be tackled — successfully or unsuccessfully — by very different institutional frameworks. It is also common sense if seeking to improve institutional arrangements to start with an analysis of what transport policy functions are required and then follow this with an assessment of how well existing institutions perform these functions. It is then a continued common sense to make the smallest changes in the existing institutional framework which are compatible with achieving the desired objective. Thus, in what follows, there is no predisposition to a super (supra) ministry of transport.

Some years ago, a strongly worded United Nations report noted that in developing countries generally institutional planning process take the form of "an absence of adequate co-ordination and liaison among transport activities; fragmentation of transport efforts; lack of overall planning and control of transport affairs; (and) a deficiency in supporting and supplementary services".

The shortcomings, the report continued, "may lie in the allocation of functions, and responsibilities among agencies, or in the relations between agencies, or merely in the performance of a particular agency".

After illustrating the variety of administrative arrangements that various developing countries have adopted to give one ministry, department or agency general responsibility for bringing about

“a cohesive, unified system of (sectoral) management devoted to overall policy formulation, planning... co-ordination and evaluation” the report concluded, these organizations are commonly “understaffed, over-taxed, poorly organized and inadequately equipped” with their activities characterized by “excessive red-tape, lack of expeditious leadership... duplication and overlapping responsibilities... and burdensome procedures in the conduct of their duties” both internally and in relations with other agencies of government.

The report concluded that because of some, or all, of the many weaknesses — and particularly those of scarce staff specialist competence and low number — transport plans often include proposals without commitments (Transport Decade?); programmes without inter-project relationships; projections (or investment expenditures) without projects; and projects without resources... (as well as) strategic errors that waste resources”.⁸ The main reason, the report concluded, was that “transport is often found to be one of the least developed components of the (national or central) planning body.

After a long review and discussion of administrative machineries, planning apparatus and regulatory and legislative frameworks, the report concluded:

- (a) “The institutional gaps have greatly widened with the transition from ‘law and order’ government to national economic management as the prime task of government;
- (b) The one essential point in dealing with the problems of functional allocation of responsibilities and procedures in the sector “is to strike a balance between centralism and decentralization, between control and *laissez faire* and between overall planning and free enterprise;
- (c) Countries move in economic planning form project-by-project approach, the transport planning apparatus and procedures have to be increasingly elaborated... (and) the problems centre on the development of the planning organization itself to widen its competence to level equal to its tasks;
- (d) With regard to management, the transport enterprises have to follow a scientific approach to the managerial problems... and... submit themselves to commercial discipline, especially in matters of production and employment, accounting and finance”;
- (e) One common denominator of the various institutional weaknesses is the prevalent shortage of trained personnel in the administrative, operational, technical and research areas of transport. Such factors often set a limit to the layout and to the creation of (appropriate) transport institutions and regulations to provide the functions required. In most... countries deficiencies of staff competence constitute the principal reason for the gaps between performance and the assigned functions of transport institutions; and,
- (f) The starting point for frontal attack on the institutional deficiencies in transport is the assessment of the situation of individual countries so that... problems can be identified and plans for their solutions formulated at the national and international levels”.

The foregoing somewhat depressing sketch of weaknesses is still representative of much of the transport scene in many parts of Africa. Equally, the broad thrusts of the report’s conclusions are valid. The ultimate answer, as the report suggests, is better experienced and trained personnel. This is an area where imaginative foreign aid is already taking place, including generous Netherlands’ assistance to ESAMI in training for the “management of road fleets” and “transport policy and planning”. Other bilateral donors and the African Development Bank could well increase their transport management training activities at low-cost but with potentially large pay-offs for their member governments.

CONCLUSION

To conclude, we can look back *over the six issues* discussed in the preceding sections to highlight some of the main policy implications and ideas which can be drawn from them. Altogether six issues were identified as being, in the author’s opinion, activities where there should be increased

emphasis in terms of analysis and staff training for improvements to be made in transport policy directions and implementation.

Regarding *road maintenance* it was suggested that poor maintenance performance was wasting much more foreign exchange than was being saved in government budgets by not getting the funds required. It was also stressed that improving maintenance needs a new, more committed approach to the management of maintenance. Therefore, there was a need for multi-year programmes, increased road user taxes and, in some cases, their transfer to road funds dedicated to upgrading maintenance needs (e.g. spare parts). A better and carefully selected use of the private sector was also desirable and could achieve greater political sensitivity and commitment to maintenance was stressed.

On *transport parastatal financial performance* it was pointed out that many are in weak financial positions, and, in some cases, major burdens on the serious position were:

- (a) Unclear and contradictory objectives which managers could not, in any circumstances, meet;
- (b) Excessive political involvement in matters more properly those of Boards and Managements; and,
- (c) Too frequent rotation of chief executives or the appointment of people inexperienced in managing large, complex and politically sensitive organizations.

Again there is no simple formula suitable for uniform application, therefore, the best way to improve parastatal performance generally, and financial management in particular, was by studies leading to "Contract Plans" or "Performance Improvement Programme (PIP)". Contract Plans would spell out the objectives and obligations of both parties — the government and parastatal. They would include targets of physical performance, timing of price changes, flows of financial support, employment levels, etc., and the means of monitoring progress. This process would in most cases, involve assistance from outside the enterprise, but organizations are available in Africa to assist.

On *markets, prices and subsidies* attention was drawn to the trend everywhere of greater reliance on market forces, competition, pricing and increased roles for the private sector or socially owned commercially oriented enterprises or groups.

Much more flexible in pricing transport services was required to reflect different demand and cost conditions and to increase efficiency. For progress to be achieved the need to depoliticize pricing rules was stressed, as was the need to undertake analysis and develop strategies which would show to policy makers that removing or reducing subsidies would not increase inflation but rather reduce it and the public sector borrowing requirements impact on money supply. The need to undertake careful analysis of subsidy programmes was emphasized, including development of alternative forms of subsidy which have "self-destruct" features. Privatization of major transport parastatals is not a big issue at this stage of Africa's development. Nevertheless, many opportunities exist to increase private sector involvement in the sector, e.g. contracting out road maintenance, among other things.

On the shortage of capital/abundance of labour question it was pointed out that over the next 15 years there will be a need to provide some 200 million more jobs in African agriculture, industry and service activities. While this task is a formidable general one and the contribution of the transport sector can, at best, be only marginal, it did provide some opportunities. Experience with labour-based rural road construction and maintenance in Kenya, and Lesotho, for example, had amply illustrated the viability of this approach when conditions were appropriate. Knowledge and appreciation of such successful cases need to be more widely known in Africa, not least as a way on focusing the attention of engineers and policy makers on them as a technology choice option. By contrast, it was pointed out that the trends in international trade and transport technology required moving away from labour intensive paper-work processing procedures. That is, trade facilitation needed the speedy transfer of bills of lading, bank documentation and the simplification

of customs recording and inspection procedures. By going this route, even though it threatened certain interest groups, there was a more likely advantageous spin-over to improving business methods generally.

On *alleviating urban transport problems* the point was made that in Africa capital cities are increasingly drawing government attention because of the economic and social importance of these cities. Circumstances obviously vary considerably from city to city and, as a result, solutions must be city specific. Nevertheless, experience in Africa and elsewhere clearly indicate there are packages of policy and practical measures which can alleviate urban transport conditions, and at low cost. These include better designed and managed parking policies; a string of low cost and well known traffic management systems; increased attention to traffic safety, particularly for pedestrians since these are usually the victims in urban traffic accidents. Better co-ordination of multiplicity of agencies usually involved in the urban transport scene is also required. Finally, there is a need, again based on experience, to make greater use of small-scale bus operators, competition and co-operative as well as pricing flexibility. Through this way, better transport opportunities can be provided for the poor and a zero or low burden to the local government budget.

Finally, on the question of *strengthening the organizational/institutional base for transport policy* formulation oversight it was stressed that the greatest weakness was the shortage of skilled transport analysis. The problem was less the duplication and over-lapping agencies and, at times, competitive "turf-protection" attitudes — serious though these are in some cases — but rather the lack of skilled leadership at the policy option analysis and preparation levels. This, almost paradoxically, is at its weakest point at the highest stage of national economic management, i.e. the central planning/financial bodies where plans, programmes, and projects may be approved or rejected. While, in principle, a super ministry of transport might be thought the best solution this may not necessarily be so in every instance. Even where such strong central, all-encompassing ministries had been set up, it was pointed out that their internal structure could well be reorganized to focus on key sectoral rather than narrow modal issues.

NOTES

1. On secondment from the World Bank to the Eastern and Southern African Management Institute (ESAMI) Arusha, Tanzania. Views expressed are personal and should not be attributed to either organization.
2. It has been said "those who like sausages or policy should not watch either being made". On being told of his appointment as Minister of Transport one politician is reported to have said "which of my enemies in the party did this to me".
3. Harry G. Johnston. "A World to the Third World". Encounter, October 1971, pp. 6-7.
4. The Nigeria Government's Statement of Policy on Transport (Sessional Paper No. 1 of 1985), for example, was a clear exposition 20 years of economic principles and measures needed to ensure "that the transport needs of the country should be met with minimum expenditure of economic resources". (p.1).
5. The *Economist* Newspaper expressed a view many years ago that is still valid today: — "To the hard-nosed right", aid is a boo-word, it stands for give-aways to irritating people... in ungrateful countries who will squander (it) on corruption and (mercedes)... To the "radical left", and is just as much a boo-word, it is a trick used by wealthy States (a term that now, in many leftist eyes, embraces Russia) to manipulate poor ones... Only in the middle has aid any friends. And they are often hard put to sustain its cause...". November 6, 1971, p. 17.
6. C. D. Foster, *Politics and the Role of Economics*, Allen and Unwin, London, p. 194.
7. Hon. J. S. Malecela, Article in *Planning in Tanzania*, A.H. Rweyemanu and B.U. Mwansasu, E. African Literature Bureau, Dar-es-Salaam, 1974.
8. All quotes are from *Institution Building for Transport Development in Developing Countries*, United Nations, New York, 1971.

CHAPTER 5

"Contract-Plan" Policies in the Transport Sector: A Case Study of Senegal

Abdoul Azia Dia

INTRODUCTION

The key words for any policy aimed at ensuring the maximum utilization of the limited resources of African countries should be economy, efficiency and effectiveness.

Economic and financial recovery policies are being implemented everywhere in Africa under the auspices of the World Bank and the International Monetary Fund and actual achievements fall far short of expectations.

This crisis is therefore affecting all sectors in general and the transport sector in particular. Since States can no longer subsidize the structural deficits of public enterprises operating in the transport sector they have begun to sign contracts with such enterprises under which objectives are set, resources released and performance monitoring mechanisms are established.

The current study will basically concentrate on the "contract plan" signed between the State of Senegal and the Societe Transport du Cap-Vert (SOTRAC) which until 1980 had the monopoly of public transport in the town of Dakar and its suburbs.

In this chapter, the basic principles of "contract-plans" will be recalled but particular emphasis will be put on the SOTRAC "contract-plan".

The definition of a "contract-plan"

The basic principles of a contract plan entail that the State shall set objectives for the enterprise:

- (a) Such objectives may be qualitative (improvement of management, development of new markets etc. ...) or quantitative (increasing productivity or the turnover according to a particular rate, reducing personnel charges, etc.). The objectives and sub-objectives should be quantified so that the assessment of performance will be based on the gap between actual achievements and forecasts;
- (b) The length of the contract is three years. However, assessment shall be made each year to ensure the correct implementation of the terms of the "contract-plan". The contract-plan may be renewed at the end of the period depending on performance;
- (c) The objectives of the enterprise for the duration of the contract shall be specifically defined. It may be redefined in the course of the contract by mutual agreement between the two parties;
- (d) The "contract-plan" shall define the obligations of the public enterprise which may include the following:
 - (i) A commitment to attain sound and balanced management by controlling operating expenditure in general and personnel expenditure in particular;
 - (ii) Reorganizing the financial situation to attain a balance between income and expenditure thus enabling the State to abolish or considerably decrease its subsidy; and
 - (iii) Improving the quality of service provided to the public;
- (e) The "contract-plan" shall also define the financial and administrative obligations of the State to the contracting party. The State has thus to release the financial resources required to permit attainment of the objectives set within the stipulated deadlines. The State shall also wipe off its debts to the signatory corporation or recover its debts on the basis of a mutually agreed plan. Any other form of assistance from the State shall be stipulated in the contract. The State may increase the capital of the corporation or underwrite the loans made by that corporation; and,
- (f) Various other clauses shall be provided for in the "contract-plans" depending on the legal status of the corporation or the nature of its activities.

Follow-up, preparation and assessment of "contract-plans"

A committee chaired by the chairman of the study group on the parastatal sector — Groupe d'études sur le secteur parapublic (GESP) and comprising representatives of the contracting

corporation, the State Inspection Unit and the Organization and Methods Office shall be responsible for preparing, monitoring and assessing the implementation of "contract-plans". As indicated earlier on, such assessment shall be done every year. Should problems arise concerning the responsibilities of the contracting parties with respect to the implementation of the contract, the responsibilities of each of the contracting parties shall be specified and appropriate adjustments shall be made.

Conditions of success

The success of "contract-plan" policies depends basically on:

- (a) The clear and accurate definition of overall policy in the area of operation of the corporation;
- (b) The clear definition of the objectives and sub-objectives that should be quantified as far as possible; it should also be possible to monitor and accurately assess the objectives and sub-objectives;
- (c) The respect of the commitments of the State;
- (d) The amount of managerial autonomy allowed the heads of the public enterprises who should be appointed on the basis of their competence, merits and judged on their performance;
- (e) The respect of the corporation's commitments; and
- (f) The availability of reliable and credible data that could be used to draw up management charts.

SOTRAC "CONTRACT-PLAN"

SOTRAC is a mixed corporation in which the State has majority shares. It has a capital of 2.6 billion CFA francs. SOTRAC had already signed a "contract-plan" with the State for a period 1981–1983. The main achievements were the following: a healthier financial situation; the rate of coverage of expenses by direct income increased from 83 to 89 per cent; purchase of 160 vehicles; construction of a second depot at Thiaroye; considerable investment in maintenance and the training of personnel; after inclusion of the State subsidy, there were positive results of 497 million CFA francs in 1981–1982 and 189 million CFA francs in 1982–1983.

However, the corporation's financial situation was alarming because it had to run heavily into debt as a result of attempts to modernize its operations during the period of the "contract-plan". Nevertheless, the relatively positive results achieved by SOTRAC earned it a new "contract-plan" with the State on 5 June 1985.

Objectives of the contract

The general objectives of the contract-plan are directed towards:

- (a) Maintaining the achievements of public transport and monitoring transport demand in the light of the financial constraints of the corporation and of State policy in this sector;
- (b) Striving to achieve gains in productivity and control transport costs; and
- (c) Improving the financial situation of the corporation.

In contrast the specific objectives are geared towards:

- (a) Increasing its production per kilometer by 6 per cent a year;
- (b) Reducing State subsidy in the medium term;
- (c) Moderate growth of 55 vehicles;
- (d) Focussing on maintenance of existing equipment;
- (e) Establishing modern management techniques;
- (f) Strengthening the training programme; and,
- (g) Achieving 93 per cent coverage rate of expenses by income.

Commitments of the State

The State shall authorize the replacement of 115 buses and the purchase of 55 new vehicles i.e. a total of 170 buses at a cost of 5 billion CFA francs.

As far as expenditure on infrastructure is concerned, SOTRAC may renovate the central workshops, the head office, and the Ouakam depot and the stations at an estimated cost of 1.04 billion CFA francs.

SOTRAC may increase the prices of tickets by 10 francs from 1 January 1986 onwards by sector. A similar increase shall come into effect on 1 January 1987, the last year of the contract. Prices of monthly subscription shall be increased in the same proportions.

The State and the urban community shall grant an annual subsidy of 900 million CFA francs of which 800 million will be paid by the State. The reason for this subsidy is because SOTRAC provides public services and it cannot charge the real prices. The subsidy should be paid before 31 March of each financial year. Some of the commitments of the State that are outlined above are summarized in Table 1 to this chapter.

Table 1. Indicators on investments to be made in vehicles and infrastructure

<i>(a) Transport vehicles—mass transit buses</i>				
	1984/85	1985/86	1986/87	Total
Number replaced	30	35	50	115
Increase	—	30	25	55
Total number	30	65	75	170
Amount in millions of frs.	812.5	1,897	2,353	5,062.5

<i>(b) Infrastructure</i>				
Millions of Frs.	1984–1985	1985–1986	1986–1987	Total
Central workshops for renovating bodies	300	250	—	550
Head Office	—	250	—	250
Development of Ouakam facilities	—	80	—	80
Stations	—	80	80	160

The growth rate of potential transport demand is estimated at 6 per cent a year

Commitments of SOTRAC

With respect to the investments mentioned above, SOTRAC should seek, in liaison with the State, the mode of financing that is most suitable for the financial objectives of the contract-plan.

During the period of the contract-plan, SOTRAC should increase its production by at least 100 million kilometers. However, the cost price per kilometer in constant francs should decrease by 2.8 per cent in 1985, 2.7 per cent in 1986 and 3.5 per cent in 1987.

As far as the personnel of the corporation is concerned, SOTRAC should contract its growth which should not be more than 3,290 in 1987 and establish a training, organization and management programme. The number of employees per vehicle should never be above a ratio of 6.65.

As far as financial objectives are concerned, SOTRAC should attain a balance in its operating account after inclusion of the subsidies granted by the State and the urban community of Dakar.

In order to monitor the implementation of the "contract-plan", SOTRAC shall undertake to produce a management chart which will show all the information required and a biannual progress report (See Table 2).

Assessment and follow-up

The follow-up committee is composed of the general management of SOTRAC, the "contract-plans" and follow-up units of the parastatal sector (Cellule des contrats-plans et de suivi du secteur

Table 2. Indicators (management)

Financial indicators

The reorganization of SOTRAC's financial situation should lead to changes in the following financial ratios:

	1984/85	1985/86	1986/87	Total
R1 = $\frac{\text{Total debts}}{\text{Net worth}}$	9.65	2.56	2.83	3.60
R2 = $\frac{\text{Financial expensés}}{\text{Turnover}}$	0.074	0.066	0.055	0.048
*Gross expected operating performance (in millions of CFA francs)	822	1,214	1,559	
*Performance after subsidies (in millions of CFA francs)	-397	-176	-31	
*Outstanding debts (in millions of CFA francs)	1,262.05	864.68	933.72	
	Indicators on staffing strength			
	1984/85	1985/86	1986/87	
Maximum SOTRAC staffing strength	2,954	3,088	3,290	
	Indicators on production of services			
	1984/85	1985/86	1986/87	
Production of services (millions of kms)	28.05	29.80	32.30	

parapublic), the Financial Controller Department (Controle financier), the Organization and Methods Office, the Ministry of Economics and Finance and the Ministry of Trade.

The Committee shall meet at least twice a year the first time in April to review progress in the implementation of the contract-plan and the second time in October to consider the performance of the past financial year.

If the gaps between forecasts and performance are considerable, appropriate adjustments shall be made. In the event that economic, financial and social conditions make it impossible to fully comply with the terms of the contract, the corporation and the State should mutually agree to revise the contract.

CONCLUSION

The policy of contract plans introduced by the Senegalese Government is to improve the management of public enterprises. In order to do this, greater autonomy is accorded to the directors of enterprises. Specific objectives are set and the resources needed to attain those objectives are released. Depending on the results obtained, the State may renew the contract, review it or even scrap it.

This author has highlighted the basic principles of contract plans and focused on the contract plan of SOTRAC which, together with the Regie des Chemins de fer du Senegal (RCFS) is one of the largest corporations in the transport sector. In this regard, the contract plan policy which now was at the experimental stage is now being generalized.

Even though it is too early to draw definitive conclusions from the implementation of contract-plans the author is hopeful that this chapter will stimulate reflection on the concept, policy and application of contract plans to various sectors of the economy.

CHAPTER 6

Part III

Transport and Rural Development

The Role of Transport in Rural Development in Africa

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INTRODUCTION

Most African countries are mainly agricultural economies. They badly need transport services. Yet rural Africa is excessively short of transport links; parts of which are completely inaccessible during the rainy season. Indeed some crops are left uncollected.

A major challenge to the transport system is the haulage of agricultural commodities mainly for the internal market, but also for export. This is particularly serious where the major (agricultural) economic activities are, as in Tanzania for instance, concentrated in the outlying peripheral areas, thereby heightening the transport burden.

The African economic crisis characterized by, amongst others, acute shortage of foreign exchange has precipitated cuts into infrastructural investments with devastating effects on rural transportation. As I have argued elsewhere (Mwase 1984, p. 89), foreign donors are more attuned to financing "white elephant" projects and to the development rather than the recurrent phases of a project which have to some extent shunned rural road construction and particularly road maintenance. The current reduction of foreign assistance, especially concessional aid, partly due to a global "aid fatigue", may hurt both rural transport, its servicing and therefore its accompanying services. In many African countries, State importation of land rovers and other rural-oriented vehicles has in recent years ceased because of lack of foreign exchange. Such "suppressed demand" has depressed the transport and communications share in GDP. In Tanzania for example it fell from a peak of 9.1 in 1974 to 5.4 per cent in 1980. In fact access to rural transport seems to be a more pressing problem than lack of roads. The provision of easily accessible and cheap transport facilities in the rural areas can reduce the transport costs of agricultural produce, which given their comparatively low value in proportion to their bulkiness and weight is a vital necessity. High transport costs may rule out the growth of certain crops or make such growth uneconomic.

Providing Rural Transport

Early analyses of colonial transport network evolution and transport issues (e.g. Taaffe, Morril and Gould 1963, O'Connor 1965) focused on their modernizing influence. However this cannot for example explain why the most populous and rich agricultural areas of northern Namibia have been almost totally bypassed by the transport infrastructure. Their role was and in the Namibian case still is — to further (colonial) exploitation. Most tarred roads were directed at serving the mines and/or large plantations either owned by the minority whites and/or geared at the export market. Indeed in much of Africa the early transport networks — whether railways or major trunk roads, run towards the ports.

Before independence, road transport particularly in rural areas was ignored. The road networks were largely unsurfaced and unsuitable for heavy traffic. Rallies such as the East African Safari had no problem keeping its reputation of being over very rough roads. Many roads were, as the Tanzania-Zambia Great North Road was dubbed, a "hell run". As Nyerere (1973) has put it, "almost any journey was an "expedition" where you arrived on time if you were lucky".

After independence road transport was however encouraged to play an equal, if not a greater role than that of the railways. In some countries this fitted in very well with the "inward" re-orientation of the transportation system to the needs of the country. In both Tanzania and Zambia for example major inter-regional all weather trunk roads were built. At least initially these were at the expense of rural feeder roads. These networks have been extensively extended in the post-independence era.

The geographical and ecological environment of many African countries is rather harsh. The limited fertile volcanic soils in some important agricultural areas create severe problems for rural road transport. Laterite soils and "murrum" which are very much used in the construction of earth and gravel roads, even if available in a country, are very unevenly distributed at the local level. If it cannot be found close to a road project, the road becomes either costly or of a lower quality. Rural transport has often been adversely constrained by occasional floods, the latest in 1984/85 which washed away bridges and destroyed roads in both the rural and urban areas.

THE ECONOMIES OF RURAL ROADS

"A cheap and extensive network of transport and communications", Arthur Lewis wrote more than 30 years ago, "is the greatest blessing that any country can have from the economic point of view" (1955, p. 73). However the overemphasis often made for the development role of rail and road transport must be treated with caution. In his reflections on whether transport or general economic activity came first, Youngson (1967, pp. 75-78) contended that rather than taking a lead in economic growth, as Hirschman (1958), Fogel (1964), etc. have argued, investments in the transport infrastructure and its services in the now industrialized countries tended to follow and was often in response to manifestations of bottlenecks in the transportation system. Wilson *et al* (1966, p. 201) has thus argued that for transport investments to have positive effects, certain preconditions with regard to the general dynamism of the economy, the existence of marketing institutions and other facilities must have already been met.

The evolution of the transport system of many a country emphasizes the role of railways as the initiator of growth, followed by the construction of "feeder" roads for the railways. This boils down to Fogel's "leading sector" argument. Roads have especially in the absence of railways, served to open up the interior. Besides their importance in the distribution of goods and services, rural access roads do have, as the ECA has argued, "tremendous potential for triggering off some very important elements of a development scenario such as employment, increasing the cultivable lands through increased access and habitation, etc." (p. 80).

Rural roads by allowing easier transport of inputs, such as fertilizers and of the produce, between the area it serves and the main transport links, help to induce greater agricultural production. They ferry into and out of local markets agricultural and industrial output. Interregional trunk roads alone without the rural feeder road system, would be of little use for agricultural development. Both are complementary to each other and their balanced development is therefore necessary for maximizing benefits. Nor can the actual and potential benefits of the trans-African Highways be fully realized without rural feeder roads. Hence the importance attached to them in the 1978-88 UN Transport and Communications Decade.

Agricultural development impact

Reference has been made to external or developmental benefits of transport, especially road transport in "inducing" economic growth and development. The greater amount of benefits will usually be agricultural, induced production or development benefits.

The impact of rural (feeder) roads can be felt by examining the changes in production and consumption. Any increased income, whether in the form of increased physical output or improved terms of trade will allow more consumption now or in the future. These consumption effects represent the utility derived from the road.

Feeder roads may generate various (pecuniary) externalities. The near-subsistence farmer faces a probability distribution for expected income which has a larger variance than that faced by his counterpart who is adequately connected to the market. The construction of a feeder road will reduce such a risk element and make production for the market a more attractive occupation.

Whereas in the industrialized countries the main benefit of road construction is the reduction in transport costs, in Africa it is seen in terms of induced agricultural production. A fundamental analysis of the latter is contained in Von Thuren's Study of the effects of transport costs on agricultural production². The lateral distance over which the presence of a road has had influence on cultivation was estimated to extend from 0.3 km (Sargent 1960, p. 371) to 8 kms (Bonney 1964, p. 7). Chisholm suggests a "universal" figure of 3-4 km (1962, p. 72). A University of Dar-es-Salaam (1979) study suggests an average of 5 km for the Tanzania-Zambia Highway.

In a major study, Walters (1968) assumed that induced agricultural output would follow increased areas under cultivation following transport provision. Walters further argued that given a positive but relatively low cost of transport on the road, and a relatively high cost of transport off

the road, the lateral extent of cultivation decreases as one moves further from the market along the road.

Walters' (1968, pp. 360–377) traffic generation model is based on the fact that the demand for transport is a derived demand. With increased physical production and no on-spot consumption, there will be increased demand for transport. Walters' model indicates that the elasticity of demand for transport of a commodity is a function of the elasticity of demand for, and supply of, the commodity and the ratio of transport costs to the final price of this commodity.

It could be argued that Walters' model over-emphasizes the transport costs of the final output at the expense of other aspects of cost associated with distance. Peasants for example make decisions about location not just on the basis of the transport costs of their produce but on the basis of the overall total cost of transport for all purposes, including walking distance to their fields and/or market. Peasants may settle along a road in order to travel to the market fairly frequently, but they may then be further from their fields. In Tanzania's villagisation programme for example, not only did villagers (rather mistakenly) migrate from rich agricultural valleys to settle along road and rail lines, but the individual huts were sometimes built in long lines along these means of transportation.

The cost of cultivation includes labour time wasted in travelling to and from distant fields. In fact peasants may react to this by changing their output-mix in favour of those products "which are less demanding of labour" (Chisholm 1962, p. 52). There is ample evidence of such substitution in African villages: typically, one finds for example that vegetables (labour-intensive) are produced close to the farmhouse and field crops (land-intensive) are produced in the next "band" of cultivation. This is partly because the costs of vegetable production increase more quickly with distance than those of field crops. Indeed choice of crop is often determined by its transport costs. Clark and Haswell (1964, p. 156) have shown that in East Africa coffee growers chose this particular crop because its value makes it one of the few crops which can support the burden of transport costs. Bulky commodities such as sisal are therefore cultivated only in proximity to railways and ports for easy transportation. Growth prospects for many crops e.g. cashew nuts, tea, pyrethrum, etc. are to some extent dependent on improved rural feeder roads.

For African countries with many (near) subsistence producers and poor transport facilities, Walters's model could indeed be modified by assuming that the lateral extent of cultivation is determined not by the transport cost of final output but by the rate at which cultivation costs increase with distance from the road. In fact although transport costs are significant, some agricultural parastatals may apportion total transport costs equally amongst all peasants regardless of their particular location along the road so that some peasants in effect face a "linear market". This is happening through pan-territorial pricing policies entailing uniform prices, in which case the transport costs charged to output is the same irrespective of the location. Such a policy takes stock of the differential provision of transport facilities per region or district. Since, as Lipton (1977) has argued, in general transport costs increase rural/urban inequality, this seems to be one way of compensating transport constrained area. However since it is more costly to operate in such areas one result has been a withdrawal of transport services from remote rural areas in favour of areas where the roads are tarred or properly maintained. In Tanzania for instance, road licence applications in 1977 indicated that private firms tended to concentrate on bitumen roads (59 per cent of applications) and gravel roads (23 per cent), leaving bad earth road areas with very poor access and therefore poor distribution system. This has usually meant that public-owned transport companies have had to operate in such areas albeit with Government subsidies. One alternative — and then only if the rates do cover costs — would be co-operative or small local individual transporters. All these operate within a regulated rate structure with some limited success in Tanzania.

The connection to the market may however stimulate the use of new techniques such as mechanization, improved seeds, or the use of fertilizer. This could take the form of a "package" investment covering feeder roads, credit and extension services, which could facilitate the transformation of a semi-traditional agriculture into a modern market economy. Two case studies

are affirmative. McKay *et al.* (1971) showed that cotton farmers in Geita, Tanzania, were quite sensitive to variations in differences in the cost of moving crops to the nearest buying post. Attems (1968) in a detailed farm management study of transportation activity from village to regional markets established a very striking relationship between accessibility and the degree of commercialization of agriculture.

Given the very heavy and sizeable export tax on agricultural commodities, African Governments extract part of the benefits of road projects through their control of the fiscal system.

The growth process can be led by a widening of the market, which in turn may result from increased efficiency in transport and communications. Indeed as Kindleberger has argued, cheapening transport not only "fuses markets but, bring also additional buyers and sellers into contact one with another" but also may (as against Walters' fixed elasticities) lead to "increasing elasticities of demand and supply" (1966, p. 167). Kindleberger's model raises other more dynamic effects. Markets can grow through an increase in efficiency and income in any commodity, which increases the effective demand for other products and spreads in cumulative fashion. Even where the growth process is led by efficiency in production, however, the requirements of distribution are inescapable.

Rural Transport and Agricultural Pricing

One important role of transport is inducing the transformation of the traditional agricultural sector into a cash crop sector. If a household has no access to a secondary market, the household can produce output for home consumption and a little surplus for local exchange involving negligible transport costs. This is a situation which still exists in some remote parts of many African countries. The avenue of transporting the output to a secondary market could induce the peasant to produce more. However if transport costs are too high, producing for the secondary market could simply make the household worse off than if it were subsistent. There are cases where peasants have done away with production for the market because of increased associated costs, transport costs inclusive. The task of transport policy is to ensure that this does not happen. This is problematic especially for low-value crops.

The main effect of transport provision on smallholder agricultural production is to stimulate agricultural productivity. Transport improvements will generate transport cost savings to the shipping firms which are partially passed on to the marketing intermediaries in the form of lowered transport charges, which are in turn passed on to the producer in the form of higher producer prices. This is likely to occur especially in competitive pricing conditions in which the transport firms and market intermediaries are maximizing profits.

In situations with pan-territorial pricing for a large number of crops, transport costs charged to the producers through the net producer price are an average for the whole country. Transport improvements undertaken in specific locations may not lead to the increase of producer prices, unless they substantially reduce the national average costs. The generated transport cost savings passed on by the shipping firms to the agricultural parastatals may not be passed further stifling the potential stimulating effect on agricultural productivity.

The alternative of subsidizing and taxation via some sort of an equalization fund is cumbersome and while it can be worked for some products e.g. petroleum, it is very difficult to administer and therefore cannot be recommended as a general approach.

All transport improvements reducing primary transport costs will have a direct stimulative effect on agricultural productivity; but as long as secondary transport costs (store-marketing centre transport costs) are dominant in agricultural production decisions, it is important that the link between transport policy and the agricultural pricing policy be more firmly established.

Transport cost reduction may or may not automatically lead to transport rate reduction. Studies in Iran (Van der Tak and de Weille, 1969, pp. 72-73) and many other countries have shown that middlemen e.g. transport companies especially under some form of monopolistic arrangements, captured a large proportion of the transport cost savings so that the benefits to the producers or consumers were minimal, in which case the incentives from road improvements are not significant

enough to induce increased production. Unless the transport cost savings passed on are large, their "generated traffic" effect or developmental impact will be small. According to a study in Kenya, where the marketing and transport system is quite competitive, the impact on farm-gate prices caused by certain road improvements was on the average less than 5 per cent of product price, even when all savings in vehicle operating costs were assumed to be passed on to producers (Carnemark *et al.* 1976, p. 13). Where producer prices are officially fixed (and thus to a large extent unaffected by transport cost savings) the collection and transportation agencies could be the principal beneficiaries.

In public sector dominated economies, agricultural parastatals i.e. Marketing Boards, own sizable fleets of trucks (and in periods of peak demand hire many private vehicles). Their transport rates often maximize returns to the Boards, and do not minimize costs to the peasants. A similar situation occurs in wholesale and retail distribution when the trading enterprises, State and private, own the transport facilities, as is largely the case in a number of African countries. Although at least in theory the firm would try to reduce its costs, obviously there is less concern by a monopoly transport enterprise to minimize its "X-inefficiency" costs², if these can be passed on to the consumer.

Vehicle operating cost savings (VOC) refer to the reduction in operating costs for road users upon road improvements. In general less fuel is used, vehicles need less maintenance, etc. Research in Kenya by the World Bank and the UK Transport Road Research Laboratory (TRRL, 1975) reveals that contrary to the situation in the industrialized countries, the changes in VOCs are in themselves not the crucial factor; what is even more important is the extent to which agricultural production benefits increase from such decline in VOCs. The Kenyan IBRD/TRRL Study (Hide *et al.* 1975) indicated that where agricultural production is not the predominant benefactor of road provision and upgrading, then contrary to Hofmeier's (1973) orthodox views, VOC savings are not the significant factor; indeed for inter-urban road investment projects the key factor could be time savings.

Social and political impact

Transport networks integrate linked area into the nation's political and social life. Administration from the capital, regional and district centres become easier and the provision of social services less costly. As Rady (1977) has noted:

"... many road projects in developing countries enhance national confraternity and further the regional integration of the country; they achieve regional and sectoral distribution effects, contribute to satisfying military and logistic needs, open areas with charming landscape or bring the country increased prestige." (pp.65-66).

Taking cognizance of other quantifiable but unmeasured road project benefits, Rady (1977) adds:

"... the impact of an improved road network on pedestrians, cyclists and ox-carts is just as much neglected as the convenience effects of improved transport facilities". (pp.65-66).

Substantial time savings are made in the movement of officials from administrative centres to and from the rural areas. The rural population can likewise reach these administrative stations much faster. If for example the move from Dar-es-Salaam and Lagos to Dodoma and Abuja respectively is geared at bringing Central Government closer to the people, this cannot be realized unless rural transport is improved.

It is worth noting that the development impact of a road may have some negative aspects e.g. the substitution of imported goods, for home made goods, increased migration, not to mention possible intangibles, such as noise, etc.

RURAL ROAD FEASIBILITY STUDIES

Road provision in Africa, is, particularly because of much dependency on foreign aid, usually dependent on a project appraisal report being made. Given their importance then, it is fitting to reflect here on these feasibility studies, underlining in particular the drawbacks.

Many road feasibility studies have concentrated in areas of expanding cash crop production. They were biased in favour of cash, rather than food crops, partly because they employed prevailing producer prices to compute the benefits. They did not for example allow other, harder to compute benefits brought about by rural feeder roads e.g. the increase in accessibility to medical facilities (often quoted by villagers as being the most important reason for wanting a road). Neither did their appraisal methodology consider the costs of inputs to the agricultural process other than road infrastructure e.g. the provision of vehicles for a start, and less directly, fertilizers and insecticides which would help the farmer to raise his yields. Some of these appraisal methods are based on the concept of "unbalanced growth" with the government investing in one sector, road building, which supposedly leads to overall growth by stimulation of all other sectors. In other words they assumed that with new "penetration roads", individual spontaneous settlement would occur and generate production benefits.

Recent road feasibility studies have departed from this conventional "separatist" approach which concentrated mainly on the incremental (direct) benefits upon road improvements, to a more qualitative broad-based "development packages" approach which considers (feeder) roads provision and other development efforts as complementary. It is a recognition that inputs, agricultural extension services and other social services must be planned in conjunction with roads. Indeed there is considerable scepticism as to whether investments in one sector, except as part of a package deal involving other sectors of the economy can have influence on economic development.

Despite its attractions, the "development packages" approach,² which characterizes Integrated Rural Development Projects funded usually by foreign donors, has some pitfalls. The state is usually unable to provide all zones with facilities at once. The evaluation, to judge by the Tanzanian experience, is done to "establish the relative ranking of potential development priorities and to formulate a probability rating of such a scheme being proceeded with..."(Camworks, 1974, p.2).

There are many areas of bias to the selection and ranking of zones, four of which are dominant:

- (a) Ranking implies an "all-or-nothing" situation is created, since a zone which excels in the Cost Benefit Analysis criteria (Net present value, internal rate of return or benefit/cost ratio) will receive investment in roads, agricultural extension and other social services, etc. while a zone with a lower B/C ratio for instance will get nothing. Since often the benefits quantified are from agricultural production only, villages in areas of relatively high economic potential will receive priority for both agricultural and social services. This can result in a very unequal investment plan, which leads to the transformation of some villages, and the stagnation of others;
- (b) This bias could be aggravated by the inclusion of costs, but not benefits, of the social infrastructural investments. Well established villages will necessarily have smaller investment costs since most of the "package" is already provided. This bias could be watered down by removing the social services out of the packages, to be planned on criterion other than the agricultural potential of villages. Allowance could still be made for the directly productive investments in agriculture to be made in the areas with the greatest probable return. Such a strategy would perhaps be regrettable for utopian socialists, but could perhaps be the only pragmatic approach in the early years of independence, especially given the low level of development in rural Africa;
- (c) Bias vis-a-vis the relative advancement of villages: an increase in production is considered equally valuable in any village. The setting of target production levels for all villages (perhaps in terms of incomes per capita) and scaling differentially to allow more "points"

for increases at the lower end of the scale than for similar increases at the top, could help to overcome this problem; and

- (d) The “development packages” approach ignores benefits’ distribution within the villages, despite evidence that increased production and wealth is often accompanied by skewed acquisition of income, unless checked by political and social forces. Many rural studies in Africa have concentrated on average income increases rather than tackling the sensitive issue of income maldistribution.

Although most feasibility studies emphasize the probable agricultural benefits of feeder roads, post-construction evidence suggests that such benefits are an overestimated and may, as Wilson *et al.* (1966) has argued, be small.

Although on purely economic criteria feeder roads ought to receive higher priority, the appraisal methodology seems to favour trunk roads. Undue priority might go to trunk rather than feeder roads when using various Cost/Benefit Analysis Criteria (e.g. Benefit/ Cost ratios) based on the existing traffic volumes because:

- (a) A large proportion of the benefits of a new or improved feeder road can be expected to come from generation of new traffic which did not exist before, i.e., the benefit is from induced development rather than cost reduction of existing traffic. This is a difficult element to calculate even for trunk roads and definitely more problematic for feeder roads; and
- (b) Road Departments keep more trunk road records, including traffic flow data, than feeder roads data. Such data are not always up-dated. Thus Cost/Benefit Ratios on trunk roads may be assessed on the basis of relatively reliable information on construction costs, traffic volumes, etc. Since most roads are financed from external sources, e.g. IBRD, for whom a well argued case is a pre-requisite for loan offers, it is therefore tempting to argue the case for the road type for which data is more readily available.

If economic potential for development is taken as the sole criterion for road provision, the resulting priority areas may already have a relatively high density of road network, or higher economic standards compared to other areas. Given the increasing reliance on foreign aid to support feeder road programmes, a “priority areas” list, used as a “shopping list” for external finance, may bias further actual feeder roads development in favour of the more prosperous areas, both to keep and expand (cash crop) production.

In general road provision decisions exhibit the “vicious circle” phenomenon — the least “developed” areas is for instance unlikely to turn in an attractive Benefit/Cost Ratio to wrest the investment from the already more promising areas. The “development packages” approach, though a step forward, does not, as its shortcomings testify, provide a truly rational alternative.

Recent experience and findings from rural feeder road studies indicate that elaborate Cost/Benefit Analysis may be a waste of scarce funds, manpower and time, and that very similar projects are selected on a rough and ready basis calling on local experience to determine priorities. Indeed both Hawkins (1962, p. 157) and Soberman (1966, p.36) have argued that in most LDCs transport needs are so great— and in many cases, so obvious—that investment projects with immediate negative returns are unlikely to be serious candidates for government investment funds. Road project appraisal should neither be used as a substitute for what is ultimately a political decision, nor convert genuine political and social issues into bogus technical ones.

MANAGING RURAL TRANSPORT SERVICES

Rural transport firms are essentially small and are noted for having links with traders and successful peasants. As the World Bank has stated, “the transport industry is considered as one of the best starting points for an independent business career in developing countries” (1974). However this could be viewed as leading to capitalist forms of development. Hence the little enthusiasm with which they are accommodated in some socialist-inclined states.²

The more common situation is that of transport-constrained rural areas, where the primary objective of government intervention is to provide transport services. To make such services cheap enough to poorer customers government subsidies may be warranted. Government intervention may also be prompted by the withdrawal of private transport firms from rural areas. This is particularly the case where bad roads cause excessive wear and tear which cannot be compensated by high freight and bus fares because of fixed haulage and passenger charges. Operators whose costs surpass the fixed rates may have to close down (see Mwase 1985). If as its likely there are no replacements, governments may have to step in either by establishing public transport firms and/or subsidizing shaky ones (including private) to avoid excessive transport shortages, at least for remote rural areas.

The need for maximum freight rate regulation (to protect the shipper and in turn the customer) is greatest in the rural areas, where the establishment of remunerative rates (reflecting the real cost of operation over poor roads) is necessary. One approach would be to have appropriate uniform maximum freight rates based on actual ton-kms. carried for both good and bad roads, instead of the normal practice of charging per ton-km. irrespective of road type. Such a two-tier road haulage rate would lead to some kind of "restricted" competition based on the differential incidence of vehicle operating costs on different road surfaces. The assumption is that most operators would reduce their freight rates if costs fall.

If differential transport charges based on road conditions are adopted, there would be, as in usually the case with respect to passenger transport, less scarcity of transport services in remote rural areas albeit at the expense of higher charges. This would mean either a greater cost being met by users or in case of subsidies by the government, either from general Budgetary allocations or higher taxation of goods or all road users.² This could be understood even for countries geared to a variety of free social services. Rarely would road transport services in Africa be provided as cheaply or freely as water, primary school education or basic health services.

CONCLUSIONS

Population concentrations should make both the provision of feeder roads and public transport services, not to mention the collection, transportation and marketing of agricultural produce easier. The 1974-1978 Tanzanian villagization experience during a change from 40 per cent to 98 per cent of rural population in villages tends to bear out this contention (Mwase 1984).

Particular emphasis should be given to feeder road maintenance, at least in a selected number of major agricultural areas. This could take the form of foreign funded and operated feeder road rehabilitation programmes, such as have been piloted by the ILO in a number of African countries, e.g. Zambia, Tanzania, etc.

Nor is this an easy task. As stated earlier, donors are for example more willing to finance construction rather than road maintenance. The aid recipient is in a dilemma, for opting for a balance or less costly options might necessitate greater disbursement of local funds. There are many possible responses to this problem, including changes in donor country practices and improvements in the recipient country recurrent expenditure planning.

To reduce costs of transport provision the spirit of self-reliance should therefore be encouraged. This could take the form of reviving/boosting self-help schemes in road construction, rehabilitation and maintenance by mobilizing local labour. This is a labour-intensive, less import-dependent, cheaper technique than "modern" road construction and maintenance approaches. In the immediate post-independence era, many rural feeder roads were thus constructed employing voluntary labour. In recent years, this spirit has dwindled. Berg (1964) attributed this loss of enthusiasm for self-help schemes to the use of coercive methods. Decentralized government and strong Party presence at the local level augurs well for the mobilization of voluntary labour in this regard. However, planned and organized State support for project design, training, materials for bridges and occasionally heavy equipment and/or skilled labour for difficult terrain may be needed. At local level (i.e. district) some

payment or a meal for seasonal labour could take the form of the Kenyan Rural Access Road "posho" system. This could avoid situations where such mobilization takes coercive trends or is perceived by the population as a "labour tax", both of which could have adverse effects on self-help schemes. Furthermore, such use of seasonal labour would raise rural incomes and effect its redistribution to the rural poor.

More use ought to be made of traditional modes of transport such as walking, animal transport, and where possible water transport.

Greater public accountability of road planners can be useful. Presently most rural dwellers have not heard of a rate of return. They assume that decisions about which roads are built are still a battle between road users and those through whose plots the new routes go; that the paraphernalia of petitions and pressure from MPs is what really counts. Perhaps it does. However, the involvement of the people through public debate on road priorities would act as a check on possible bending of the rules for parochial political reasons, and would commit the rural population to building (perhaps through self-help schemes) and utilizing the roads in a more worthwhile way.

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¹ In the case of Tanzania this contradicted the almost opposite World Bank (1960) recommendation. In Zambia it accorded with the ruling UNIP Independence Manifesto.

² The nature and manner of its operation is discussed in Veen (1980).

CHAPTER 7

Transport and the Problems of Small Holder Agricultural Transformation: Findings from Northwestern Botswana

David S. Cownie

INTRODUCTION

Historians have argued that the Bechuanaland Protectorate was one of the most neglected colonies in the British Empire. While the use of the term "neglect" is of dubious credibility, it nevertheless indicates a lack of concern on the part of the British for intensive direct exploitation of the colony. Instead, the indirect exploitation of Bechuanaland through the subordination of its economy to the needs of capital in South Africa had specific international manifestations. At independence in 1966, Botswana's total kilometers of tarmac road numbered less than 12 in a country of some 600,000 square kilometers. While a dirt road did link the southeast with the northeast, the condition of the road was poor and few substantial feeder roads existed. To the west of the main north-south line, roads were almost non-existent. To take but one example, to travel from the capital Gaborone to the Kgalagadi village of Hukuntsi (a distance of some 450 kilometres) could take over a week. The railroad (owned by Southern Rhodesia) which passed through the eastern portion of Botswana had no branch lines, and it generally served the export/import needs of Southern Rhodesia.

Since independence tremendous strides have been made in extending transport infrastructure. There is a tarmac road from the South African to the Zimbabwean border. Tared roads from the South-north major road axis reach Francistown, the border with Zambia, the mining town of Selebi-Phikwe, the major village of Serowe, the mining town of Jwaneng, the Kgalagadi village of Letlhakeng, as well as many smaller villages off the main roads. Good gravel roads also extend to Maun in the northwest, to the mining town of Orapa, and to most points in the east of the country. In 1986 most of the population could easily be reached by two-wheel-drive vehicles. Plans are nearly complete for a takeover of the railway from the National Railways of Zimbabwe; a feeder line has been constructed to Selebi-Phikwe, and it is expected that the railway will also service the new coal-powered electrical plant near Palapye. A new international airport, Sir Seretse Khama Airport, has been constructed in Gaborone, with direct connections to Europe via Lusaka beginning in 1987 through British Caledonian Airways (BDN, 1986a). The idea of a "trans-Kalahari" railway from Francistown to the Namibian port of Walvis Bay has also been mooted, although early feasibility studies have raised cost-benefit questions, (Mwase, 1987, pp. 65-75).

These advances in the transport sector have been aided/limited by two variables broadly categorised as *administrative/policy* and *physical*. These variables have affected the transport sector's ability to positively enhance arable production. An examination of transport and arable agriculture turns up these two critical intervening variables which mediate the relationship, while pointing to the need for careful policy planning for effective implementation. In order to understand the nature of the linkages between these variables and why they have arisen, the paper takes an historical approach to the study of Botswana's political economy through three primary phases — the colonial finally 1981 until the present. The three phases can be characterized as the period of indirect exploitation, the period of substantial infrastructural development, and finally the contemporary period of sustained arable sector investment. It is at this third stage that attention is focussed, adding to the temporal dimension of a cross-sectional assessment of the linkages between the transport and arable agriculture sectors.

To aid in a delineation of this relationship, research was undertaken in the remote northwestern region of Botswana. Interviews were carried out with arable farmers in five research sites spread out over the district. In addition, interviews were conducted with district officials from the Ministry of Agriculture, and a questionnaire was administered to Agricultural demonstrators in the area. Ngamiland district was chosen because it is in the northwest that the problems incumbent in the relationship between the two sectors is the most striking. The physical size of the district, its remoteness from the major population centres, the difficulty of infrastructural construction in the region, and the historical isolation of the region's arable economy all provide a situation conducive to the study of the relationship between the two sectors. (see Map 1, Ministry of Agriculture, 1985:2)

INDIRECT EXPLOITATION AND THE COLONIAL 'NEGLECT' OF THE BECHUANALAND PROTECTORATE

Contemporary literature discussing the impact of capitalism on Southern Africa often starts from the premise that the underdevelopment of the sub-continent differed substantially from that of other areas of the Third World. Amin (1981) offers a concise discussion of these differences within the African context. In West Africa Amin asserts that there existed "Africa of the colonial trade economy" characterized by labour-intensive peasant farming for food and cash crop production/trade, in central Africa, "concessionary Africa" consisting of plantation systems of production, and in southern and southeast Africa "Africa of the labour reserves". In the latter case, Amin examines the relationship between extensive mineral resources and the advent of settler colonialism. The result, he notes, was the need for a large proletariat available at low cost. To obtain this large proletariat, land alienation and tax measures were the most common methods employed.

Authors on and in southern Africa have since the 1970s further refined discussions of the underdevelopment of the subcontinent (see Marks, 1986). Regarding Botswana, Parson (1980, 1984, 1985) has gone the farthest in delineating just what impact the creation of the labour reserve had on the colony. The emergence of the Bechuanaland protectorate as a labour reserve meant that the exploitation of the colony was indirect rather than direct. In western and central African countries direct exploitation by the colonial powers meant the building of roads and railways to carry raw materials to ports. By contrast, the Bechuanaland Protectorate lacked any significant infrastructural development (for raw material exploitation).

RAPID INFRASTRUCTURAL INVESTMENT AND THE RESPONSE TO THE POLITICAL THREAT

The dependent relationship of Botswana on South Africa engendered by the labour reserve economy led to early post-independence predictions that Botswana could do little to alter the relationship. Indeed the first seven years of independence were indicative of this dependence, with the economy relying on British grants-in-aid to meet recurrent expenditures. By the early 1970s, however, Botswana was displaying signs of rapid economic transformation in the minerals sector. The opening of the diamond mine in Orapa had a tremendous impact on the economy and, added to an increase in the value and quantity of beef exports to Europe, left Botswana with the fastest growing economy in the world for the better part of the 1970s.

The rapid growth of the economy and the corresponding rise in monetary reserves coincided with heightened political concern on the part of the ruling Botswana Democratic Party (BDP). The 1969 elections had resulted in gains for the opposition parties. The gains, while not challenging the ruling party's dominance at either the national or district level, nevertheless shocked ruling political elites. The political response of the BDP reflected the country's newly-acquired financial muscle (see Picard and Morgan, 1985). In the two years leading to the 1974 elections, the BDP used state revenues (as well as foreign aid monies) to initiate the Accelerated Rural Development Programme (ARDP). While the 1973-78 development plan had specified an increase in spending on infrastructural projects, the "acceleration" of project plans under the ARDP exceeded plan goals in terms of scope, focus, and funding (Ministry of Finance and Development Planning, 1973). The programme concentrated on the areas of health, education, water and physical infrastructure (especially roads). Over the 1973-75 period of programme implementation, almost 20 million pula was spent (Cownie, 1983/84)). As per election results, the programme helped to solidify the power base of the BDP. The BDP increased their percentage of the popular vote from 68% to almost 78%, and made a three seat gain in parliament.

Whatever the political reasons behind the programme, the effects were striking. Most small to medium size villages obtained piped water with standpipes within reasonable walking distance, as

well as health posts. In the field of education, a recent paper (Kann and Taylor, 1986) noted that the number of secondary schools constructed nearly doubled from 1972 to 1974. Significant advances were also made on the construction of roads connecting major population centres.

SUSTAINED ARABLE SECTOR INVESTMENT

Introduction

While infrastructural investment grew rapidly in the mid-1970s there was no corresponding rise in arable sector investment. Rather, the government remained committed to progressive farmer policies developed in the 1950s. The early policies, centered around the Pupil Farmer Scheme (PFS), comprised the main government thrust in extension activities. By the mid-1970s, however, government's policies were coming under increasing criticism due to the limited impact of the PFS — requiring intensive extension effort per year but reaching very few farmers. The emerging contradictions between the rapidly growing urban/mines/cattle-centric economy with the stagnation in the smallholder arable sector led to increased government attention to the idea of a mass-based extension approach. What ensued were two programmes designed to study the potentials of smallholder agriculture under dryland farming conditions. The Dryland Farming Research Scheme and the Evaluation of Farming Systems and Agricultural Implements Project served as the foci for extensive testing of farming systems under on-farm conditions. These two projects, as well as political concerns over the stagnation in the smallholder agriculture, aided the development of a comprehensive arable programme by the 1970s. Known as the Arable Lands Development Programme (ALDEP), it quickly became the cornerstone of government's arable development strategy. Over the period 1978–79 consultation took place regarding the proposed characteristics of the programme. After a further two-year pilot period, ALDEP was implemented beginning in 1982. Focusing on the provision of four packages— fencing, implements, draft power, and water catchment tanks, ALDEP has within the past four years distributed some 12,000 packages (Mmopi and Bhatia, 1985).

ALDEP has undergone one major strategic change which has had important implications for the programme, both in its administration and in its popularity. Prior to late 1983/early 1984, ALDEP consisted of a loan/subsidy arrangement whereby farmers would obtain a portion of the full cost of a package as a subsidy (ranging from 35 to 60 per cent), while the remainder would be obtained through the National Development Bank (NDB) as a loan, subject to approval. Despite the establishment of a flexible loan structure, very few ALDEP farmers obtained loans and even fewer had the capacity to repay these loans. These loan repayment problems and low levels of package led to serious discussions regarding how ALDEP should be modified. Both the funding agencies and Parliament beginning to ask questions about the failure of ALDEP to reach target levels, and NDB officials were complained about repayment difficulties. In an effort to alleviate these problems, ALDEP National-level officials developed a grant/down payment which they determined would be more feasible. A ratio of 85/15 was decided for the new scheme. Farmers were now required to come up with 15% of the package costs prior to package adoption, following which the Ministry would cover the other 85%. The only package exempted from this equation was the oxen draft power scheme, which was 60/40.

While ALDEP remained the major government policy for the arable sector, a second programme took effect in the 1985 planting season (Kwelagobe, 1985; Mmegi wa Diukgang, 1985). The programme, entitled the Accelerated Rainfed Arable Production programme (ARAP) sought to complement the efforts of ALDEP by emphasizing packages unavailable under the latter (Agrinews, 1986). The focus was on timely ploughing, the destumping of fields, the availability of quality seeds, and further efforts to increase the adoption of fencing packages. Incentives to adopt ARAP packages were offered through payment for working on one's own land. If expenditure levels on package adoption can be measured as one element of success, then ARAP was indeed successful. During the 1985/86 season some eleven million pula was spent.

While the origins of ALDEP were less political than the origins of the 1973/75 Accelerated Rural Development Programme, ALDEP nevertheless has periodically become a political issue. During the 1979 elections little mention was made of the programme. Because it was in formative stages and little was known about its characteristics, attention was instead focused on local-level development projects in specific constituencies. The 1984 election differed from that of 1979 since ALDEP was entering its third year of full implementation. Opposition party members focused alternatively on low adoption rates, especially on the part of poorer and female-headed households, and on their belief in the need to develop large-scale capital-intensive agricultural schemes (see Puo Phaa, 1986). The ruling BDP focused attention on the recent move from a loan/subsidy arrangement to a grant/down payment scheme.

ARAP, much more recent in origin, differs from ALDEP in the profoundly political nature of the programme in both its origins as well as its implementation. While introduced in a non-election year, the expected continuation of the programme for at least five years has implications for the next general elections in 1989. Additionally, the political careers of those closely identified with the programme could likely be enhanced by their identification with what has become a very popular programme.

Contextual Issues in the Relationship between Transport and Arable Agriculture in Ngamiland

As stated in the introductory section, the relationship between the transport and arable agriculture sectors is mediated by factors which can be classified under the themes policy/administration and physical limitations. To examine this further in its contemporary context, a survey was conducted in the Ngamiland District of northwestern Botswana after the 1985-86 harvest season was complete. Among a variety of other issues, the survey sought information regarding transport limitations on the implementation of the two major arable agriculture programmes, ALDEP and ARAP. In the following paragraphs I set out why Ngamiland was chosen for intensive analysis, discuss the administrative nature of agricultural programme implementation in the district, and finally explore specific issues linking the transport and arable agriculture sectors.

Ngamiland differs from other arable districts in Botswana for a number of reasons. Most striking of these is its remoteness from the major population centres of the country. The administrative capital of the region and the largest village, Maun, is almost 500 kilometers from Francistown, which is on the line of rail. For the final 300 kilometers of the journey the road is gravel of varied quality. Travel to the western Ngamiland administrative capital of Gomare from Maun requires at least six hours, the last two/three hours over very poor roads. Reaching remote villages from Gomare is especially difficult. Maun serves as the last petrol stop, as well as the final location for vehicle repairs. The existence of Kalahari soils in the district makes road upkeep very difficult. Population density is low compared to eastern Botswana, with less than one person per square kilometers. For the entire region there are less than 10,000 farming households, the majority less than three hectares in size. Of these, roughly three-quarters are involved in crop production (Ministry of Agriculture, 1985).

The difficult transport situation in the region added to the scattered population make agricultural extension activities very difficult. Twenty-six agricultural extension areas exist to cover Ngamiland (some of which stand vacant). The Ministry of Agriculture has a regional office in Maun which is responsible for Ngamiland East and Ngamiland West districts as well as Chobe district to the northeast. The Maun regional agricultural office is headed by the Regional Agricultural Officer (RAO), who is supported by a District Agricultural Officer and a District Agricultural Supervisor in each agricultural district. A Crop Production Officer (CPO) is also assigned to the regional office.

In the case of Maun Region there exists an ALDEP Regional Manager who is responsible for the co-ordination of ALDEP and related activities. The selection of farmers for inclusion in ALDEP by district-level staff is overseen by the Regional Manager. Additionally, the Regional Manager acts as a liaison with suppliers to ensure the availability of adequate and reasonably-priced ALDEP

packages, is responsible for the exposure of technical weaknesses in packages, and performs an extension function. The latter takes two forms. First, the ALDEP Regional Manager attends most of the Agricultural Demonstrator monthly meetings, to provide information, conduct demonstrations, display observation plots, and discuss specific problems demonstrators may be encountering with regard to ALDEP. Second, the ALDEP regional manager performs direct extension activities by attending village meetings to discuss aspects of the programme with farmers.

Also at the regional level there exists an ALDEP sub-committee. Chaired by the Regional Agricultural Officer, with the ALDEP Regional Manager as secretary, the sub-committee is charged with the drafting of recommendations regarding alterations in the implementation of ALDEP. This regional sub-committee is subordinate to the main regional staff committee, which is composed of senior regional officers. Recommendations which come from the sub-committee pass through the regional staff committee for channeling to ALDEP national authorities.

With the change from the loan/subsidy scheme to the grant/down payment scheme in 1983/84 the administration of ALDEP at the district level has been modified. District Agricultural Officers have been responsible for the bulk of the paperwork involved in farmer package adoption. In the first two years of the programme, the DAOs served as the primary link between the field level agents (the Agricultural Demonstrators) and the ALDEP Regional Manager and national officials. Given substantially increased workloads since late 1983, each DAO is now assisted by a District Agricultural Supervisor (DAS). Since this modification, the process has functioned as follows. First, ADS are responsible both for the popularization of the programme and for assisting farmers in making applications. Each month an AD reports to the DAS those farmers who have made application for an ALDEP package. After checking to ensure that all the necessary information has been collected, the DAS passes each farmer's application along to the DAO, who either approves or disapproves the application based on the farmer's eligibility, whether the form has been properly filled out, and whether the farmer has made efforts to inquire about the availability of the package from a local supplier. At this stage payment must be made to the DSA either in their office or during the DAS travel to an area. Upon receipt of the money the farmer is issued with a receipt and a government purchase order is issued for the purchase of the package. If a farmer lacks transport for the package, the district authorities will transport the item to the farmer. Finally, after adoption the DAS is responsible for ensuring that the package is being implemented properly.

ARAP administration has essentially been grafted onto the existing ALDEP structure. National level ALDEP officers are partially responsible for the effective functioning of ARAP, and at the district level the DAO and the DAS handle implementation. At the field agent level, ADS are responsible both for the extension of the programme as well as ensuring payment of farmers benefitting from the scheme.

Prior to the 1983/84 ALDEP change from loan/subsidy to grant/down payment the distribution of ALDEP packages in the region numbered only 18. Participation was stifled primarily by farmers' inability to repay loans and a fear of going to jail, yet also by the lack of extension advice promoting the programme. Coinciding with the change to the grant/down payment scheme was the arrival of the ALDEP Regional Manager in Maun. Armed with the new payment scheme, the Regional Manager travelled throughout the region to promote ALDEP. Additionally, efforts were made to get suppliers in all major villages to stock ALDEP inputs, something which did not exist prior to stock ALDEP inputs, something which did not exist prior to 1984. The growth in the number of packages distributed is remarkable.

In interviews conducted in May 1986, regional and district officials highlighted a number of transport-related problems which have caused serious extension problems. Additionally, a questionnaire was administered to agricultural demonstrators in both Ngamiland East and Ngamiland West which raised further concerns. Finally, 66 farmers were interviewed in the five Agricultural Extension Areas of Makalamabedi, Xhana, Komana, Nokaneng and Gomare, (see map two Ministry of Agriculture, 1977) five areas which reflect the diversity within the two districts. The problems mentioned consist, generally, of the following: access to and distribution of suppliers,

obtaining transport for extension activities, difficulty of travel in the districts, the overtaxing of extension resources and the expenses involved in administration of the district. These problems, it will be argued, are further compounded by extreme personnel shortages and the nature of the administrative state in Botswana. Each of these issues is now dealt with in greater detail.

One of the most serious problems facing the extension of ALDEP and ARAP packages to farmers is the access to, and distribution of, package inputs. As mentioned previously under ALDEP if a farmer does not have transport, which is often the case, the Ministry of Agriculture will transport the package. The result has been tremendous delays in the provision of packages (especially to farmers in outlying areas), and the severe overtaxing of district staff, particularly the DAS. Some farmers have reported the non-receipt of ordered packages. In an area where wide variation exists in seasonal and yearly rainfall, the late arrival of needed donkey draft power, for instance, can negatively affect crop yields. The problem is exacerbated by a severe shortage of vehicles for Ministry of Agriculture and district staff in Maun and Gomare.

Transport problems and the long distances involved have raised input costs. Farmers must get a package price quotation before an application is approved. In a number of cases farmers have obtained estimates for inputs, only to find out that when the down payment is finally raised and the purchase order received, the price of the package has increased. In the case of Ngamiland, supply difficulties increase the problem of price variability. Additionally, the higher transport costs means that a larger Pula-sum down payment is required. Indeed, over half of the farmers interviewed who responded to the money problem question stated that they either had somewhat serious problems raising the cash.

To obtain inputs the regional officers in Maun often have to travel some 500 kilometers to Palapye which is the nearest bulk supply source.

A second issue of concern relates to the availability of adequate transport for extension workers. When asked to agree or disagree with the statement "I have adequate enough transport to travel around my extension area", fully 75% of the ADs surveyed strongly disagreed, only 20% agreed. In a number of cases farmers are reachable only when the annual delta floods have receded. Often farmers live some 35 to 40 kilometers away, in almost all cases they are connected by poor roads. At present there is a programme wherein ADs can purchase motorbikes to make their rounds. However, the AD is responsible for the purchase of the bike as well as its maintenance. In the case of remote ADs, the nearest repairs/spare parts facilities are hundreds of kilometers away. The long time motorbikes inevitably take when being used means reduced extension time and effectiveness. Other ADs in the region either travel on foot, which means very restricted extension rounds, or by horse which also reduces the area covered.

At district level, the limitations on the availability of transport hinders the effectiveness of district authorities in the delivery of packages as well as collection of feedback from farmers. One of the areas that has been affected by the shortage of transport regards local-level input into the rural development process, which requires two-way communication between target groups and extension personnel. Questioned whether farmer input into the implementation process affects responsiveness to the programme (i.e adoption rates), 75% of the ADs answered in the affirmative. Yet the difficulties of transport in the region has made effective two-way communication a luxury. The distances involved, the shortage of vehicles and the difficulty of travel has, to paraphrase the response of one official, rather turned district-level personnel from extension agents into package providers. Unfortunately, this bias toward package provision has been substantially increased with the advent of ARAP.

This latter factor relates to another issue, that of the overtaxation of extension resources. On average ADs in Ngamiland are responsible for extension services to almost 350 households. The households can extend over an extension area hundreds of square kilometers in size. With fourteen separate responsibilities ranging the spectrum from cattle to crops, from drought relief to pest control as well as a number of reporting activities, ADS simply are unable to cover their extension areas (BDN, 1986d; BDN, 1986e). The manpower shortages facing the district became especially

acute with the advent of ARAP. The programme required that ADs measure fields for purposes of payment. The result was a tremendous backlog of unmeasured fields, farmers who were not paid on time (indeed, many fields have yet to be measured and many farmers have yet to be paid), the neglect by ADs of other important duties, had lowered credibility of the ADs in the eyes of farmers. These problems are highlighted by AD responses to three time-related questions. In response to the statement "Since ARAP has begun, I find little time to work on ALDEP", 70% of the ADs either strongly disagreed or agreed. Almost 70% disagreed with the statement "I have enough time to discuss ALDEP with farmers in my area", and fully 90% of the respondents argued that the situation has worsened.

The problems with the transport sector also increase the costs of administering the district. For district and regional Ministry of Agriculture staff, the vast distances involved and the remoteness of the district from the east raises petrol, repair and manpower costs. These factors have led to higher costs of packages for the ALDEP and ARAP programmes. For the Ministry, the subsidy cost is higher per package delivered.

FUTURE LIMITATION AND POTENTIAL

The severity of the personnel problems facing extension services in the region should be lessened during the 1986/87 cropping season with the proposed hiring of two field assistants per AD for AREA-related work (BDN, 1986b). Plans are presently being implemented for the tarring of the road from the east to Maun. The effect should be to reduce transport costs of goods brought in to Ngamiland region, although intra-regional transport problems will remain severe. Indeed, for the foreseeable future, some areas will simply continue to remain inaccessible.

Poor crop storage facilities is another cause for concern. Because of the current drought little attention has been given to depots for surplus grain storage. The Botswana Agricultural Marketing Board, (BAMB), was originally charged with the building of storage facilities throughout Botswana. Altogether some 40 lock-up stores with a 200 tonne capacity were to be built with the onset of the drought in 1981/82, BAMB altered its plans with the result that, to date, of the 40 nationwide depots originally to be built, only 7 were built. No new facilities have been constructed in Ngamiland. The distance from most farmers to the nearest depot remains over 40 kilometers, with no transport services. The few farmers who managed to produce a surplus in 1986/87 had not heard of BAMB or were unaware of a depot location.

Another problem will remain which will negatively affect the future of agricultural development in Ngamiland, a problem based fundamentally in the nature of the administrative state in Botswana. The relationship between the transport sector and the arable agricultural sector reflects a necessary interdependence. Coordination between the two, therefore in the drawing up of future plans would seem to be a necessity. While district-level development planning has sought to link these two (as well as other) areas, administrative factors mitigate against smooth interaction. Indeed during the discussion stage of ALDEP mention was frequently made of the need for positive interaction between transport development and the arable agriculture sector (Ministry of Agriculture, 1979). There exist, however, limitations on the degree to which the two can act together. Administratively, the Ministry of Agriculture and the Ministry of Works and Communications each have district offices operated through a line ministry arrangement. The most common communication patterns are vertical, that is, with the respective main offices in Gaborone rather than horizontal. Incentives to co-ordinate across line ministries at the district level are minimal. Personnel and organizational issues (such as promotions or programmatic development) create incentive structures which maintain separation of each of the line ministries. Similarly, at the national level linkages between the various ministries including Agriculture and Works and Communications are few. Rather, each Ministry is linked with the Ministry of Finance and Development Planning which controls monetary resources.

On a more macro-scale, the possibility of a future "trans-Kalahari" railway traversing the region has gained increasing consideration. The continuing deterioration in relation between SADCC

states and South Africa may increase the pressure to build such a railway. Stronger prices for copper, coupled with the development of the Sua Pan soda ash project in northern Botswana, could have a bearing on the decision (BDN, 1986c; Mmegi wa Dikgang, 1986). The next ten years might indeed see the building of the railway. The implications for Ngamiland are threefold. General transport sector costs would probably be lowered for the region, the Manu abattoir could increase its export capacity and lower costs of production, and capital-intensive agri-business operations in the Okavango watershed could potentially become viable. For our purposes here, however, it remains difficult to see how this could benefit intraregional transport and smallholder agriculture, save for lower input costs.

SUMMATION

The past twenty years of independence in Botswana have seen rapid advances in the area of infrastructural development. It is precisely these advances which have increased an understanding of the complexity of the relationship between this sector and that of smallholder arable agriculture. Increasingly policy-makers are becoming aware that the interactions between the two are neither bi-variable nor linear. In an effort to understand the relationship in both its historic as well as its contemporary contextual dimensions, the nature of colonial rule in the Bechuanaland Protectorate was explored, changes in government strategies toward both sectors since independence were delineated, and the impact of the intervening administration/policy and physical variables were investigated.

In the first instance, the historical underdevelopment of the Bechuanaland Protectorate as a labour-exporting colony had a profound lack of impact on the transport sector and, indeed, the agricultural sector. The virtual absence of such infrastructure changed rapidly during the 1970s through an interaction of political variables and genuine developmental goals. The party's efforts to lessen the opposition threat at the polls translated into a programme of rapid infrastructural investment finance largely (56%) by newly-created government revenues. This investment in physical infrastructure was not, however, coincident with any similar increased investment in smallholder arable agriculture. The third and present stage has been characterized by continued infrastructural investment (although at a lessened rate) combined with substantial investment in the smallholder arable sector.

It is in this latter stage that the relationship between the two sectors has been explored most fully. By examining the impact of the transport sector directly on smallholder arable agriculture, as well as its impact mediated through the two intervening variables of administration/policy and physical limitations, both positive and inconsequential relationships have been discovered. Unfortunately those positive interactions which do exist are quite limited in the remote regional context of Ngamiland. Whereas most of the population of Botswana can now be reached by two-wheel drive vehicles, in Ngamiland this is not the case. Where adequate roads have kept costs of farmer inputs moderate, in Ngamiland the isolation of the region has effectively increased consumer prices. While many problems facing smallholder farmers elsewhere in Botswana are numerous and severe, the problems with transport in Ngamiland make the problems more acute. The high costs of road construction and low use levels argue against future intraregional upgrading. Save for drought relief-related road construction, the district is unlikely to see substantial investment made in the upgrading of roads in the region.

NOTES

1. Prior to independence in 1966 Botswana was, due to mispronunciation, known as the Bechuanaland Protectorate
2. The legal currency at the time was the South African Rand. However, in the mid-1970s Botswana began using its own currency, the Pula.

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3. At present the CPO office remains vacant.
 4. To briefly outline the survey methods involved; For the farmer interviews, within the two agricultural districts of Ngamiland West and Ngamiland East five agricultural extension areas were selected based on level of ALDEP package adoption. Within each extension area a 15% sample of ALDEP farmers were randomly selected for inclusion in the survey. Two control groups were also interviewed, one comprising ARAP farmers and the other farmers who had taken advantage of neither programme. In each case the interview took 30-45 minutes. A questionnaire was administered to ADs at their monthly meeting, taking approximately one hour to fill out. Finally, semi-structured interviews were conducted with district officials to determine trends and opinions. In the case of both the farmer and AD questionnaires, pre-testing took place before the field research began.
 5. In the final analysis as noted in Mwasa (1987), the project is entirely dependent on the liberation of Namibia (including Walvis Bay).
 6. I have noted elsewhere (Cownie, 1985f) that, with reference to the agricultural sector, the emergence of the labour reserve had several debilitating effects. The policies employed to enhance Botswana migration to the South African mines consisted, in order of importance, of taxation, restrictive commercial practices, and land alienation. These coercive mechanisms for labour migration were further enhanced by the 1986-97 rinderpest epidemic which destroyed ninety per cent of Bechuanaland's herds, South African restrictions on the colony's beef exports, and the virtual dearth of agricultural development extension services and loans. This underdevelopment of the agricultural sector, I argue, was central to the creation of the semi-proletariat class which emerged in southern Africa. In the case of Bechuanaland, neither the peasant base or rural households nor the wage earning position offered sufficient support for societal reproduction.

CHAPTER 8



Regional Economic Integration and Self-Reliance

Oye Ogunbadejo

INTRODUCTION

A common feature of contemporary international relations is the proclivity among states to associate together in intergovernmental organisations (IGOs) for a variety of purposes¹. In line with this trend, African countries have increasingly joined IGOs, in particular, the regionally delimited economic organisations. Indeed, virtually every sub-region of Africa now has at least one major economic grouping. The list includes: Arab Maghreb Union (UMA) in the north²; the Economic Community of Central African States (CEEAC) in the central region; Southern Africa Development Coordination Conference (SADCC), and the Preferential Trade Area (PTA), both in the east and south³ and the Economic Community of West African States (ECOWAS) in the west⁴.

The wisdom that propels such major sub-regional groupings stems, in large part, from the premise of using these blocks to steadily work towards an all-encompassing African Common Market by the year 2000; or so the Lagos Plan of Action envisaged.⁵ In itself, the logic is a product of the differing perspectives on development and under-development, the relationship of Africa to the world economy, and the ways in which global economic conditions limit Africa's economic policy choices.⁶

Specifically, it is widely believed that each of the sub-regional blocs would, *inter alia*, be an invaluable weapon in the battle for economic survival, since each was a unit large enough to help stimulate the internal economies of the member-states and attract foreign investment. Besides, at the systemic level, and given the complex politics in the trade and aid relations between the industrialised countries of the North and the relatively technologically-backward developing countries of the South, regional economic integration is often seen by the latter states as a means of attaining the objectives of the New International Economic Order (NIEO). This viewpoint has gained added weight in more recent times with the scheduled attainment of a single European market within the framework of the European Economic Community (EEC), in 1992.⁷

Moreover, regional integrationist drive is adjudged by several of Africa's progressive leaders and intellectuals as the major pillar of collective self-reliance. To them, any sub-regional economic integration in any part of the continent offers the member-states the opportunity to maximise their internal capacity for self-reliance as well as to collectively reduce their dependency on the North.

Even from the standpoint of functionalism,⁸ the idea of tackling Africa's dependency through self-reliance, within the framework of regional integration, is of great relevance to the continent's economic development. Such an idea, in fact, fits in well with the gradualist approach to pan-Africanism favoured by the member-states of the Organisation of African Unity (OAU), as opposed to the strictly instant, and, indeed, grand, political drive towards continental unity, which Kwame Nkrumah had pioneered soon after Ghana's independence.⁹ After all, according to the theoretical premise of functionalism, the idea of establishing an IGO is to facilitate international cooperation with respect to a specific technical problem, not to establish an over-arching political authority with broad scope and powers.

In any case, the functionalist option towards pan-Africanism must, by its very nature, consider collective self-reliance. Indeed, proponents of this option stress the point. Typical of the familiar argument in this regard is the contention of Kofi Buenor Hadjor, who maintains:

As long as Africa is divided it will remain too weak to fight neocolonialism. Many of the countries created in the colonial era are not viable economically and cannot thrive on their own... Pan-Africanism is not an option but a necessity. Only the collective effort and resources of Africa can provide the foundation for progress.¹⁰

In a similar vein, scholars of the political economy school maintain that the territorial state is no longer capable of dealing with problems posed by the globalisation of the economy and by interdependence. The nation-state must, therefore, be transcended by either an international civil service which could manage the problems that have escaped from the grasp of national governments, or by a confederal arrangement that would make the pursuit of "collective rationality" possible.¹¹ Needless to add, these recipes have sub-regional implications as well. In other words, the quest for

regional integration and collective self-reliance in Africa can also be situated in the political economy setting.

In this study, we examine the experience of, and the possibilities for, ECOWAS—arguably, one of Africa's most ambitious experiments in regional integration to date — as a factor in inward-oriented development strategy. In doing so, we hope to examine the efforts of the organisation as a counter-weight to other economic groupings in the sub-region; the different aspects of the organisation's quest for self-reliance; key issues in, as well as the ramifications of, striving towards a bloc trade regime; the role of Nigeria as the dominant power in the organisation and the implications of such a situation for integration and self-reliance; the challenges of economic crisis vis-a-vis the sub-region; the sensitive subject of externally-imposed structural adjustment policies as a vehicle for self-reliance in ECOWAS; the major factors that militate against integration and self-reliance, as well as some policy recommendations for dealing with them.

Economic Groupings in West Africa

Historically, there has always been a strong tendency towards economic groupings amongst the West African States. By 1989, there were at least some 35 IGOs in the sub-region.¹² These organisations range from the larger bodies, including ECOWAS and the seven-nation *Communauté Economique de l'Afrique de l'Ouest* (CEAO), to several smaller, but more specialised, bodies, such as the four-nation Gambia River Development Organisation (OMVG) and the three-nation Mano River Union (MRU). Of course, every one of these numerous organisations has its functional justifications; at least, from the standpoint of the member-states.

ECOWAS itself was formally established, through the signing of the Treaty of Lagos, on May 28, 1975. However, the Community did not effectively come into being until June 10, 1975, when the provisions of article 62 were fulfilled by the ratification of the treaty by seven member-states. Even so, it was not until November 1976 that decisions were taken as to where to locate the organisation's headquarters and which countries were to provide the statutory appointees. True, the ECOWAS Executive Secretary, as well as the Managing Director of Fund for Cooperation, Compensation and Development (hereafter referred to as the Fund), assumed duty in January 1977. By March 1977, a task force had been established to build the Community from scratch. In addition, Cape Verde had, the same year, 1977, joined the fifteen original signatories to become the sixteenth member-state.¹³ Nevertheless, the first permanent staff members of the two institutions of the Community — the Fund and the Executive Secretariat — took up their posts only in late 1979 and early 1980 respectively. Moreover, the task force was not fully replaced by a permanent staff until 1981.¹⁴

From such slow beginnings, the organisation can now be said to have effectively taken off the ground. Yet, the existence of rival groupings constitutes, amongst other things, a constraint on the integrative efforts in the sub-region. Nigeria, for one, has always maintained this position. At the 1983 ECOWAS summit in Conakry, President Shagari offered a policy option to all his colleagues, namely, "to streamline the existing institutions in the interest of our economies and eliminate institutional overlaps or conflicts of objectives which only hamper our march towards the achievement of our desired development goals".¹⁵

Admittedly, the Nigerian position has since been endorsed by some countries, including, most notably, Burkina Faso. Equally, the ECOWAS heads of state had, in any case, requested the UN Economic Commission for Africa (ECA) to take a critical look at the existing inter-governmental organizations (IGOs) with a view to aligning their activities, and of merging some of the groupings with ECOWAS. It is significant too, that the Council of Ministers of ECOWAS had in 1983 recommended a merger of the CEAO and MRU with ECOWAS. Nonetheless, there has, to date, been no major progress in streamlining the numerous rival organisations within the framework of the Community. Indeed, such was the frustration of the organisation's Executive Secretary, Dr. Abass Bundu, that he contended at the 1989 summit in Ouagadougou that all IGOs in the sub-region should be subordinate agencies to ECOWAS. As he has put it, "ECOWAS must be the sub-regional organisation".¹⁶

The truth of the case seems to be that some of the smaller countries still consider it worthwhile to group themselves together, partly because, in their view, it gives the members of such a bloc a stronger bargaining position with Nigeria than they might have individually; and partly because some of the countries believe that their economic development can best be hastened or enhanced in an organisation of small countries. In arguing against the concern of possible conflict in objectives between the MRU and ECOWAS, for example, the late President Doe of Liberia echoed the latter theme. According to him, "we must realise that a small group of countries can promote economic cooperation and integration more rapidly than a larger group". In the Liberian leader's view, countries that are more or less at the same level of development will, when grouped together, "find it easier to agree on specific projects which would be impossible if there were wide differences between these countries".¹⁷

It is thus clear that there is a clash of objectives on the crucial question of economic integration between, on the one hand, member-states of the smaller groupings and, on the other, the larger ECOWAS outfit. Furthermore, we must not lose sight of the political dimension of regional groupings in West Africa in general. Let us for example, take the position of Nigeria. Because it is the most populous and, in military terms, the most visible in the sub-region, the smaller countries often view the country's role in ECOWAS with suspicion, sometimes quietly levying against it the charges of harbouring hegemonic tendencies.

In any case, such fears had been expressed even before ECOWAS came into formal existence. The leaders of CEAO, for instance, were deeply suspicious of Nigeria's true motives in the region. The fears had not been helped by the Pompidou administration's persistent urgings that the Francophone states should remain together in a separate organisation, so as to counterbalance the weight of Nigeria in the sub-region.¹⁸

Successive French policies have not deviated from the Pompidou regime's stance. If anything, France has repeatedly played up the CEAO/ECOWAS dialectical relationship to maintain, defend, and even advance, French national interests in the small francophone countries. True, the states are relatively poor, but for a country like France which very much believes in the promotion of Franco-African understanding as a way of enhancing its political stature in international relations, the need to maintain France's political influence in these states remain an important policy objective.

ECOWAS and the Quest for Self-reliance

As used in this study, the concept of self-reliance does not mean an exclusive, and isolationist strategy of development amongst a group of geographically contiguous states. Rather, it refers to an inward-directed development. In this regard, Julius Nyerere's analysis is apposite. The former Tanzanian President has contended that:

"We in Africa went through one process of liberation — the political liberation... There is another layer of dependence. We have to recognize that we are economically a semi-colonized people. We must at least, say: economically we are not independent, this economic dependence is unacceptable and we must organise ourselves to change this situation".¹⁹

The question that naturally arises is: to what extent has ECOWAS been able to meaningfully embark on the policy of self-reliance? To answer this question, let us turn to specific areas in which modest gains have been recorded or beginnings made. We start with the provision of basic infrastructures. After all, it stands to reason that until such a time that the economic infrastructures are provided, efforts towards integration or self-reliance in the sub-region would remain a difficult goal to attain. The more so, as these infrastructures are essential in providing avenues for physically linking ECOWAS member-states, and so making it relatively easy to cultivate economic ties among themselves.

It can be argued that the most positive achievements of ECOWAS to date seem to be in the area of the provision of these economic infrastructures. High on the list, has been the organisation's investment in telecommunications, which understandably, was declared a priority by the meeting of heads of state at Dakar in May 1979. The project, which attracted a partial financing of \$12.5

million from the Fund in the first phase (Phase A),²⁰ and which is a major contribution to the West African part of PANAFTEL project of ECA, will, when all the phases are completed, establish microwave links between West African capital cities and secondary towns. The telecommunications project is important since, prior to its inception, most West African states had no existing direct links with one another. Rather, they often routed their calls to each other through European capitals.

Aside from telecommunications, ECOWAS has commenced work on two trans-West African roads: a coastal road from Nouakchott to Lagos, and a Sahelian road, connecting Nouakchott, N'Djamena, and Lagos. When these two roads are completed, the member-states would be physically linked. The Fund has also granted loans, amounting to \$6 million, to Benin for the construction of two bridges of Community interest, and to Liberia for the construction of the Liberia-Freetown highway. In addition, ECOWAS Secretariat announced in 1988 that the organisation had provided a loan of \$2.5 million to Liberia and Sierra Leone to assist the two countries in the completion of their respective portions of the trans-West African highway.

Furthermore, ECOWAS has plans to connect all West African capitals by air, so that there could be daily flights to each capital, and to form a West African shipping line wherever the volume of production in the sub-region would justify such a venture. Nor must we forget to mention that the Fund has made several grants for studies carried out by the Executive Secretariat, especially in the fields of energy and monetary affairs.²¹ Lastly, the Fund has contributed to two other projects, namely, 40 per cent finance of its own \$10 million headquarters, and \$5 million to Ecobank Transnational Incorporated (ETI), a commercial bank established under the aegis of the Federation of West African Chambers of Commerce whose membership covers the 16 member-states of ECOWAS.

The latter project is noteworthy, at least insofar as ETI is West Africa's first off-shore bank. It was incorporated with a capital of \$100 million, out of which \$50 million has been allocated in 50,000 shares of \$1,000 per share. Of this amount, 40 per cent has been allocated to Nigerians, 10 per cent (\$5 million) to the Fund, and the remaining 50 per cent to private investors from other ECOWAS member-states. The principal objective of the company is to establish or acquire operating units for the provision of banking, economic, financial and development services within the sub-region. Aside from its headquarters, which is based in Lome, ETI currently has five affiliates, viz. Ecobank - Togo, Ecobank - Côte d'Ivoire, Ecobank - Nigeria, Ecobank - Ghana, and Ecobank - Benin.

It seems probable that when all the outstanding economic infrastructures are completed, they would not only facilitate the drive towards integration in the Community but would also, in the process, enhance economic activities in the organisation, particularly in terms of trade relations. The trade dimension is quite important when we bear in mind that a major shortcoming of ECOWAS has been its failure to implement the protocols dealing with trade. True, trade is usually one of the main objectives of establishing an economic community. It is also a fact that the ECOWAS treaty was relatively more explicit on the trade cooperation programme. Indeed, the Community was based on the strategy of first establishing a customs union.

Even so, there are various reasons why ECOWAS has not made any major progress in trade relations. These include the problems of determining the origins of products, the absence of common regional monetary policy, and the reluctance of countries that are already in sub-grouping within the Community to dismantle their existing arrangements. Consequently, after fourteen years of existence, there has been no major impetus towards stimulating legitimate trade among the member states. Unfortunately, the vacuum created by the ineffectiveness of ECOWAS trade protocols has been enthusiastically filled by smugglers who traffick in imported manufactured goods. We shall return to the subject of trade relations in the next section.

With regard to the implementation of the protocol on free movement of peoples, the right of residence and of establishment, ECOWAS is yet to take the last decisive step on the subject. Indeed, the topic has always remained a sensitive one. And, as if to underscore this point, Nigeria unilaterally closed its borders in 1984 for over one year.²² Prior to the border closure, the movement

of peoples seemed to have been the major area in which ECOWAS had its most practical impact in the sub-region. It was hardly surprising, therefore, that until the Babangida administration reopened Nigeria's land borders in 1985, several of the members, particularly the Francophone neighbours, expressed grave concerns about the continued utility of ECOWAS.²³

Admittedly, member states have since recovered from the shock caused by Nigeria's unilateral action. All the same, it is significant that the implementation of the protocol has not yet been achieved. Bureaucratic obstacles, especially the printing and issuance of ECOWAS travel certificate, have constituted bottlenecks. In a communique issued in April 1989, after a meeting of the ministers responsible for internal affairs and state security, member-states called for the effective implementation of the protocol. In particular, member-states were urged to print without further delay the required travel document. Stressing that the programme for educating national officers who are responsible for immigration should be intensified, the communique recommended that adequate information should be disseminated among their citizens and that public campaigns should be stepped up.

A few months later, at the 12th summit, the issue of free movement of ECOWAS citizens was, once again, keenly considered. Apart from ordering member-states to print the stipulated travel certificate and deciding that all immigration officials be further sensitised on the issue, members were requested "to take all necessary measures to prevent and stop violations of the free movement protocols". To provide a measure of legal backing on the latter subject, a tribunal was established to investigate those violations.

The effective implementation of the protocol remains an important test case for ECOWAS. Unless the member-states take concrete steps to reinforce awareness at the grassroots level, whereby the people of the sub-region would be free to cross national frontiers in pursuit of their legitimate business, ECOWAS would remain fragile and shaky.

The efforts of ECOWAS in the field of food production and in agriculture in general are still at their infancy. Be that as it may, there are encouraging developments in the promotion of certain policies. These policies pay particular attention to the creation of seed production centres, the harmonisation of agricultural pricing policies, control of animal diseases, development of cattle breeding centres,²⁴ control of floating weeds, plant and wildlife protection schemes, and support programmes for the development of crop production. An important challenge that is likely to confront ECOWAS member states in future, especially if the issue of self-reliance is to be meaningfully tackled in the field of agriculture, would involve devising full-scale strategies to boost food production, the provision of adequate storage facilities, rehabilitation of cash crop farms, fostering agro-allied industries and addressing the issue of low international prices of the major cash crops of the sub-region.

In the interim, and to highlight the special problem of inadequate food production and supplies, the Executive Secretary, Abass Bundu announced in 1989 that the organisation had set a food sufficiency target in the sub-region for the year 2000. Hopefully, the organisation would, in the years ahead, embark upon positive measures that would make the attainment of such a target realisable.

Towards a Bloc Trade Regime

For understandable reasons, ECOWAS places an important emphasis on trade relations amongst its member states.²⁵ After all, a trade liberalisation scheme is often designed to enhance intra-community trade and economic integration. Besides, such an emphasis is part of the self-reliance strategy. It should, in any case be noted that currently, each member state's trade with the Community constitutes less than 5 per cent of its total exports.

Indeed, the sub-region's international trade epitomises a neo-colonial economic relationship, with the bulk of the trade being carried out with the western industrialised countries, and with the former metropolitan powers being in the dominant position. In contrast with this, a typical West African country's trade with its fellow ECOWAS member-states is minimal. In other words, the

pattern is still overwhelmingly North-South, with South-South trade links remaining on the periphery.²⁶

The four relatively developed states in the Community — Nigeria, Côte d'Ivoire, Senegal and Ghana — clearly highlight the trend. Admittedly, Nigeria's trade in the sub-region has been on the upward trend in recent years. Even so, the volume, as a percentage of the country's overall exports, is still low. In the first 6 months of 1988, for example, Nigeria's trade surplus with its ECOWAS partners stood at N700 million, with imports at N117.9 million and exports at N812.7 million. But, as a proportion of its total trade, the N930.6 million was only 4.4 per cent of Nigeria's trade.²⁷ Little wonder, the organisation's secretariat has, in 1989, set an intra-ECOWAS trade target at 10 per cent, from the current level of 4.6 per cent, of the total trade of the Community.

It is pertinent to point out at this stage that ECOWAS has adopted a trade liberalisation programme, including on industrial goods, and has taken steps, by way of doing some of the essential administrative spadework, that would facilitate such a process. The programme which, as envisaged, would eventually lead to the creation of a free trade zone, has three components:

- i) Liberalisation of trade in unprocessed goods;
- ii) Liberalisation of trade in traditional handicrafts; and
- iii) Liberalisation of trade in industrial goods.

As it is, the Heads of State and Government of the Community have already decided to abolish all duties and taxes on, and to eliminate all non-tariff barriers to, unprocessed goods and traditional handicrafts circulating within the sub-region. Two major reasons were advanced for taking such a decision. First, the free flow of unprocessed goods would encourage further trade, since some of these unprocessed items would constitute the inputs of the budding industrial sector. Second, the handicraft industry is seen as a good base for developing manufacturing skills and, in any case, being rural-based, it needs all the encouragement it could receive.

For the purposes of the liberalisation of trade in industrial products, member-states were divided into three categories in 1985. See Table I. Nigeria, Côte d'Ivoire, Senegal and Ghana were all placed in category G3. They, therefore, have the shortest period, four years for priority industrial products, and six years for non-priority industrial items respectively, for completing the essential trade liberalisation.²⁸

The trade liberalisation scheme for industrial products is scheduled to take off on January 1, 1990, with a selected range of products. In all, 26 products from the organisation's 16 member-states

TABLE 1. Programme for the Attainment of Liberalisation of Trade in Industrial Products

	Country (G)	Priority Industrial products (P1)	Non-Priority Industrial Products (P2)
G1:	Cape Verde The Gambia Guinea Bissau Burkina Faso Mali, Mauritania Niger	8 years, on the basis of a 12.5% reduction per annum	10 years, on the basis of a 10% reduction per annum
G2:	Benin Guinea Liberia Sierra Leone Togo	6 years, on the basis of a 16.66% reduction per annum	8 years, on the basis of 12.5% reduction per annum
G3:	Côte d'Ivoire Ghana Nigeria Senegal	4 years, on the basis of 25% reduction per annum	6 years on the basis of 16.66% reduction per annum

Source: ECOWAS Secretariat, Lagos, 1985.

would be commercialised. In the case of Nigeria, the leading industrialised country in the sub-region, for example, only four of its companies would be allowed to export one product a piece.

Arguably, until certain hurdles are removed, it may be difficult for the member-states to expand their trade relations on a significant scale. Members would have to shed their allegiance to the various smaller groupings; a concerted effort would have to be made, with the assistance of the ECOWAS secretariat, to devise a fairly reliable form of determining the origins of goods; and, perhaps, most important, efforts should be made to harmonize the national currencies, by establishing a West African monetary zone, so as to facilitate easy payments for all trade transactions among the member-states. Indeed, with regard to the latter point, Chapter VIII of the treaty of Lagos provides for cooperation in monetary and financial spheres through the harmonisation of monetary and fiscal policies of member-states, while spelling out the institutional arrangements to be set up to achieve these goals. In May 1983, the Heads of State, at a meeting in Conakry, authorized the secretariat to work out the details for the creation of a single monetary zone. Accordingly, the secretariat, along with the Study Group set up for the purpose, submitted their recommendations to the 1986 summit.

Following the consideration of the report, the governors of central banks of the member-states met and drafted modalities for the new scheme. To assess its future potential, the ECOWAS currency would circulate for a probationary period of five years. It was further stipulated that the authority of Heads of State would be the supreme organ to formulate policy, while the Council of Ministers of Finance would supervise the scheme's monetary operations.

The establishment of a single monetary zone, which would embrace the present ten currency zones in West Africa would, in the context of economic integration, be a remarkable feat. In any case, given the present multiplicity of currencies, with varying exchange arrangements, it is doubtful if any major economic integration can be attained in the sub-region without a monetary union. Aside from the point that such unions tend to promote monetary stability in developing countries, by exercising restraining influence on individual national government's ability to borrow excessively from the banking system, a common currency within ECOWAS would facilitate intra-regional trade, as there would be no exchange controls. As of now, 1992 has been set as the target date for the introduction of a single monetary zone in the entire sub-region.

Economic Crisis and Recovery Implications: for Integration and self-reliance

Given the prevailing economic circumstances of West African States, the task of tackling the problems of underdevelopment, dependency and poverty in the sub-region seems to be a herculean one. The debt crisis, for example, has amongst other things, forced several of the ECOWAS member states to implement the IMF/World Bank Structural Adjustment Programme (SAP), or the Economic Recovery Programme (ERP) as a cross-conditionality remedy for getting out of the economic woods. The debt crisis is debilitating by any standard, especially if we bear in mind that the member-states are obliged to repay and service an external debt which stood at US\$55 billion at the end of 1987. In most of these countries, the leaders claim that SAP or ERP would ensure rapid economic recovery and promote self-reliance. Yet the avowed objectives have remained a distant dream; not least because the policies adopted tend to negate the objectives.

The distinctive common characteristics of these policies include massive currency devaluation, export promotion for primary exports which face dwindling foreign market and protectionist barriers in the industrialised countries; greater foreign control of the debtor-countries by transnational corporations (TNCs) through such avenues as external investment, privatisations (TNCs) debt-equity swap and increased foreign loans; deflationary policies, such as drastic budget cuts, severe credit squeeze and higher interest rates; flexible exchange rates; massive retrenchment of workers; and withdrawal of subsidies and price controls.

The impact of the policies on the affected West African states often exacerbate the plight of their respective economies. Radical African scholars and statesmen have persistently challenged the IMF and the World Bank to identify a single African country that has implemented these policies and

recovered from its economic straits. They contend that, essentially, the policies further promote foreign domination and sharpened class contradictions.

Bade Onimode, for one, argues that the major beneficiaries of SAP or ERP are the TNCs, which have: reaped enormous gains from higher import prices and lower prices in local currency from massive devaluation, cheap raw materials, easy repatriation of super-profits from foreign currency auction and the dismantling of exchange control, rising bank profits from rising interest rates and greater exploitation of debtor countries from tumbling wages, privatisation and debt-equity swap.³⁰

In a sense, it can be argued that ECOWAS is not totally oblivious of some of the major issues that surround SAP, particularly in relation to sub-regional integration and self-reliance. Modest as the efforts may be, the organisation launched its own inward-propelled \$920 million economic recovery package in December 1986. The recovery programme, which would cover 136 projects grouped into "national" and "regional" categories, would pay attention to certain strategic areas, notably, rural development, transport, telecommunications, energy and industry. Specifically, 40 of the projects would be of a regional nature, with an estimated cost of about \$US548.5 million. The balance of 96 would be "national" projects, which, in turn, would cost about US\$371.7 million.

BUDGETARY CONSTRAINTS ON ECOWAS EFFECTIVENESS

While these efforts are to be commended, it should be stressed that many of the stated projects are still on the drawing board, due, in the main, to lack of funds. Indeed, as of December 1988, Mahenta Fall, Director of the Fund, could only announce the availability of funds to execute 54 of the 136 projects. The Community has been financially strapped, not least because several of the member-states have been unable to pay their annual contributions in time.

The financial problems of the organisation raise an important issue at this stage of our analysis, namely, to what extent can ECOWAS continue to survive or even pursue the twin tasks of economic integration and self-reliance when funds are low or simply non-existent? At the 1989 Summit, the Executive Secretary reported that only \$6.5 million had been received out of the \$82 million outstanding contributions. He specially pleaded that all member-states should settle their arrears by June 1990, and those that were unable to do so by that date, should pay up in four quarterly instalments, beginning July 1, 1989. As of now, Nigeria, in spite of its own economic difficulties, still manages to honour its obligations by regularly contributing 33 per cent of the organisation's annual budget. Table 2, for example, shows the country's contributions from 1985 to 1988.

Ordinarily, Nigeria's statutory contributions for the years under reference, viz. 1985, 1986, 1987

Table 2. Nigeria's Annual Contribution to ECOWAS Budget, 1985-1988

Year	ECOWAS Budget	Nigeria's Contribution
1985	N 30,397,560.00	N 10,031,194.80
1986	N 28,018,800.00	N 9,246,204.00
1987	N 27,523,400.00	N 9,082,720.00
1988	N 31,083,792.30	N 10,257,651.46

and 1988, would have been N5,471,561, N5,043,384, N4,954,212 and N5,595,028 respectively. This is because the country's share of the annual budgets, as worked out through its GNP and population, ought to be 18 per cent. In recent years, Lagos expressed a desire to limit its contributions to the normal statutory share of the annual budget. While that stance had initially been accepted at the 1988 Council of Ministers meeting in Lome, Togo, Nigeria was later prevailed upon to stick to its usual 33 per cent contribution so as "to save the organisation from collapse". Accordingly, Nigeria contributed \$2.046 million (about N20 million) out of the \$6.2 million (about N60 million) budget for 1989. In essence, Nigeria thus constitutes an important factor in the provision of financial support for ECOWAS.

Arguably, the inability of ECOWAS member-states to even settle basic bills like the annual dues to the organisation highlight the magnitude of the economic crisis that confront these countries. On comparative basis, too, many of them are even unable to settle their indebtedness to the United Nations. As of June 30, 1988, 14 out of the 16 ECOWAS members were indebted to the world body in their contributions. Altogether, they owed \$2.16 million. Only Nigeria (\$.43 million) and Ghana (\$172,413) had paid their dues by that date.

From all indications, the financial straits of most of ECOWAS member-states would continue to handicap their ability to provide resources with which the organisation could boldly embark on a strategy of self-reliance. Even Nigeria that contributes generously to sustain the organisation owed as much as \$30 billion foreign debt by the end of 1988.

CONCLUSIONS AND RECOMMENDATIONS

Without gainsaying it, a properly functioning ECOWAS offers many advantages. Aside from the fact that it constitutes a single large market of over 150 million people, the organisation can negotiate more effectively with, and stands to obtain better terms from, other international economic organisations, including, the post-1992 EEC. Moreover, ECOWAS can mobilise resources to achieve optimum results in the sub-region, serve as an important cornerstone for a future African Common Market, reinforce the collective will of the members to strive towards political unity, formulate results-oriented economic policies in such key sectors as agriculture, industry, energy, technology, research and development, as well as commercial and financial services, that will take account of, and indeed accommodate, the social, economic, cultural and political realities of the sub-region.

Furthermore, a virile ECOWAS can devise and successfully implement innovative strategies that will further promote the goals of economic integration and self-reliance. It can, in any case, effectively foster South-South links, establish a single monetary zone with a convertible currency, and, when the need arises, challenge the problem-laden economic orthodoxes of the leading western international financial institutions like the World Bank and the IMF.

In all these areas, ECOWAS certainly deserves the encouragement and active support of its member-states. The modest gains in the provision of basic economic infrastructures like telecommunications and road networks, and the drive, albeit a slow one, towards establishing a bloc trade regime need to be improved upon and consolidated. At the same time, member-states ought to address certain factors that may militate against economic integration and self-reliance. Let us identify some of them.

First, there is a pressing need to streamline the number of economic groupings in the sub-region, particularly as many of them promote narrow group nationalism and strive to achieve the very self-reliant economic goals for which ECOWAS was set up in the first place. In any case, given the current economic difficulties facing the 16 West African countries, including a huge external debt burden, the other 35 IGOs in the sub-region can only make competing demands on the limited financial resources of ECOWAS member-states.

Second, the twin issues of non-convertible currencies and the problem of common payments system must be tackled. In this regard, the establishment of a single monetary zone with a convertible currency would, *inter alia*, facilitate trade liberalisation and further promote intra-community trade.

Third, all the major protocols, including the one on the free movement of persons, right of residence and establishment, which are bound to encourage social and economic interactions should be energetically pursued, with a view to their effective implementation. Similarly, and equally important, the member states need to promptly ratify and implement all the outstanding protocols as well as any other future decisions of the Community.

Fourth, there must be a concerted effort to break the language barrier in the sub-region, notably, through the setting up and the promotion of bilingual policies in the short-run, and trilingual policies

in the long-run. Fifth, member states ought to be more alive to their financial responsibilities to the organisation by settling their annual dues. Arguably, a cash-starved sub-regional organisation would be hard put to marshal the necessary resources to execute key projects that have been designed to promote economic integration and self-reliance, or even projects that could act as catalysts for other programmes.

Sixth, since West Africa is, essentially, a peasant and predominantly rural society, more attention needs to be paid by the member-states, as well as the ECOWAS Secretariat and the Fund, to agriculture — whether in terms of production of adequate food supplies or the growing and maintenance of cash crops — and rural development. Indeed, there ought to be a stronger emphasis, than hitherto, on rural development as an alternative to the urban-centred development policies of the past. In particular, there should be a well-coordinated sub-regional policy that would ensure that member-states extend massive credits to small-scale, labour-intensive agriculture as a way of readjusting, where applicable, export-oriented agriculture toward production for domestic consumption.

Seventh, West African states should be alert to, and, indeed, wary about, *laissez-faire* development economic policies, as recommended by the IMF and world Bank, especially the attendant socio-economic and political consequences, before being implemented.

Eight, each member state should be encouraged to develop a more positive attitude towards ECOWAS, and cultivate a deep-rooted commitment and political will to see the organisation succeed. Ninth, anti-integrationist and bureaucratic obstacles towards ECOWAS ideals should, as far as possible, be narrowed down, if not totally eliminated.

Tenth, an inward-propelled and self-reliant strategy of industrialization, with the appropriate linkage effects, as opposed to the much-tested and often discredited import-substitution industrialization process, should be evolved and put into practice by the ECOWAS member-states. The dependent nature of the economies of the sub-region is such that key industries are externally controlled, principally, by virtue of the requisite technology. While the relevant TNCs involved have been anxious to maintain their dominant positions in these local economies and, correspondingly, increase their profits, they have not been forthcoming on the crucial issue of transferring their technology. If any lesson can be learnt at all from the dire consequences of the adoption of SAP or ERP by some of the ECOWAS member-states, it is probably that in order to move faster on the industrialization front, local sourcing of raw materials for industries, as well as the ultimate development of indigenous technology are essential.

True, foreign technology, in particular the sophisticated technology of the world's leading industrialised countries, can never be excluded altogether. Even so, some bold initial efforts at mastering basic rudimentary technology on the scale of, say, India, can at least be encouraged. It may be essential, too, to go into partnership with the notable and most successful of the Third World newly industrialised countries, with a view to benefiting from their own experience and, hopefully, receiving a measure of their technology. In other words, the South-South emphasis, can, and ought to be encouraged as a conscious policy. It is in this regard that the pursuit of self-reliance in a Third World framework, makes ECOWAS an important enterprise.

Eleventh, ECOWAS needs to pursue the task of attracting external aid to the sub-region to execute key self-reliant projects. The relative success of SADCC in this regard should be quite instructive. Twelfth, to the degree that no meaningful economic integration or self-reliance can be attained in West Africa if the sub-region is bedevilled with major crises and conflicts, there is an urgent need to devise an effective framework for resolving conflicts, including border clashes. The task of conflict resolution is the more important if we bear in mind the ramifications and the negative consequences of the 1989 ethnic conflict between Senegal and Mauritania for the two states, on the one hand, and for ECOWAS on the other.

Thirteenth, the issue of illicit trade or smuggling needs to be addressed. True, most of the borders in the sub-region are porous. Even so, devising effective means to curb the mammoth smuggling that currently goes on in the sub-region would boost official trade among the member-states. All

things being equal, the impact of illicit trade would become minimal when full-scale trade liberalisation is attained in the Community. Fourteenth, the issue of the unrealistic trade drawback procedure needs to be addressed, too.

Fifteenth, ECOWAS member-states should endeavour to provide export credit guarantee and insurance scheme, as a further policy option that would facilitate trade within the Community. Such a scheme could, amongst other things, provide guarantee for loans granted to exporters by each member state's banks to finance the production of goods destined for export, and also enable the banks extend credit facilities to foreign importers. Moreover, the scheme could provide the exporters with insurance cover against default in payment by foreign importers, and to also raise funds in foreign currency from various international banks, as well as lines of credit from foreign creditors.

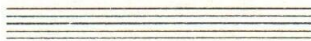
In sum, the goals that ECOWAS sets out to attain are particularly laudable at the sub-systemic level. Besides, in the larger context of the ideals of achieving the economic integration of Africa, as an important functionalist step towards the ultimate pan-African goal of continental unity, a successful and mature ECOWAS is bound to be an important cornerstone. The problems that we have highlighted in this study, as well as the policy recommendations, would, it is hoped, facilitate the organisation's task of identifying key areas that deserve, to the degree possible, serious and urgent attention.

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CHAPTER 9



Part IV

Training in the Transport Sector

The Role of Training and Research Institutions in the Transport Sector

Peter H. Chiwona

INTRODUCTION

Transportation is the process by which goods, services and people are moved between two points. It plays a multi-dimensional role in furthering the political, social and economic objectives of a nation. It facilitates the exploitation of natural resources, the raising of agricultural and industrial productivity and output; the enhancement of per capita consumption, the promotion of political cohesion; the strengthening of the country's defence, and the promotion of socially desirable locational patterns.

This underscores the fact that the existence of appropriate transport facilities and an efficient transportation system are crucial to national development. The improvement of the living standards of people is dependent on their ability to communicate and to trade and transact with ease amongst themselves and with other people. The development of agriculture for example is dependent on an economic and reliable transportation system. There is little incentive for any farmer to produce surplus food if rapid and dependable transport to both domestic and external markets is non-existent. Transport is unique in national development because it contributes to the success or failure of other sectors of the economy. Through the various modes of transportation systems, people and goods are moved to and from the centres of social and economic activities, without which many socio-economic activities would be malfunctioning. Hence the need to identify the conditions under which this catalytic process — transport — will contribute to national development.

In essence, therefore, we need to be asking questions: Does transport generate developments in other sectors of the economy; or do investments in other sectors of the economy lead to development activities in the transport sector? Transportation involves movement and the essence of movement is energy. Hence transportation is therefore inherently one of the most energy-intensive activities, heavily dependent on petroleum products. An improved transportation system implies a greater need for and use of imported petroleum products. But increased demand of petroleum products threaten, through lack of foreign exchange, the very economic growth which we seek.

This paper argues that transport has two facets: facilities and systems. Facilities can be broken into two parts i.e. those which make it possible for transport to be undertaken: in other words, the forms of conducting transport. These can be labelled conductors — e.g. the ship, car, bus, airplane, conveyer, train, boat, bicycle, wagon, cart etc. Secondly there is the path along which transport is conducted e.g. airport, ocean, river, canal, ports, rail, roads etc. Systems on the other hand refer to a network of transportation modes both within and outside the country. Such a network involves the various modes of transportation system such as air, water, road and rail transport as developed to serve both domestic/national needs and to bring together other countries through the various modes of the systems network.

For construction, establishment, operation and management of facilities, it is necessary to have drivers (of locomotives and automobiles), pilots, captains, builders and maintenance crews of such facilities.

Given therefore that both facilities and systems need human beings, it may be necessary to ask as to what type of skills are needed to construct, operate and manage the facilities; to plan, operate and manage the systems in the transportation sector. Once these skills and competencies have been identified, a further question needs to be asked: Can these skills be effectively developed through formal training, and if they cannot, what training programmes should be undertaken to ensure that the transport sector does not suffer?

In an effort to answer these questions, the paper focuses attention on transport issues in the development context of the African region as regards the building, operation and management of both facilities and systems; the contribution of training in solving transport problems; and on the role of research and research institutions in the development of the transport sector. These issues will be the subject of discussion in the next three sections of this paper.

TRANSPORT IN THE DEVELOPMENT CONTEXT OF AFRICA

Transport problems are both natural and man-made. Natural transport problems are those caused by African topography, mountainous terrain, excessive heat, deserts, forests, heavy rains and storms, innavigable rivers etc. All add to the high costs of providing regular and efficient transport to the various communities.

The existence of mountain ranges and lakes has led to the construction of circuitous and winding roads and rail tracks, whose maintenance is very costly. Heavy rains have washed away bridges and roads thereby making distribution of goods or services difficult during the rainy season. Construction of roads and rail tracks across the deserts and equatorial forests has been extremely difficult and expensive. And the navigation of African rivers with so many cataracts and falls; and in some cases, irregular water level has produced irregular transportation system.

To these natural obstacles, man in Africa has added his own creations: the colonialists built railway systems with different gauges and often without proper connections either by road or water transport. The transport network was built for export markets and not to serve internal transport needs. Thus vast hinterlands were left inaccessible. Worse still the rail system operates with old locomotives using tracks that are in poor conditions. The roads are usually not part of an interconnected system. They are often left without proper and adequate maintenance.

Water transport is very limited because African rivers are subject to silting; and to seasonal interruptions according to the water level. Oceans, seas and lakes are not fully utilized because of the absence of navigation aids. Shipping is often delayed due to congested ports, dilatory customs procedures, lack of berths and cargo handling equipment; inadequate road and rail connections and inefficient poor management.

Many African countries cannot afford to purchase and maintain passenger or freight aircrafts. They need facilities for maintenance, a maintenance and service crew, air traffic controllers and a well trained and disciplined staff to operate the aircrafts.

In all these modes (road, air, and rail) even if capital and infrastructural facilities were there, often there is lack of qualified and trained personnel (both in the public and private sectors) to build, operate, manage and maintain transport facilities. This raises organizational issues which are further complicated by the fact that a transportation system can either be public or private. In either case, five main characteristics may according to Nash (1982) be identified:

- (a) The size and distribution of transporters;
- (b) Ownership and control of transportation system;
- (c) The types of traffic being handled;
- (d) The mode/modes of transport being operated; and
- (e) The geographical area covered by the particular transportation system.

One of the major provisions of transport is the one-man one-vehicle operation common in road freight, truck and taxi business, and the provision of mini-bus services and other services such as the "matatu" motor service in Kenya. These operations are usually privately owned, restricted to road transport, limited in type of traffic and area covered. Often, it deals directly with the customer, and the same individual takes full responsibility for all decisions with respect to pricing, scheduling, marketing, engineering and training. Perhaps it is true to say that little contribution can be made by training and research to the one-man one-vehicle operation which is often confined to small rural and urban areas.

The organization of the large firms (public or private) operating various transport modes depends on the range of product and markets in which the firm operates; and on the degree of interdependence in terms of technology used and complementarity of services provided. Like the one-man operations, decisions in large firms have to be made about what prices to charge, what services to offer and how to procure them. But the quality of decisions is dependent on who takes such decisions and on the basis of what information.

Whereas private modes of transportation can be purely commercial, public transport operation may not be given a purely commercial dimension because of: (a) the social need for some level of transport service in rural and urban areas especially in the provision of national bus and railway services which are public owned and subject to subsidy; (b) the existence of economies of scale and monopolistic practices; and (c) externalities produced by both public and private transport e.g. traffic accidents and delays caused by and to other vehicles.

There has been limited potential for economic growth not so much for lack of finance and capital, as for deficiencies in skills and trained personnel. Training has not solved the development problems which are not amenable to training solution (World Bank 1986).

The next section therefore examines those problems in the transport sector which are amenable to training solution, and those which are not. In this way, we can gauge the role of training in the transport sector now and in the future in better perspective.

THE CONTRIBUTION OF TRAINING IN SOLVING TRANSPORT PROBLEMS

Reference has been made of transportation as an essential ingredient of almost everything man does to satisfy himself with the necessities of life. It was emphasized that transport is an essential catalyst to the realization of such objectives as the provision of food, shelter, health services, education and employment. Transport is a major ingredient in the process of production and distribution.

In fact, transport in any society, serves a variety of conflicting and incommensurable objectives, and as such the selection of a national transportation system implies a choice among possible goals. It is in this regard that training has played an important role in the transport sector. For instance, transport economists have been able to contribute to policy decisions by offering a range of feasible transportation plans together with prognoses of some of the foreseeable social implications. However, provision of a transport system will not necessarily imply greater industrial output. There must be other conditions within the economy viz:

- (a) The quality of a nation's administrative structure and social order; usually a reflection of its education and training;
- (b) The character and drive of a nation's educational system;
- (c) The nature of the legal and property relationships; and
- (d) All other dimensions of a country's propensity to develop.

These qualities are crucial if any amount of transport investment is to bear fruit. In this regard the importance of training cannot be over-emphasized. Training reduces obsolescence among people and organizations in the face of relentless technological innovation. Training prepares an individual for certain lines of action which are delineated by technology and by organization in which the individual works. It helps the individual improve his performance on the job by equipping him with the necessary skills through practice and experience.

Most of the "natural" transport problems analysed in part II of this paper are not subject to training solutions. There is very little that training can do to stop land slides blocking mountainous roads; or heavy rains sweeping away some roads. Even some of the man-made problems such as different rail gauges and old locomotives are not amenable to training solutions. On the other hand, training has made an important contribution in road and rail maintenance, servicing of vehicles, pricing of goods and services and investment decisions in transport. In fact, if there has been a break through in the development of transportation systems, it has been a product of a more effective application of science and technology through training and research. Africa has benefitted from the accumulated knowledge of the transport revolution and innovations in road and rail construction and maintenance, air traffic control, etc.

In much of rural Africa, transport is characterized by the bullock cart, the camel, the donkey, mule, bicycle, canoe, wheel-barrow and bags on human heads and backs. Training at this level, is

on-the-job and is based on observation and practice. Maintenance of the facilities is based on practical experience. Indeed the skills and competencies needed to build, operate and manage rural transport facilities and systems cannot be effectively developed through formal education. These skills are mostly developed through informal or non-formal approaches.

While the rural sector can get the skills required through observation and on the job training, the modern African sector requires both on-the-job, pre-service and in-service training, the last two are crucial for the construction, development, operation and management of facilities and systems in the modern sector. There is need to have qualified engineers, builders, supervisors and managers for the construction and management of roads, rail, ports, airports etc. Qualified planners, environmentalists and managers are very much needed for the planning and management of transport systems. The management and operation of facilities like airports and ports require trained personnel.

Although training has made substantial contribution to urban and rural transport some factors have impeded progress in the effective utilization of facilities and systems. These include inability to identify, assimilate and digest available information to make better decisions. While information may be available, decisions taken may not be based on what information is before us. Secondly introduction of new transportation mode involves high overhead costs in terms of the construction of new infrastructure, service facilities, staff and other costs. Thirdly inability to assess at the planning stage the magnitude of overhead costs of introducing new transport modes. Fourthly, the new modes of transport are designed for greater degree of automation and sophistication than may be justified, leading to financial losses, etc.

Perhaps a most significant development has been the use of computer in management information and planning systems in transport, in the preparation of flight, train and shipping timetables, crew schedules and the pricing of goods and services. Computer training is therefore vital and absolutely necessary for the efficient management of the transport sector. Some decisions have to be made regarding the range of alternative technologies. This is however hampered by lack of reliable information and data on transport costs. There is need to undertake research focusing on new transport techniques for meeting transport requirements in a more effective manner through scientific innovations in and outside the transport field.

THE ROLE OF TRANSPORT RESEARCH

Good transport facilities and services are key elements in socio-economic development. However, if transport is to play an effective role in fostering the general progress, it will be necessary to solve the many complex problems prevalent in the sector. But to solve these problems we need not only to assess and balance the technical, social, economic and environmental aspects of transport to ensure the efficient movement of goods and people, but to have information and data on which to base our decisions in solving the problems. Such information can only be provided by well organized and conducted research.

Transport research is the application of the scientific process of enquiry, analysis, and prediction to a wide range of transport problems concerned with the planning, design, construction or use of transport infrastructure, services and facilities; or the use of transport equipment. Transport research facilitates transport planning decisions, engineering practices and operational procedures. It has two key roles:

- (a) It contributes greatly to the identification and specifications of the emerging and changing transport requirements, or to the wishes of the community; and
- (b) It facilitates the finding of transport solutions.

Transport research is applied research directed at finding an answer to a given problem. During the last two decades, transport research done outside Africa but for developing countries focused on traditional technical problems of the environmental aspects i.e. on their interaction with engineering features.

Early research in transportation was concerned with vehicle design and performance and this was later supplemented by civil engineering investigations concerned with the design and construction of facilities such as roads, ports and airfields. This research was followed by engineering and operational research to provide for improved methods of managing and controlling traffic and of raising safety standards.

With the increasing number of private cars and commercial vehicles, there has been serious traffic congestion and severe pollution; the increase in air traffic produced problems for air traffic controllers and airport managers; and the increase in large ocean liners increased the risk of marine collision with serious environmental consequences.

The types of transport research undertaken over the last decade provides an indication of the role of research in the transport sector viz:

- (a) Transport research has played an important role in trying to find solutions to problems concerned with transport systems with the aim of assisting all those concerned with the planning, design and operation of transport. This is the policy-oriented research concerned with policy decision or policy implementation. This type of research has provided the transport sector with information of a "soft ware" nature to give guidance, rather than specific instruction e.g. the techno-economic assessments; the policy sensitive forecasting of transport demand; and attempts to evaluate social factors in the transport planning process. This type of research has attempted to answer the following questions:
 - (i) What systems and services will effectively meet defined social and economic needs?
and
 - (ii) How can such systems and services be efficiently operated?
- (b) A second type of research is that concerned with traffic and the safety and convenient methods of moving people and goods. This type of research has a strong component of operational and behavioural research, and through it safety measures in the transport sector have been developed and initiated;
- (c) A third type of research is project-oriented research which has a much greater hardware content concerned with how to do something with specific technological or methodological innovation; it aims at providing information with much more instructional content or emphasis. In practice this type of research has led to improved design or operational procedures. For instance, project-oriented research has been conducted on new materials, the use of sugar or cassava as substitutes to petroleum products; use of ethanol in motor vehicles; construction processes traffic engineering systems, and vehicle performance. Policy-oriented research is a small component of the transport research programmes. Project-oriented research will continue to be the dominant user of resources made available for African research.

Some of the research activities described above have not been taking place in Africa. However research completed in Europe and North America has been effectively used in Africa especially as regards to road transport research such as:

- (a) Investment models: which have focused on road standards both structurally and geometrically. This model has helped to determine the cost of road construction against other competing demands on public funds;
- (b) Road research has also helped in axle-load surveys for the measurement of traffic flows and the effect of overloading vehicles on road maintenance and repairs. Experience has shown that in developing countries, Africa in particular, little account has been taken of the structural strength of roads with the growing weight of vehicles; and that there has been little enforcement of axleloads to the pavement specification because of the lack of data on which to base decisions about the effects of over-loading on roads;
- (c) Research has also been conducted on traffic-related pavement deterioration resulting into

road deformation, pot-holes and ravel. A lot of research not necessarily on, but relevant to Africa, has been done on road conditions, road maintenance and how to make the best use of roads; and

- (d) Research undertaken in Europe and North America on strengthening road pavements with bituminous outlays of suitable composition and correct thickness has proved very useful in strengthening roads in Africa. Secondly with the rise in the price of road bitumen and the need for economy, it has been possible to use research findings and results for recycling of bituminous surfacing. This has become possible through sophisticated processes of mixing used bitumen with new ones either in the same place or elsewhere in shoulders or as a base for secured way roads. Through research, it seems possible to adapt the principles of recycling bitumen in construction but using less sophisticated and expensive machines, or hand-operated machines.

Rural research projects have helped in analyzing existing transport problems and short-term transport needs; and secondly helped to identify appropriate rural transport systems beneficial to rural communities. These research undertakings are conducted in research institutions, whose role we now examine.

THE ROLE OF RESEARCH INSTITUTIONS IN THE TRANSPORT SECTOR

Transport problems have been the subject of serious research studies. What is not clear, is the extent to which African countries have used such research findings to take decisions on transport investment. Partly because African countries have wanted quick solutions to problems, research has not been given its rightful place, which has affected the establishment of research institutions.

Should developing countries establish research institutions to do the same thing in different countries; encourage areas of specialization, or to join hands in transport research to cater for both national and international needs? Africa has very few transport research institutions. Much of the research work may be undertaken by the Ministry of Works in some countries. Ghana for instance established in the 1960s a Building and Road Research Institute to deal with materials for building and road construction; feasibility of feeder road construction for agricultural development and for road safety. The focus of these few institutions has been traffic engineering and road safety. We could note that while transport planners are experts in the preparation of land use plans and town layouts, they lack knowledge of basic traffic management. Research institutions should therefore offer basic training in civil engineering, traffic problems; basic data collection and analysis and in transport planning procedures. Although little use is made of the research results from African institutions, research including the use of experimental facilities, has played a major role in the development of technical regulations for the various modes of transport in Africa.

Transport research for developing countries is undertaken by the following three types of research institutions (Yerrell 1980).

- (a) The research carried out by African institutions themselves. Many such institutions or centres have developed practical links with other research institutions/centres to investigate transport problems. The road transport investment model was developed as a co-operative research project by the United Kingdom Transport and Road Research Laboratory (TRRL), the World and the Kenyan Research Centre of the Ministry of Works. The results of the "Model" have been tried in African countries, Brazil and the Caribbean;
- (b) Research carried out by specialist agencies of the developed countries specifically for third world conditions particularly for road development. Funds are earmarked for transport research in collaboration with national African institutions. The World Bank, ILO, OECD and the TRRL have made significant contributions in this regard;
- (c) Research undertaken by institutions in industrialized countries with a focus on transport problems common to both developed and developing countries. The research findings are then disseminated in developing countries with similar problems.

The need for co-operation and collaboration among and between institutions in developed and developing countries needs no emphasis. A co-operative approach to transport research has shown that transfer of techniques, methods and information between countries at different levels of economic development and with different research resources is possible and effective. Third World countries therefore should be encouraged to establish indigenous transport research centres/institutions for maintaining a link between indigenous research centres and similar institutions in other developing and developed countries. The extent to which this may happen may depend on the resources put aside for research; which is itself dependent on national priorities and importance attached to research by the state. This may depend on the usefulness of the research effort to Government, the parastatals, etc. As the former Tanzanian President Julius Nyerere put it:

“Properly directed research can ensure that our money is properly spent, that our plans are really being carried out, and that we get the maximum benefit from the efforts we make and the policies we pursue” (cited in Mwase, 1986, pp.139–140).

However, the economic difficulties facing most African countries are such that Dr. Nyerere would have to go further than he did, to justify budgetary allocations for research work in the 1980s. As Mwase (1986, p.145) has argued, even assuming that the financial resources — particularly foreign exchange — are available, the choices which Governments have to make are extremely difficult. Most governments are unable to provide any funding beyond the recurrent costs for research institutions. Hence the need for outside assistance in this regard.

CONCLUSION

In this paper, it has been argued that transportation systems play a multi-dimensional role in the pursuit of development objectives. Transport enables goods and people to be moved between and within production and consumption centres. It has been emphasized that transport creates internal economies for many sectors of the economy, thereby fostering external economies for all sectors. In this regard it is a necessary but not a sufficient condition for economic development.

In spite of this, the transport sector is besieged with both natural and man-made problems which have continued to contribute to the widening gap between the immobile and mobile sections of the community. Although training and research play a major role in the solution of some of these problems, it is not a panacea to all problems. Research findings are essentially useful to the extent that they aid decision-making. Unless the findings by research institutions are utilized for taking decisions by policy makers, the possibility of investing uneconomically in the transport sector could be very high.

On the other hand, training is often sought as one of the main approaches to solving development problems. However not many problems can be solved by training especially as regards to rural transport problems at subsistence level. Here transport improvement is often tackled through self-help projects which often give the community a stake in the facilities which they have provided for themselves. However, training and experience gained while engaged in building or improving a road, make valuable contribution to the development of other village projects and activities such as irrigation schemes or the provision of rural clinics. Indeed, self-help road projects can be a starting point for the development of larger and more complicated village schemes; pooling together limited local resources for common use. Such training can also help to cushion and overcome political, social and other problems.

We could conclude by saying that rural transport can be improved through the application of self-help schemes. In this regard, certain basic areas for research by prospective and existing research institutions could be identified viz: research into rural needs; the use of appropriate transport technology; on community self-help; on development opportunities etc. Most of these can help analyze existing transport problems and needs.

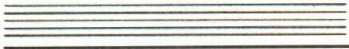
As regards the modern and industrial sector transport research institutions could concentrate research activities on transport investment and pricing; design problems; policy problems; measuring

economic costs and benefits; financing transport investments; transport technology; use and preservation of raw materials; transport management etc. With the use of such research, both the economic and uneconomic objectives of transportation can be given proper consideration.

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CHAPTER 10



Institutionalization of a Transport Management Training Programme: The Ghanaian Experience

Theo B. Wereko

INTRODUCTION

Transportation as a function for the movement of goods, materials and personnel involved in socio-economic activities and is one of those national needs whose importance can hardly be overstated. It has been described as indispensable to economic growth and as a necessary concomitant of the exchange economy, so that in its absence visions of stagnant economic activity and life restricted to hand to mouth subsistence levels do loom large. The world of increasing specialization of output and generation of surpluses of exchange on the basis of comparative advantage seems increasingly predicated on the capability to move resources and goods from one place to another by air, both internally and internationally, by inland waterway, coastal and ocean shipping, by pipeline, port and by rail or road services (World Bank 1972). A positive correlation is often inferred between the demand and provision of transport services and the pace and locational pattern of development.

The view of this chapter is that if in fact transportation is recognized to be so important to economic and social development, then not only should Governments' priorities accord it such a status and investments in it be as carefully planned, but among other things, those entrusted with the management of this heavily invested sector should be capable of effective performance and be as systematically trained as the managers and administrators in the other key sectors of the economy. It is only when that is done that the expected contributions of the sector to socio-economic development can materialize.

The chapter outlines some of the main strategic issues and impact of investments in the transport sector on national development; the nature of policy and investments in transportation in Ghana; the particular and general problems that may be identified in the transport sector are outlined. The transport sector in Ghana is then identified and the size of its operations and indications of its management training needs are outlined; brief survey of the management training capability in Ghana is presented before the Ghana Institute of Management and Public Administration's (GIMPA) role in management training and specifically in the training of transport sector managers is identified. Thereafter the justification for establishing a regular Transport Management Course and the course content are outlined, and the expected benefits of an institutionalized transport management programme are discussed.

TRANSPORT IN NATIONAL DEVELOPMENT

The USA owed its rapid development to the extraordinary development and use of transport facilities in the economy. By as early as the 1940s, it owned one third of the railroad mileage, nearly half the merchant and more than 70 per cent of the world's motor vehicles. In addition thousands of miles of inland water routes, pipelines and airways provided passenger and cargo services (Dearing and Own 1949). Such is the enormity of the volume of goods and people transported from one place to another in developed countries that even though the contribution of transport to the domestic production effort is usually understated by standard national accounting methods, the sector typically accounts for 10 per cent to 15 per cent of Gross Domestic Product (GDP) (World Bank 1972). By comparison developing countries show considerable variations in the contribution of transport to GDP, because the variables which determine the cost and volume of transport are fewer and individually more important.

One aim of investment in the transportation sector is to reduce the costs of production by lowering those of transport, thus facilitating higher levels of production and consumption. Investigations in developed countries suggest that transportation costs are not a significant proportion of the final price of most manufactured and some mining products, as the transport systems are more efficient. By contrast, in developing countries, a larger proportion of the economically important movements are likely to be high-bulk, low-value agricultural and mineral products. Because of that transport costs on the feeder roads, on the trunk roads or railways to the

coast, through the port and on the ship to foreign markets can account for as much as 50 per cent of the receipts from these commodities (World Bank 1972). Maize in Kenya and Zimbabwe, iron ore in Brazil; bauxite, manganese ore and timber in Ghana are cases in point.

The question has however remained unanswered as to what general guidelines might be used to determine the share of total investment that should go into transport investment at any stage of development. Even though a rough guide of 5 per cent of GDP per annum is often prescribed as a very rough indicator of the magnitude of total transport investment (World Bank 1972), that figure may not be universally endorsed. In the initial stages of a country's development process for example, the amount of investment needed to equip such a country with the facilities it needs can be enormous. Cases in point are Nigeria where the 1962–1968 development plan allocated 41 per cent of total outlay to the provision of power, transport and communications (Federation of Nigeria, 1962, p.41). India in 1961–1964 invested 30 per cent of government expenditure in those three infrastructure items. These huge investments however do take time to produce noticeable economic results as the developing economy make full use of the large new facilities all at once (Bryce 1965).

Policy in regard to infrastructure development is a vital part of the overall strategy for accelerating economic growth. Policy decisions have to consider the need to plan and build these services well before they are needed, they have to exist before any investors will be prepared to establish factories, mines and other productive enterprises. In view of the fact that vast amounts of scarce capital need to be invested in the sector, planning must be realistic. And yet planning of infrastructure investments to meet needs and avoid waste has been one of the most difficult tasks faced by young planning machineries in developing countries.

Apart from the primary reason for providing transportation as an essential service to a country, policy makers need to consider other benefits too. Investment of huge sums in building railways, dams, highways etc. can lead to economic expansion. Jobs are created and the increased purchasing power can also create new markets for manufactured goods. The possibility of the multiplier effect which is expansionary and inflationary problems need to be watched. Other benefits from investments in transportation include the mobilization of idle labour, the training of a new industrial labour force whose product creates new wealth in the form of capital goods — vehicles, railways stock, ships and aircraft (Bryce 1965).

But most of these benefits are indirect and are dependent on the market, the policies and conditions in the transport sector and the economy as a whole which in turn affect it.

It does seem as if the safest strategy of investment in transportation is to wait until increases in production or growth in the economy makes the need for infrastructural development inevitable productive schemes clearly the infrastructure demanded. In view of the scarcity of investment funds this may be the best investment strategy to follow. But this approach assumes a certain level of development already. In very poor countries now embarking on development the infrastructure must be there before such clear indications of demand can be manifested. In addition to transportation other resources and investments required to exploit them must also be in place. The complexities and currents and cross currents in the development process obviously cannot be reduced to a single cause and effect relationship and policy guidelines on the sector must be comprehensively thought out before implementation. Account must also be taken of the complexity of modes of transportation, the kind of ownership and how policy directives will affect each type of ownership.

THE TRANSPORT SECTOR IN GHANA—COMPOSITION

In Ghana, as in other countries transportation needs are met by one or a combination of these modes: aviation, inland waterway, coastal and ocean shipping, pipeline, port, rail and/or road services. Other traditional forms of transportation using human and animal power may also be found co-existing with the others in many parts of the country. The size of the private sector is significant especially with regard to means of transport used on the roads and waterways in the form of cars, trucks, motorcycles, bicycles, boats as well as animal (carts) and human traffic. But state owned

transport organizations still predominate the transport scene. The following list of enterprises in the transport sector shows that all the major ones are fully owned by Government under the State Enterprises Commission Act 433 and covers almost all modes of transportation in the country:

(a) *State owned transport enterprises*

1. Ghana Railways Corporation;
2. Black Star Line/Stage Shipping Corporation;
3. Volta Lake Transport System of the V.B.A.;
4. Ghana Airways Corporation;
5. State Transport Corporation;
6. Omnibus Services Authority;
7. City Express Services;
8. Ghana Highways Authority.

(b) *Privately owned state enterprises*

Privately owned transport enterprises, may either belong to the Ghana Private Road Transport Union (GPRTU) of the TUC, or operate on their own. Thousands of individual vehicle owners complement the state owned organizations in (a) above.

TRANSPORTATION INVESTMENT IN GHANA

The importance of transportation to Ghana's development was summed up by Governor Guggisberg in 1920:

"For progress we must have education, for education of the right type we must have a bigger revenue. To get bigger revenue we must have bigger trade and to get bigger trade we must have more agriculture and far better systems of transportation than at present exist (Hymer 1969 and 76)."

This view of transportation as the bottom line of Ghana's (then Gold Coast) development policy is what led Guggisberg to proceed to invest a massive 71 per cent of the total outlay for the 1920–1930 Ten Year Plan period, on railways, harbours and roads. The investment of 49 per cent of total planned expenditures on Communications and Works by the first post-independence Consolidated Development Plan 1958–1959 conformed to both the colonial perspective and to the trend in other developing countries where such huge initial investments in the sector is seen as necessary.

Throughout the 1950s the yearly expenditure on transport and communications averaged 10 per cent of total expenditure. By contrast the earnings from transport over the period never rose to 1 per cent of total ordinary revenue, in fact the average was 0.5 of 1 per cent (Seven Year Plan 1964, p.252). This demonstrated the tendency for developing countries at early stages of development to invest heavily in the sector without a corresponding return from it.

The rate of patronage and development of the various modes of transportation fluctuated over the 1960s. Freight handled by Ghana Railways tended to reflect the size of Ghana's exports, most of which were bulk items like manganese, bauxite, cocoa and timber logs. Together these accounted for about 85 per cent of the railway traffic freight of 1961, 1965 and 1970 (Economic Survey 1965, 1972–1974). Other media like shipping, harbours, roads and airways also made varying impacts on the national economy. The 1961–1968 saw the least investment in the transport sector (see Table 1). Thus by the late 1960s the country's transportation system had deteriorated to the point where its ability to move export commodities and perform its other functions was questioned (Two Year Plan 1968, p.62).

The situation improved markedly when by the Five Year Development Plan period, 1975–1980, the transport and communications sector was allocated 22 per cent out of the total planned investment. As Table 1 shows, planned expenditure for the sector over 1986–1988 is about 40 per

cent of total planned expenditure. Between 1970 and 1980 the share of the sector in GDP was 4.7 per cent per annum. Measured against the backdrop of the World Bank's suggestion of 5 per cent of GDP per annum as an appreciable sectoral share, Ghana's performance, though satisfactory, could not be maintained over the long term.

The estimates and projected GDP by industrial origin for 1980–1986 showed that the percentage share of transport and communications fell below the 1970–1980 estimates. The contribution of the sector averaged 3.6 per cent for the period 1980–1986 (Government of Ghana, 1984). The current huge investments in the sector are reminiscent of those made in the pre- and immediate post-independence era when such investments were deemed necessary to establish a new and comprehensive infrastructure. Funded from external sources under a special efficiency—increasing expenditure programme, the present investments mark a new Government effort to inject “once and for all” monies into specified sectors and hopefully bail those sectors out of their perennial financial problems (Government of Ghana, Progress of the ERP).

The results of these investment to date may be seen in the Stock Situation in some of the areas in the Transport Sector in Ghana in Appendix II. The roads network has increased from 32,175 kilometres in 1969 to over 40,000 in 1983, with first class roads accounting for about a quarter of the total. The population of vehicles of all description on Ghana roads was 64,916 in 1983. These consisted of 42,828 cars, 11,145 lorries, 9,773 buses, 1,167 special purpose vehicles and 3 other vehicle types. Railway track length totalled 1,300 kilometres in 1986. Ghana has four airplanes, two for international flights and two for domestic routes.

PROBLEMS OF THE TRANSPORT SECTOR IN GHANA

Ghana entered the 1980s with serious transport problems, summarized thus:

When the present Government took over in 1981 the transport sector was in complete disarray. More than half the serviceable vehicles were off the road for lack of tyres, batteries or fast moving spare parts. The railways were in their worst condition since the system was established. The ports, Black Star Line, Ghana Airways were all limping along with ineffective management teams..... (Ghana Government Economic Recovery Programme 1984, p.12).

Table 1. Ghana planned investments in transport and communications (1920–1986)

	(1)	(2 & 3)	(4)	(5)	(6)	(7)
	Ten year plan	First Development Plan 1951 and Consolidated Plan	Seven Year Development Plan	Five Year Plan	Economic Recovery Programme	Progress of the Economic Recovery Programme
	1920–30	1951–59	1963–70	1975–80	1984–86	1986–88
Transport & Communications	71.4%	35.3%	9.3%	21.6%	23.6%	39.9%

- Sources: (1) Gold Coast: The Ten Year Plan 1920–1930 (G. Guggisberg).
 (2) Gold Coast: First Development Plan 1951–1957.
 (3) Government of Ghana: Consolidation Development Plan 1957–1959, Seven Year Plan p.27.
 (4) Government of Ghana: Seven Year Plan for National Reconstruction and Development 1963–1970 p.27.
 (5) Government of Ghana: Five Year Development Plan 1975–1980 Part I, p.III.
 (6) Government of Ghana: Economic Recovery Programme 1984–1986 p.17.
 (7) Government of Ghana: Progress of the ERP, 1986–1988 p.38.

Because of this poor state of the sector, the Economic Recovery Programme allocated two fifths of the import programme to transportation and petroleum sectors. Foreign assistance came in the form of four World Bank projects in 1983–1985 and African Development Bank projects 1984–1985 to improve the transport infrastructure. Specific areas to benefit from those sources were spare parts for the trucking fleet, both private and public and for the State Transport Corporation; the railways, which are the backbone of the country's transport infrastructure, the ports and the Posts and Telecommunications (Ghana Government 1984, p.13).

In practice while physical infrastructural problems can often be solved by the injection of such large doses of capital, both domestic and foreign, there are crippling sectoral management problems that cannot be solved so directly. Hence the need for training of the sector's management and other staff in specified areas of operation. In all job situation it is always necessary to diagnose performance discrepancies in terms of causes or revelations that may be due to shortage of capital/maintenance or other physical inputs to production or whether it is due to the absence of, or need for training. At various levels training has been identified as a solution to some of the transport sector problems. To take but three examples:

- (a) The management of the various organizations in the sector had been training management staff on the job and in institutions in Ghana, like GIMPA, MDPI, School of Administration and Overseas Training Institutions;
- (b) The Government in the Economic Recovery Programme of 1984 does identify the need for training in the sector, (p.12); and
- (c) The state owned enterprises reform programme with World Bank assistance— sees the need for training at most levels of the managements in the state enterprises sector including the transport organizations.

Even without a formal survey one can determine what training needs there might be, from the size, complexity and present performance levels of the transport enterprises.

PROBLEMS OF THE TRANSPORT SECTOR IN A DEVELOPING ECONOMY LIKE GHANA

General national problems

- (a) Inadequate national policy direction on transport issues;
- (b) Lack of long term planning to enable investors make long-term investments;
- (c) Inadequate stability in Government to enable continuity of policy direction and stable investments;
- (d) Diffused centres of decision making especially in the state enterprises sector which hamper concerted and consistent decisions to be made on national transportation issues;
- (e) Inadequate expertise in the Ministry of Transport in the specialized areas of transportation to make for sound expert guidance in policy decisions and implementation;
- (f) Inadequate capital availability for investment in this capital-intensive sector;
- (g) Inadequate facilities for transport education and management training in the national universities and institutes; and
- (h) Problems of scarce foreign exchange in a sector which is almost predominantly a foreign exchange consumer, as most developing countries are dependent on imports of transport equipment, etc.

Organizational and related problems are as follows:

- (a) State ownership of most transport organizations limits attraction of well qualified managers and entrepreneurs, due to inadequate remuneration, inadequate materials to work with, lack of opportunities for career development, lack of recognition etc.;

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- (b) Unclear job descriptions for transport managers and lack of consistent policy guidance create management/leadership problems;
 - (c) Poor state of repair of national road and rail networks resulting in their rapid deterioration and in turn excessive wear and tear of vehicles, etc. make substantive demands on part replacement;
 - (d) Problems of capital to buy new stock or repair existing old vehicles, frequent breakdown, inability to maintain schedules, unreliability in meeting delivery times, hazards to drivers and other road users; and
 - (e) Inadequate vehicles hold back manufacturing schedules, make for poor delivery schedules, loss in revenue both to the Government and individual transporters, etc.

Individual level problems are as follows:

- (a) Inadequate and lack of specialized training pose problems of competent management of the transport sector;
- (b) Poor personal attitudes to work, for a number of social and economic reasons, make for low productivity of transport sector employees, especially in the state-owned sector;
- (c) Lack of tools and parts to work with lead to employee frustrations and low output; and
- (d) Inadequate technical/mechanical training facilities in the National Vocational Training Institute and other Technical Institutes make for inadequately trained mechanics, technicians, electricians, etc. with adverse consequences to the transport sector.

MANAGEMENT TRAINING CAPABILITY IN GHANA

There are three main management training institutions in Ghana: the University of Ghana School of Administration, Management Development and Productivity Institute and the Ghana Institute of Management and Public Administration. In addition there are various on-the-job management training activities in many banking and other organizations, private consulting and management training establishments as well as a flourishing number of professional associations. These latter activities in the management training field employ periodic and yearly seminars, workshops, conferences, public lectures and publications, to improve the management capabilities of their clientele and members.

The following three training institutions are now discussed in greater detail:

- (a) *The School of Administration* was originally established in 1960 as the college of Administration to provide the various training programmes required to meet the need for administrative and accounting personnel in the rapidly expanding economy of Ghana. The school has powers to offer regular courses leading to degrees, diplomas, and certificates of the University of Ghana. It also has a mandate to organize courses and seminars from time to time in the field of Business and Administration. The school offers four Bachelors (B.Sc.) courses, two Masters courses, as well as Ph.D. courses; two diploma courses and a graduate diploma in accounting. It also offers Secretarial courses in shorthand and typing. These essentially residential courses last for two-three years (University of Ghana 1976–1978);
- (b) The Management Development and Productivity Institute was established in 1964 as the National Productivity Centre and part of the Planning Commission, Ministry of Economic Planning. Starting out as a management consulting organ to improve productivity in public sector organizations it expanded and diversified quickly. In 1967 it was re-established as the Management Development and Productivity Institute (MDPI). Its objectives are:
 - (i) To improve and develop the standard of management in all aspects and at all levels;
 - (ii) To introduce suitable management practices and techniques; and
 - (iii) To promote increased efficiency and productivity in industry, commerce and other related fields.

To achieve these objectives the Institute conducts, Management Training, Consultancy and Research, Productivity Measurement and Promotion and Small-scale Industry Advisory Services. The MDPI specializes in non-residential short duration courses (MDPI Management Training Programme 1983). During the 25 years of its existence (1961–1986) there are not many organizations both public, private, which have not attended courses, requested research and consultancy services, attended talks and symposia, or in one way or the other been associated with GIMPA.

ATTENDANCE OF TRANSPORT SECTOR ORGANIZATIONS ON GIMPA COURSES

A number of sectors including transport and communications, agriculture, health, defence, industry, education and housing have benefitted from GIMPA courses. In 1985/86 alone three organizations including transport ones benefitted from GIMPA's training programme. As Table 1 indicates, over the past 16 years the transport sector alone has sponsored 115 participants for six GIMPA courses.

The four courses with the highest attendance rates, the Senior Management Courses, the Diploma and Certificate in Public Administration and the Personnel Management Course are all non technical courses. They however embody knowledge deemed important for senior to top executives. The Project and Budgeting Courses have not attracted large numbers of participants from the sector perhaps because they are rather specialized. Furthermore those courses are beamed more at operating and implementing managers than the more senior managers and top executives. This then raises the question of what will be the most appropriate content for a course in Transport Management.

THE PROPOSED TRANSPORT MANAGEMENT COURSE AT GIMPA

To date, there is no Transport Management Course *per se* in any institution in Ghana. The need for such training is obvious at both the lower and middle levels of management in the transport sector where most of the decisions with regard to traffic scheduling and flow maintenance schedules, pavement design and drainage, road design parameters, energy consumption and freight transport operations, are made. Knowledge in these areas should form the basis for training more senior transport managers and heads of transport organizations in management.

(a) *Target group for transport management course*

Managers, deputy managers/administrators and middle-level managers, engineers (mechanical, electrical and civil), town planners, architects, social scientists and all those holding responsible management positions in the transport sector.

(b) *Course content*

- (i) Principles of management and organization structuring;
- (ii) National development objectives and priorities;
- (iii) Transport legislation and policies in developing countries;
- (iv) Traffic and environmental considerations;
- (v) Traffic engineering;
- (vi) Transportation and traffic planning;
- (vii) Construction management; and
- (viii) Personnel management and human relations.

GIMPA already has the infrastructure to be able to accommodate this and a few more courses, in the regular programme of the institute. GIMPA has a faculty strength of 24 whose work is occasionally supplemented by a group of part-time, seasonal lecturers.

SOME BENEFITS OF A LOCALLY INSTITUTIONALIZED TRANSPORT MANAGEMENT COURSE AT GIMPA

Many benefits from an institutionalized transport management course at GIMPA can be listed:

- (a) Considerable savings will accrue to the Ghana Government by training transport managers at GIMPA instead of training them overseas;
- (b) Consultancy requests may flow directly from course presented locally. Considerable consultancy savings using local instead of external consultants could be realized;
- (c) Course will be readily and conveniently available to transport managers when needed; saving overseas transportation costs and time;
- (d) Enterprises in the transport sector can design schemes of service and career development plans of their managers around the course and be assured it will always be offered;
- (e) Local trainers on the course can consolidate and improve their expertise and presentation of the course, with benefits to the sector's managers;
- (f) Local case studies can be prepared on participating enterprises and be used with more rewarding results; and
- (g) Feedback from course participants can be more readily obtained and used to improve future course.

CONCLUSIONS

In conclusion, this chapter has sought to throw light on the transport situation in Ghana and strategies for improvements and in particular establish a case for institutionalizing a transport management training programme at GIMPA. In this regard it was noted:

- (a) That transportation is an important and indispensable function in a modernizing and developing nation;
- (b) That Government policies need to recognize the importance of the sector and provide guidelines and investments that reflect the importance of the sector;
- (c) That in particular developing countries e.g. Ghana, tend to have problems not only with the rather heavy investments required for the sector but also with inefficient or perhaps non-existent (skilled) management in the sector. Given the massive investments in this sector, greater effectiveness in the management of the transport sector is not only necessary but attainable;
- (d) That Ghana has invested considerably in the transport sector and has created a number of state-owned transport sector enterprises to manage it;
- (e) That whereas capital problems can be solved by domestic and or foreign borrowing, management performance problems require a process of determining the performance discrepancies, isolating the training causes of the discrepancy, designing and institutionalizing training actions to solve present and future performance problems;
- (f) That Ghana has the capability for management training for various sectors and can and has in fact been training transport managers. GIMPA has already trained 114 transport managers on various courses, including in particular, the Transport Management course specifically designed for the sector;
- (g) That both GIMPA and the sister institutions can call on the wider and relevant expertise from the transport sector generally; and
- (h) That benefits of the course will include savings to government of more than 80 per cent each from providing the course in Ghana instead of overseas and developing local expertise and consultants in the sector whose services will cost much less than their external consultants counterparts.

These conclusions and the discussion in the chapter underline the case for the institutionalization of a Transport Management Training Programme at GIMPA. The implementation of the transport management course programmes outlined here would go a long way in improving the effectiveness and efficiency of transport operations in Ghana.

CHAPTER 11

Part V

Country Case Studies

Policy and Management Issues in the Transport and Communications Sector in
Lesotho

Ministry of Transport and Communications of the Government of the Kingdom of Lesotho

INTRODUCTION

General Factors of Development

Lesotho's development strategy has been determined by a variety of factors; availability of natural resources, the market size, the suffocating migrant labour system and the complete integration of the economy into the South African economy through the Southern African Customs Union Agreement (SACUA)

The economy bears the heavy hand of colonial policies and negative repercussions of its geopolitical location, completely surrounded by a more developed neighbour, South Africa.

The centrality of agriculture to Lesotho's development cannot be over emphasized. It is the leading sector of the economy providing employment and livelihood for about 85% of the population. Two-thirds of the total land area (30,350 sq.km) consist of rugged and mountainous landscape but only about 400,000 hectares (13 per cent) of the land is considered suitable for crop cultivation. Development of a modern industrial sector is limited by the small size of the domestic market, and the proximity of the highly industrialized South African economy which supplies Lesotho with most of the goods and services it requires. Over half of Lesotho's male labour force is employed in the RSA and remittances of migrant workers constitute over 50 per cent of Gross National Production. Coupled with these development factors is the critical role played by the transport and communications sector in the development process. It constitutes the vital network for all social, political, economic and technical as well as commercial activities.

Recognizing the importance of dependable transportation and communications system for national development, the government has in recent years sought assistance from different donors to tackle the problem more seriously and effectively. Given its uniquely disadvantaged position, Lesotho depends to an overwhelming extent on South Africa's transportation and port services. Its imports are handled by South African carriers, mainly the South African Railways, whose stringent restrictive laws and policies shield the railway against competition from road transport. But Lesotho is now self-reliant on international telecommunications through her microwave system.

History of Transport Development in Lesotho

The existing transport and communications networks in our countries are a colonial heritage. In the construction of roads and railways and development of water transport, the main consideration in the colonial past was to develop a network that facilitated the extraction and exploitation of mineral and agricultural produce which was then transported to the metropolitan countries for processing. Like in other African countries emerging from the colonial cold, Lesotho entered independence with poorly developed transport and communications systems. The administrative centres in the western lowlands were largely connected by seasonal roads which became impassable in rainy seasons. People depended on horses and animal-pulled sledges that are normally used on tracks and paths, for their goods and passenger transport. At independence in 1966 Lesotho had only one kilometer of bitumen surfaced road and this was in the capital Maseru. After independence an *ad-hoc* road development programme was undertaken which by 1973 had increased the total road network to 2,735 km.

The highlight of this programme was the construction of Lesotho's first ever non-urban bitumen road in 1967 which linked the North-western town of Leribe to the capital Maseru through Teyateyaneng and extending another 13 km East of Maseru to Masianokeng.

Lesotho's first Transportation Study undertaken in 1974 was the first attempt towards a more planned road development strategy. Faced with the geographical situation as a landlocked country, Lesotho had to ascertain access to the neighbouring harbours and ports for its exports and imports and to ensure movements of goods and passengers across its borders to and from its neighbours. Subsequently in 1969 Lesotho entered into a Customs Union Agreement with the Republic of South Africa, Botswana and Swaziland. Articles 15 and 16 of the agreement provides for the free

movement of publicly owned transport for purposes of conveying goods within the common customs area and for non-discriminatory road tariffs.

Because of Lesotho's different terrain, aviation plays a predominant role in interlinking remote inaccessible mountain areas with the lowlands. Since the establishment of the Department of Civil Aviation in 1975, aviation activities have increased at a relatively fast rate. There are 32 airports within the country, one of which is international and two designated as ports of departure. All these are owned and operated by government.

In complementing road and air transportation, the Government introduced river boat transportation. This was introduced in order to service rural areas along the rivers to facilitate movements and journeys between villagers, towns and different essential services.

Significant developments and progress have also been recorded in the communications sector. Key infrastructure projects involving large-scale capital outlays have recently been completed. The introduction of a microwave network in 1985 was a great step in the history of inland communications. In the mountains, efforts are being made to find suitable systems in those areas that may not be covered by the microwave network

TRANSPORT AND COMMUNICATIONS POLICY IN LESOTHO

The policy objectives in the transport and communications sector are essentially those of establishing, ensuring and developing efficient transportation and communications systems and network, the choice of the modes best suitable to the country being the key element. Since independence government policy has been to further economic growth, attain self-sufficiency in various sectors of the economy and to uplift social standards. The main emphasis now is bringing services closer to the rural populace by opening up new routes into the interior of the country.

In line with this policy of bringing services closer to the people, the government is undertaking a study to determine the feeder road network development strategy necessary to support socio-economic development in the rural areas of Lesotho.

As noted previous transportation studies, the existing road network only developed within the western lowlands of the country. The foothill and mountain areas remain poorly served by even rudimentary roads; horses and back animals are still the major transport modes in these areas.

It is the policy of Government to encourage the development of a commercially viable passenger transport system in which the private sector should play the predominant role, the main area of emphasis being road safety.

Difficulties attendant on other modes of transport due to the mountainous terrain of the country make air transport an important communications link. The main policy objectives are development of air services in order to lessen dependence on South Africa by providing direct access to the outside world and by improving the safety standards of domestic airfields in view of their key role in providing transport to isolated rural communities.

Lesotho government considers telecommunications services to be important to the social and economic development of the country. It is therefore the policy of government and Lesotho Telecommunications Corporation to develop suitable telecommunications services both for the growth centres, future economic areas and the rural centres and crosspoints.

Acts/Laws/Regulations

With the policy of leaving transportation in the hands of the private sector, while ensuring adequacy and safety with fair competition, government introduced the Road Transport and Traffic Act 1970 which was in 1981 updated to produce two Acts.

- (i) Road Traffic Act 1981 and its regulations.
- (ii) Road Transport Act and its regulations.

The objective of the Road Transport Act is to provide for a co-ordinated development and flexible control of the means of and facilities for road transport by way of permits in accordance with the transport policy approved by government. The Act also allows and ensures fair competition by transport operators who are in the majority private operators, with government taking part in two parastatal organizations e.g. Lesotho National Bus Corporation (LNBS) established by Act No. 12 of 1974 and Lesotho Freight Services Corporation (LFSC) established by Act No. 10 of 1979.

The LNBS was established with the purpose of providing the public with a reliable network of transportation at reasonable prices and ensures that widely dispersed rural and mountain communities are provided with adequate and reliable transportation facilities to serve their diverse needs. Routes covered were mainly those which the private sector was not interested in.

The purpose of the Lesotho Freight Services Corporation is the establishment and operation of a freight service business for the haulage of freight within and outside Lesotho.

The national policy on commercial air transport has been established in the Lesotho Airways Order, 1970, which constituted Lesotho Airways as a corporate body with the objective of providing air transportation within Lesotho.

The government, recognizing the importance of telecommunications as an essential infrastructural development and as a catalyst in the social and economic growth of the country, established the Lesotho Telecommunications Corporation by the Telecommunications Act No. 12 of 1979. The Act provides for telecommunications in Lesotho and between Lesotho and other countries.

DEVELOPMENT PROGRAMMES

Transport and Traffic

The Government will acquire additional river boats in order to continue to provide invaluable cross-river transport for mountain communities.

To improve efficiency of testing of motor vehicles and promotion of road safety, it is planned to build vehicle-testing stations in the northern and southern areas of Lesotho. This will be compatible with government's policy of decentralizing services.

Civil aviation

In order to improve and increase accessibility to the isolated parts of the country proposal have been made for the upgrading of various airfields. The plan is to improve 22 airfields in the next five years.

The government also intends to extend the length of the main runway of Moshoeshoe I International Airport by 1000 meters for non-scheduled and occasional operations by wide-bodied jets— particularly cargo jets that would import and export supplies. In this regard, works to be carried out under the additional works programme at Moshoeshoe International airport have also been identified and will be initiated once funds have been received from the funding agencies.

Lesotho Telecommunications Corporation

With the major centres now virtually developed, the Corporation is switching efforts towards developing the rural growth centres. All the open-wire trunk routes which were replaced by the microwave network are being rehabilitated to prepare them for redeployment into subscribers lines— this will be an answer to the lowlands rural services.

LINKAGES WITH OTHER SECTORS

The performance of the transport sector depends a great deal on other sectors of the economy. Construction of a new road in the rural area substitutes one mode of transport with another. For

example, animal transport is replaced by vehicle transport once a new road is constructed.

Betterment of roads is a pre-requisite to an efficient transportation system. Poor road infrastructure inhibits transportation of food surpluses from producing areas to deficit areas because of inadequacies or absence of transport facilities.

Developed roads facilitate:-

- (i) movement of goods and services to the markets;
- (ii) movement of people to administrative and service centres;
- (iii) provision of speedy communications facilities like delivery of mail etc;
- (iv) delivery of inputs to farmers, access to market for agricultural and industrial goods;
- (v) a speedy movement of essential drugs and sick people.

Air transport also serves extensive domestic needs by providing essential communications to remote communities which are otherwise inaccessible by road. Radio links also play a vital role for the highland areas which cannot be easily reached by the different modes of transport.

MANAGEMENT OF THE TRANSPORT AND COMMUNICATIONS SECTOR

A viable transport system depends on good management which is a shared responsibility of different agencies that are involved in transportation.

The planning, execution, supervision, monitoring and financing of the transport network system is delegated to a number of ministries and agencies of government. The Ministry of Works through its Roads Branch is primarily responsible for planning, construction and maintenance of the road network. The Ministry has a pool of staff to carry out its technical responsibilities. The cadre of staff ranges from the trained professionals to maintenance gangs in the fields.

The Ministry of Planning has responsibility for soliciting funds from bilateral and multilateral agencies. The Ministry of Transport and Communications supervises the performance of public institutions charged with the responsibility of providing road transport services to the country.

The Policy Department has the task of ensuring that road transport operators comply with the Traffic Act and enhance road safety for all road users. In this respect, the Police have an important role to play in lowering the incidence of accidents which are a great drain not only in terms of time lost but also in terms of damage to vehicle stock and property and loss of human life.

There are in Lesotho, adequate numbers of service facilities, workshops, garages and unconventional backyard garages. However the performance of the transport sector is incapacitated by lack of required spare parts at the right time. On the public side the government budget constraints prohibit the allocation of enough funds for efficient as well as timely maintenance of public assets.

Most of the roads are in a poor surface condition particularly in the rural areas with resultant high vehicle operating costs. There is need to appropriate a larger share of funds to maintenance operations, to raise the level of availability and utilization of existing plant and equipment and to train and mobilize more staff.

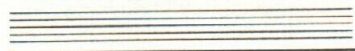
CONCLUSION

Although much has been achieved in the development of the transport sector, a lot remains to be done. The shortage of funds to carry out planned works and for maintenance of existing facilities still remain a major problem.

It is important to improve the quality of the existing infrastructure by giving priority in the mobilization of financial resources from within and from outside the subregion for those projects that require rehabilitation, upgrading and later on for new constructions that would contribute to the physical, economic and political integration process in the subregion. In order to cope with the heavy programmes ahead, government will intensify manpower training programmes.

Roads should be given a preferential treatment by funding agencies. Very often the roads are found to be not feasible by conventional appraisal methods. The rural communities require access to education and health services, they need to sell their produce and buy other essential commodities. But such considerations are often invisible to external financiers, hence the responsibility for financing such projects rests with the national government and causes great stress on the meagre resources of the country.

CHAPTER 12



Policy Reforms and Programmes in Transport and Communications Sector—
United Republic of Tanzania

Reynold Matanda Minja

INTRODUCTION

The role and importance of the transport and communications sector in the development and sustenance of national socio-economic status of any country must be obvious to everyone of us. Efficient communications and transport services are needed for a government to effectively realize its cardinal objective which in Tanzanian thinking is to promote the socio-economic development of its country by exploiting the potential of the land (agriculture, minerals and other natural resources), industry, trade and the human resources as well as to ensure that other economic and social services sectors such as health and education and maintained at a sufficient standard commensurate with the intended rate of development. In all these endeavours the movement of goods and people and the exchange of information is of primary importance. Indeed, like blood vessels in the human body, transport and communications are crucial in putting life to all other socio-economic sectors of a country. This means that without effective transport and communications there will not be any socio-economic activities and, hence, no countries will exist as socio-economic entities as we know them today.

In the particular case of Tanzania the role and importance of the transport and communications sector can further be elaborated by considering it in the context of agriculture. In Tanzania, agriculture constitutes the mainstay of our economy and this is because it contributes approximately 80 per cent of the total export earnings as well as being the occupation of more than 85 per cent of the population who live in rural areas. For agriculture to record any measure of success the inputs required (e.g. fertilizers, seeds, insecticides, pesticides and farm implements, etc.) need to be available to farmers in time. Outputs from the farms need to be evacuated from the farms to storage in the farms/villages or delivered to domestic and foreign markets in time; materials required for provision of health, education and other social welfare services to the people in those rural areas need to be delivered promptly; means must also be provided in agriculture (e.g. extension officers etc.) as well as for satisfying the travel requirements of the people; and finally there must be an efficient exchange of information between villages and other parts of the country particularly on matters likely to promote the development of agriculture e.g. information about crops piling up in a village while there is a shortage elsewhere.

We in Tanzania have had our own taste of what happens when a less than efficient transport and communications services is provided in this regard. We have had many cases of failure to transport fertilizer or other agricultural inputs in time, a situation which has led to poor harvests. Often times we have had cases of pile up of crops in villages leading to an increased rate of post-harvest crops losses as a result of destruction by rain or insects/vermin. We may have also on several occasions failed to ensure that our main export crops reach the ports in time leading to a decrease in foreign exchange earnings.

With the above background and bearing in mind our country's overall policy of giving maximum attention to rural development i.e. where most of our people live, I have structured this chapter so as to give you a picture of the Tanzania transport system, its historical development and deliberate policy decisions which have been made in the course of time for guiding the development and operational performance of this sector to effectively support the overall development objectives. The purpose of such a presentation is also to enable you to share with us our modest experience so that you may assist us by pointing out where we could have done or should do better.

To achieve the above objective, the rest of this chapter has been arranged to reflect on the following:

- (a) A brief exposition of development objectives of Tanzania;
- (b) The characteristics of the transport and communications system supporting these objectives;
- (c) Details of particular policies taken in the transport and communications sector to promote the intended socio-economic development; and
- (d) Finally, conclusions are given as a summary of an overall assessment of the impact of the policies which have been implemented.

DEVELOPMENT OBJECTIVES AND THE TANZANIA TRANSPORT SYSTEM

The basis of the development objectives of independent Tanzania were crystallized in the Arusha Declaration of 1967 pronouncement promulgating the country's policy of Ujamaa and self-reliance. Subsequent guidelines provided by the ruling party were issued to elaborate or operationalize different aspects of the overall policy. As probably most of you already know the foundation of which the Ujamaa policy is based on human equity. This means that there should be equality in development among all people irrespective of geographical location. This can be achieved by ensuring that all people get equal opportunities for carrying out economic undertakings (basically in agriculture) and get access to equitable social and welfare services including health and education.

As a way to operationalize this policy a "villagization" operation was launched where new organized villages were established especially in sparsely populated areas. However, at the time of launching the programme already there existed traditional villages in the densely populated areas. The main feature of the new villages thus created and that of the old ones in the densely populated areas was the establishment of village centres which were commonly crops collection or marketing centres; shopping centres for agricultural inputs and other consumer goods; centres of other social amenities such as schools (for basic and adult education), dispensaries and health centres, postal services and, where possible, telephone services, religious workshop places (churches and mosques), playgrounds and village government administrative offices. The other feature of the policy which is relevance to the transportation and communications sector was the requirement for public ownership of major means of production and provision of socio-economic services.

In terms of transportation and communications the above overall policies meant the following:

- (a) The demand for transport and communications increased particularly due to the increased centrally organized demand for consumer goods and materials for social amenities as a result of higher level of awareness for development within the new village organizational set-up;
- (b) Need for reorientation of the transport and communications network to facilitate equality in geographical development and attainment of higher internal integration of the economy. This means that there had to be a change of the network from the colonial mainly export-import orientation to a more internally integrated network;
- (c) State participation in the sector through public ownership of major transport and communications concerns;
- (d) Need for policies which ensure efficient operations so as to get maximum contribution from the existing transport and communications network; and
- (e) Need to develop and attain self-reliance in the local production of some of the equipment and spare parts required in the sectoral operations.

On the basis of the above understanding Tanzania went about making decisions on the development and operations of the sector in an effort to ensure the attainment of the aforesaid overall development objectives. The details of such policy decisions are given below. However, before we can get into those details it is important to have an overview of present transport and communications network especially as compared to what it was at independence in 1961.

Railway network

There are two railway systems in Tanzania — the Tanzania Railway Corporation (TRC) system with a total of 2,640 kms of a single track (1.00 mm gauge). To this system is being added the Manyoni-Singida line which used to be there but was uprooted by the colonial regime for allegedly lack of economic justification. The second system is the Tanzania-Zambia Railway Authority (TAZARA) with 970 km of track within Tanzania (890 km in Zambia). The track is of 1.067 mm gauge. Apart from TAZARA whose construction commenced in 1967 and completed in 1976, the

rest of the railway network remained the same since independence in 1961. The railways, therefore, still bear the East-west import-export orientation i.e. lead to/from ports.

Road network

In Tanzania the road network is classified on the basis of a functional-administrative division which entails trunk roads, local main roads, regional roads, district roads and unclassified roads. However, the trunk road system has remained the same in its orientation. At independence, there were only about 400 km of bitumen trunk road whereas there are in 1986 more than 3,000 km although some parts are in very poor state due to poor maintenance.

Air transport network

There are 66 government run airports and airstrips in Tanzania. Each regional headquarter has an airport and there are scheduled flights to almost all the regional capitals. Of the 66 airports and airstrips the major ones are:

- (a) Two are international airports — Dar-es-Salaam International Airport (DIA) and Kilimanjaro International Airport (KIA) (at Dar-es-Salaam and Kilimanjaro);
- (b) Major domestic airports at Mtwara, Mwanza, Dodoma, Tanga, Zanzibar and Pemba; and
- (c) Other regional airports such as Tabora, Lindi, Bukoba, Songea, etc.

Most of these were improved or constructed after independence. KIA was constructed in 1972 and major improvements were completed at DIA in 1984.

Water transport network

There are five major ports situated along the Indian Ocean namely, Dar-es-Salaam, Tanga, Mtwara, Zanzibar and Pemba (Zanzibar and Pemba are in the Islands). Smaller ocean ports are Lindi, Kilwa and Kilindoni on Mafia Island. The major ones are used for international as well as coastal shipping whereas the smaller ones are entirely for coastal shipping. Of the major ports Dar-es-Salaam is the largest accounting for 87 per cent of total ports throughout whereas Tanga and Mtwara account for 10.4 per cent and 3.0 per cent respectively.

Apart from these ocean ports there are lake shipping services in the three lakes i.e. Victoria, Tanganyika and Nyasa where the major ports are respectively Mwanza, Musoma and Remondo Bay; Kigoma; and Itungi and Mbamba Bay. However, there are smaller ports of call used to serve people living around the lakes as well as on small islands in the lakes.

Other transport networks

There is a pipeline serving Zambia i.e. Tanzania-Zambia Pipeline (TAZAMA) to supply crude petroleum oil to a refinery in Ndola, Zambia. For domestic use pipelines are used for conveying portable water in very short distances mainly in urban areas.

The urban transport system in Tanzania is constituted of road networks only and the only noticeable change has taken place in terms of expansions or extensions in areas where new developments in land use have been recorded due to the population increase.

Apart from dug-out canoes and such primary equipment, the use of rivers has not been exploited or developed to take full advantage of the potential offered by the big rivers in the country.

Posts and telecommunications

Between 1961 and 1985 the Departmental Post Offices have grown by 2.7 per cent per annum increasing from 80 to 180; sub-post offices increased from 100 to 540 (at average of 7.3 per cent per annum); stamp vending agencies from 10 to 880 in 1984 — an average of 34.2 per cent growth per annum. This has ensured that there are postal services at least at village level.

MAJOR POLICY REFORMS AND PROGRAMMES TO IMPROVE SECTOR PERFORMANCE

Sector co-ordination

There are several ministries and institutions involved with the development and operations of the transport and communications sector. The division of responsibilities is:

- (a) The Ministry of Communications and Works has the overall responsibility (in its leading and advisory capacity) for all policy, development and operational matters relating to the whole sector. Specific responsibilities include the development and maintenance of trunk roads, aerodromes; and, through respective institutions, the development and operations of railways (TRC and TAZARA), road transport (NTC and TLA), ports and shipping (THA, TACOSHILI< SINOTASHIP and CFB), air transport (DCA and ATC) and posts and telecommunications (TP & TC). The Ministry is also responsible for maintenance of government vehicles and equipments and plants including ferries;
- (b) The Prime Minister's Office, through the Regional Authorities, is responsible for the development and maintenance of local main and regional roads; allocation of motor vehicles and other transport inputs especially during shortages; issuance of regional transport licenses; and some policy and operational strategies for different modes of transport within the region especially when emergency programmes (i.e. special operations) have to be undertaken to move agricultural inputs or crops;
- (c) The Ministry of Local Government and Co-operatives through district/city/municipal/town councils, are responsible for development and maintenance of district, urban and unclassified roads. The Ministry has also a big influence in the operations of the Co-operative Unions and primary societies who engaged in the procurement/purchase, storage and transportation of crops and agricultural inputs;
- (d) The Ministry of Finance, Planning and Economic Affairs which is responsible for allocation of available government resources required for the development and operation in all sectors; and
- (e) Other sectoral ministries whose sectoral development and operations directly depend on the transport and communications services. Ministry of Industries and Trade, through different factories producing transport inputs such as tyres and tubes and spare parts and whose State Motor Corporation is responsible for importation and distribution of road motor vehicle and spare parts imported from public funds; Ministry of Energy whose TPDC is responsible for importation of crude oil and distribution of petroleum products; Ministry of Home Affairs responsible for safety matters and road traffic control. Institutions like Crop Authorities or Marketing Boards and Regional Trading Companies operate own account fleets of freight vehicles and staff buses.

It is obvious that the improved performance of the transport and communications sector high level co-ordination is required between ministries and within the Ministry of Communications and Works itself.

Though appreciating this we have, for a long time, not been able to achieve the level of co-ordination required. As a result we have had problems including factories and other economic undertakings having been established only their operations to be hampered by lack of adequate transport and communications services. Similarly, within the ministry institutions we have been making unco-ordinated decisions (e.g. port investment in container handling without parallel investment in the surface modes and motor vehicles owners acquiring vehicles whose capacities exceed designed roads bearing capacity etc.). A host of other examples do exist.

As a result of the above the government has launched a project for "strengthening of the planning and co-ordinating capacity in the transport and communications sector". This project has been accorded very high priority and is expected to result in a better institutional and organizational

framework; a better development and operation policies and strategies; and, most important, the capacity to implement and scientifically review the policies and strategies on a permanent basis. Successful accomplishment of this project is crucial for better performance of the sector in future.

Allocation of resources to and within the sector

As pointed out earlier it is clear that the amount of investment or expenditures to the transport and communications sector is directly related to the rate of development of a country. In view of the fact that resource allocation to the transport and communications sector competes with other sectors, decisions on resource allocation are taken at both the national level and at ministry (or sectoral) and institutional level.

The fragmentation of the transport and communications sector makes it difficult to obtain figures on precise allocations. However if one were to take allocations directed to or through the sectoral ministry only, an average of between 15 to 18 per cent of national resources were allocated to the sector in the first 10 years after independence. This declined to about 11 per cent towards the end of the second decade after independence in 1961. In the recent past the government has however reasserted the importance of the sector by ranking it second to agriculture in priority.

However, it should be noted that the overall national cake available has been very limited and, hence, despite this ranking the quantum of the resources allocated have been far below the requirement even for sustaining the capacity (network and vehicles) that exists. Foreign exchange allocations for procurement of spare parts, fuel, tyres and tubes and other inputs have not been adequate. Therefore, although we believe we have the right policy, we still cannot cope with requirements due to unavailability of resources.

The allocation to different components of the transport system, to different modes and to different activities have, in the recent years, been guided by the need to remove immediate bottlenecks rather than expansion. Given the pressure of crisis management caused by severe shortage of resources and the acknowledged limited planning capacity, it has been difficult to work out a rational allocation of resources at this level. The choice of how much to use on maintenance and how much for construction and purchase of new equipment has been a difficult one to make. At times the influence by donor agencies has limited our freedom to make choices. However, a brief account on what has taken place in different modes is given below:

Within the rural or intra-regional transportation system one can identify three components or levels i.e. the household level (where household is the basis of freight and passenger movements), the village level and the district level. The following notable policy decisions and programmes have been made on different aspects concerning different modes of transport used and posts and telecommunications.

Policy decisions on transport and communications

The most commonly used modes particularly at household level and, although to a less extent, the village level, are walking and portage (head or shoulder), wheel burrows and hand carts, animal drawn carts, the bicycle and tractor drawn trailers. There has been a deliberate policy and effort to ease transportation difficulties at this level. In this regard the government established in 1978, a bicycle factory as well as availing wheels and other components for making carts, wheel burrows, etc. These efforts have, however, in the recent years, been afflicted by severe shortage of foreign exchange.

At the village and district levels the most predominant mode is road motor transportation whose development and operation is described in more detail below.

Roads

The most notable policy issue here concerns the responsibility which has been given to village governments (villagers) to construct and maintain their own roads. The district authorities are required only to assist in providing technical assistance and facilities such as culverts and graders

where required. This has assisted a lot in ensuring possibility of such roads than the case would have been if the councils were not given such responsibilities.

Road transportation

(a) Vehicle importation

From 1971, importation of vehicles was confined — the purpose being to ensure that more public vehicles (lorries and buses) are imported rather than saloon cars. This was basically meant to direct most of the efforts to ensure that the performance of transport in rural areas is improved as required by the overall policy. For example as of 1983 more than 50 per-cent of all commercial freight transport vehicles were for rural transportation (with capacities between 5 to 10 tons). However, due to the inability of the government to import enough vehicles from its foreign exchange resources private individuals with access to private foreign exchange have, since 1984, been allowed to freely import public vehicles (mainly from pickups or minibuses upwards).

(b) Ownership

Whereas before independence ownership of commercial vehicles was almost exclusively private, public ownership of trucks and buses has grown from zero to more than 20 per cent as of 1983. With the reintroduction of the co-operative unions and development of the Ujamaa Villages who also own vehicles, public ownership of commercial vehicles in Tanzania was bound to increase. However, it is fair to admit that to date private ownership accounts for about 80 per cent. In order to ensure a healthy balanced development in transferring a fair share of ownership to the public the National Transport Corporation was established to supervise the creation and the strengthening of major national transport companies and, overall, this has been a success.

(c) Distribution

In the course of time it was discovered that in rendering services to the community private vehicle operators chose to operate on good areas only and left the unattractive areas unattended. This state of affairs worked against the government policy of ensuring equitable distribution to enhance frontal social-economic development. To curb this situation a deliberate move has been made to favour the public companies and co-operative unions "ujamaa" villages in the allocations of vehicles.

However, such allocation takes into account efficiency in performance as a basis for the allocation of vehicles and the situation now is that any public concern which fails to perform is left to die and there are example of companies which have been liquidated as a result.

(d) Spare parts

Importation of spare parts has been severely affected by non-availability of adequate foreign exchange especially since 1980. However, the government has, since 1985, relaxed this by allowing private individuals with access to private foreign exchange to import spare parts. In addition exporters are now allowed to retain some percentage of their earnings which is mostly used to import, among other things, spare parts.

(e) Fuel

This item has been hit hard by lack of foreign exchange. This has resulted in impositions of mechanisms of fuel allocations to different regions/districts so as to ensure that the little that is available also reaches the peasants in the villages.

(f) Tyres and tubes

A tyres and tubes manufacturing company was established in early seventies. However, the factory has also suffered from lack of sufficient foreign exchange allocated to it in recent years to ensure sufficient supply of raw materials. Because the demand is far greater than what can be produced by the factory allocation mechanisms had to be instituted.

(g) *Tariff*

The need to ensure that transporters earn enough income from their operations is very clear to the government. However, the government has still retained control of tariffs mainly for curbing the tendency to overcharge unnecessarily as a result of supply being much below demand. This situation is, however, now being reviewed.

(h) *Standardization*

The advantages of standardization in terms of economies of scale in the importation and stocking of spare parts as well as maintenance of vehicles is recognized by the government. A standardization policy does exist although is not rigorously implemented. However, this weakness is being studied at the moment with a view of improving the situation.

Posts and telecommunications

As explained earlier positive developments have been achieved in providing postal and telecommunications services to rural areas. It is Tanzania government's policy to continue enhancing this development within the resource limitation.

Long distance (inter-regional) transportation

The major mode of transport used for interregional transport is railways. However, road transport also plays a very significant role because the network of railways (the ideal mode for distances of longer than 300 kilometres) does not cover the whole country and also because of the limited capacity of the existing railways. Coastal transport provided mainly by TACOSHILI and marine services on the lakes provided by TRC marine services also provide interregional freight and passenger services. Air Tanzania Corporation has scheduled flights to nearly all regions or to points close to other regions and these are mainly passenger services. These flights are augmented by air charter services.

As pointed out earlier, regional integration of transportation has not been achieved mainly because of limited resources which have been spent mostly on sustaining the existing infrastructure. There is, however, some improvement particularly in development of improved roads to facilitate interregional transport.

The developments of respective modes is highlighted below.

Railways

After the break-up of the East African Railways and the East African Community Tanzania Railways Corporation was established in 1977. Since most of the maintenance and training facilities were in Kenya, TRC has had a very difficult time to get a replacement of such facilities.

However, the capacity of TRC has been painfully sustained by way of acquiring locomotives, rolling stock and new repair workshops. The government has accorded high priority to this system which is the backbone of the country's transport system. Track rehabilitation and improvement of communications and signalling for more efficient train control is underway. It is anticipated that with these improvement programmes TRC should be able to attain its rated capacity which will almost double its 1985 performance.

Tanzania-Zambia Railway Authority (TAZARA), jointly owned by Zambia and Tanzania has performed better than TRC and has managed to handle all traffic on offer. However, while TAZARA serves a limited number of regions in Tanzania it mainly handles Zambia imports and exports particularly metals. With regard to tariffs, TAZARA's tariffs have been satisfactory, while those of TRC have at times not been adequate mainly due to long delays in obtaining the approval of the Government for tariff adjustment. However, as in the case of road transport this matter is under review and a more effective policy is anticipated in the near future. In order to enable TRC to purchase spare parts which require foreign currency the railway has been allowed to retain 50 per cent of the foreign exchange earned from transportation of transit traffic.

Road Transport

For quite sometime Tanzania roads have been and still are in a poor state. On recognizing the role played by road transport in the national economy as a whole, a rehabilitation programme has been embarked upon. Currently the trunk roads are being improved and upgraded through a World Bank funded project popularly known as Trunk Roads Maintenance Programme. Through these programmes a good system of trunk road maintenance will be evolved. For regional roads and local main roads there are particular programmes in many regions known as Regional Integrated Development Programme (RIDEP) through which extensive road improvement and maintenance are effected.

The pattern and characteristics of interregional road transport in Tanzania are the same as those for rural transportation except for sizes of the vehicles, fleet sizes per owner and tariff control. To decrease the turn round times of vehicles and increase their load factors a programme is underway to encourage establishment of freight forwarding agencies at least at regional capitals. These will provide information of cargo availability.

Air Transport

Since the formation of Air Tanzania Corporation (ATC) after the break up of the EAC owned East African Airways, the emphasis given to the national airline has been on consolidation of domestic services. This was partly aimed at attaining higher integration of regions as required by the national policy. Although the airline has faced a lot of problems, it has succeeded to a large extent in satisfying the domestic market.

Urban transport services

There are no very notable programmes for urban transport and tourism so far except that efforts have been geared at sustaining what exists. The exception is Dar-es-Salaam where we formally had a monopoly in a public owned passenger transport company serving the city of Dar-es-Salaam normally known as Usafisiri Dar-es-Salaam (UDA). To improve transportation the government since 1983, has allowed private operators and staff buses (owned by government departments and parastatal companies) to participate under the auspices of UDA. We have found the arrangement more efficient than the old system. However, urban transportation as a whole is under review to have better plans to avoid congestion and inefficient traffic flow.

International transport

The past and current programmes in this regard have been geared at improving our links (roads, air and railways) with our neighbouring countries. It has been a very strong undertaking of our government to develop and consolidate these links for both trade (south-south) and our position as a transit country. Our railways (including marine services) and airline serve all our neighbours. In the air transport sub-sector, several international airlines provide services to/from other parts of the world. Such air transport services are encouraged provided they are mutually beneficial to the country and the foreign airlines.

For international maritime transport to distant countries it is mainly foreign shipping lines serving us with our SINOTASHIP and at times complemented by TACOSHILI. However, in order to consolidate freight and gain from chartering cheap ships we have formed the Central Freight Bureau to do just that. In the few years of existence they have enabled savings to be realized from such shipping operations.

Major improvements are being made on the ports to improve their performance especially in container handling. Berth 9 to 11 at the Dar-es-Salaam Port are being converted to container terminals.

CONCLUSION

I have endeavoured to cover the significant aspects related to policies and programmes which were meant to improve the performance of the transport and communications sector in Tanzania. I have also briefly indicated whether they were beneficial or not. I would like to emphasize that the list I have given you is not exhaustive but I believe, it gives a good impression of how Tanzania has attempted to develop the transport and communications sector as an integral part of national development policies and plans.

CHAPTER 13



Analysis of Government Policies in the Transport Sector with a view to Initiating
Policy Reforms in Uganda

Joseph Kabango and Dr. Ijuka Kabumba

INTRODUCTION

Uganda, which is about 800 kilometres both by rail and by road — the distance being calculated from the Kenyan port-city of Mombasa to the small town on the Uganda/Kenya border, and account being taken of the fact that from Mombasa to Malaba the rail and the road systems run side by side with each other — is very much of a land locked country. It needs all modes of transport to enable people and goods leave and enter it.

The importance of transport in the process of economic development and integration, and the principal goals of the strategy to adopt in this sector in African countries, are dealt with either in the Lagos Plan of Action (relevant parts of which are highlighted in the aide memoire to the Roundtable) or in the background papers. Consequently, it is not our intention to discuss them here. We will instead, restrict ourselves to that sub-topic of the Roundtable dealing with the "Analysis of Government Policies in the transport sector with a view to initiating policy reforms" — and in the context of Uganda.

Our approach will be as follows. We will first describe the transport network in Uganda. This will facilitate the appreciation of the policy and management issues in Uganda's transport sector. We will then recall government policy in the sector. We will end the discussion with a more detailed examination of the major management issues and problems, and the reforms the government has intends to undertake, in the sector.

Nevertheless, before proceeding with the discussion, it is appropriate to give brief information on the country's Geography.

Uganda, which became independent on 9 October 1962, is situated on the equator and bounded by the Sudan in the North, Kenya in the East, Tanzania in the South, Rwanda in the Southwest and Zaire in the West. Its total area is 241,000 Km², of which about 14 per cent is water. Most of the remaining area is plateau, lying between 1,000 and 1,200 metres above sea level. Notable exceptions include Rwenzori Mountains (5,119 metres), Mufumbiro Ranges (4,500 metres), Mount Elgon (4,321 metres) and Mount Moroto (3,083 metres).

According to the 18 January 1980 National Census, the country had a population of 12.6 million inhabitants, growing at an average annual rate of 2.6 per cent. It is now (December 1986) estimated to be about 15 million.

Since 26 January 1986, the country has been under the leadership of a broad based government led by the National Resistance Movement (NRM) under President Yoweri Kaguta Museveni.

UGANDA'S TRANSPORT NETWORK

Uganda's transport network, is intermodal. The modes can be divided into two broad categories. The first comprises the usual aspects which are associated with physical, easily seen and understood forms of transport and communication — road, rail, air and water (or marine). The second, which is not shown on the map, comprises aspects like postal and telecommunications services.

Road and rail transport are centred at Kampala. Air transport is centred at Entebbe, some 39 kilometres from Kampala. Water transport is connected with our rivers and lakes, while postal and telecommunications services have their centre in Kampala. Below we describe the main features of the different modes.

Road Transport

Uganda's gazetted roads have a total length of 27,000 km. Of this, nearly 7,000 km. are main roads, maintained by the Central Government (Ministry of Works). The rest (20,000 km) are secondary and tertiary roads, maintained by local authorities (under the Ministry of Local Government). Of the main roads, some 5,250 km (or 75 per cent) are murrum while the rest (1,750 km or 25 per cent) are tarmac. The longest single tarmac road runs from Kabale (in the South-West)

through Mbarara, Masaka, Kampala, Jinja, Tororo, Mbale to Soroti (in the North East). Plans are underway to bituminize the Kabale-Katuna stretch linking Uganda with Rwanda. Once work on the stretch is completed, it will mean that the road from Mombasa to Kigali will be tarmac.

Uganda's road network is part of the International Northern Corridor route which links Kenya, Uganda, Rwanda, Burundi and Eastern Zaire. As far as Uganda is concerned, the road section of the corridor goes from Malaba (in the East) through Tororo, Jinja, Kampala, Masaka, Mbarara, Ntungamo, to Marema Hill (in the South-West), while the rail section goes from Malaba through Tororo, Jinja, Kampala, to Kasese (in the West). Kasese acts mainly as the transshipment point for Zaire road bound traffic and, to some extent, for (road) transit traffic to Rwanda and Burundi. Nevertheless, it is Kampala which is the main transshipment point for transit traffic to these two countries.

Three types of vehicles operate on Uganda's roads. First, there are the international vehicles — whether privately or publicly owned. Second, there are national but private vehicles, both commercial and non-commercial. Third, there are national and publicly owned vehicles, mainly buses and trailers. Vehicles in the latter category are owned by the following parastatals: Uganda Transport Company (1975) Limited (UTC) and People's Transport Company (for passengers); and Uganda Co-operative Transport Union and Transocean (for goods, using long haul trucks). The transportation of produce goods is undertaken by both co-operatives and private individuals. Passenger transport is largely run by individuals.

Rail Transport

In Uganda, rail transport is operated by the Uganda Railways Corporation, which was formed in 1977 following the break up of the East African Railways Corporation (which used to serve Kenya, Uganda and Tanzania). The Corporation has slightly over 55 operational passenger coaches, 60 diesel locomotives and 740 covered wagons.

The main function of this mode of transport is the haulage of long-distance bulk freight to and from the East African coast (Mombasa and recently, Dar-es-Salaam); and between the main producing areas within Uganda.

The first overland railway reached Kampala in 1931. It linked Kampala with Mombasa through Nakuru and Eldoret (both in Kenya). However, since 1902, goods and people from Uganda had been able to travel by steamer across Lake Victoria to Kisumu (Kenya) where the railway from Mombasa stopped (after branching off eastwards at Nakuru instead of continuing to Eldoret in a North-Western direction).

Between 1953 and 1956, the overland line from Mombasa to Kampala was extended to Kasese in the West. The extension became necessary in order for copper from Kilembe mines to be carried to the Jinja Copper Smelting Plant and thereafter to Mombasa. A point that is worth noting in passing is that the Kampala-Kasese line was never constructed to carry the kind of heavy loads and frequency as it is carrying today. This, plus the years of neglect and non-repair especially after 1971, have led to occasional accidents on the route. Nevertheless, Government is about to embark on a programme for its rehabilitation which will cost US\$ 83 million and be funded with outside assistance, possibly from France and Italy.

Uganda railways has two types of connections: internal and external. The internal connection has three sections. The first serves the Eastern and Northern regions — from Malaba, through Soroti (1929), Lira (1962), Gulu (1963) and Pakwach (1964) (the years in brackets indicating the time when the line reached the respective town). The second serves the central region, that is, from Kampala through Jinja, Tororo to Malaba. The third serves the Western region and runs from Kampala to Kasese. In contrast, the international connection has two aspects — land and water. The land aspect refers to a plan rather than anything concrete. Thus, under the regional transport projects of the Kagera River Basin Organization (KBO) — whose members are Uganda, Rwanda, Tanzania and Burundi — there are future plans to extend the railway from Uganda at Bihanga to Rwanda. Where there is the water aspect which is a "bridge" connecting Uganda Railways to Kisumu in

Kenya and Mwanza in Tanzania. On the Uganda side, the "bridge" is formed by three wagon ferries each with a deck capacity of 22 large wagons, capable of carrying 880 net tonnes of cargo. These ferries are capable of three return trips per week each and can move two way traffic of over 15,000 tonnes of cargo per week. In addition to rail and marine services, Uganda Railways Corporation operates road services from Masindi to Kampala.

For imports into Uganda, and transit traffic through Uganda originating from Kenya, there are two routes; Mombasa — Nakuru — Malaba through Mombasa — Nakuru — Kisumu, connecting through marine services to Jinja for onward movement to any point in, and beyond, Uganda. Regarding imports and transit traffic originating from Tanzania Railways, there is the Dar-es-Salaam — Tabora — Mwanza rail service, which provides the third outlet from Uganda.

Marine Transport

Unlike Kenya and Tanzania, her former partners in the now defunct East African Community, Uganda is not a coastal state. Even though it has lakes and rivers around with substantial water transport is yet to be organized, it has no public corporation specifically charged to operate this mode of transport. Water transport in Uganda is intimately connected with rail transport, especially on Lake Victoria where international wagon ferry services are run by Uganda Railways Corporation.

In addition to wagon ferry services water transport in Uganda is associated with canoes which are a popular form of transport on our water masses, especially among ordinary people. They are used for both passenger transport and commercial purposes particularly where fishing is concerned. Motor-boats serve the same purposes except that they are owned, operated and sometimes used, by the more well-to-do citizens. Ferries link roads where bridges are not yet built — for instance, on several crossings on the River Nile and Lake Kyoga.

At the time of writing the final draft of this paper (November 1986), we are not aware of any Government plans to establish something like a Uganda Marine Transport Corporation. It is possible that Government feels that the present arrangements are satisfactory. Some other people hold a different view, especially as far as the future is concerned. While appreciating the close link between rail and water forms of transport, and the continuation of that link where necessary, such as where the three wagon ferries on Lake Victoria are concerned, they think it is high time that such a Corporation should be established. Uganda does not have a seashore. Nevertheless, the number and sizes of her lakes, the total length of her rivers; and the activities taking or likely to take place, on them, justify the establishment of such a body. Once established, the new corporation would work closely with existing Corporations dealing with transport and especially the Uganda Railways Corporation, to ensure the smooth running of the country's transport network.

It is possible that the proposed Corporation on water transport would breath life into disused facilities like ports such as Butiaba (on Lake Albert) and Masindi (on Lake Kyoga) which were thriving before 1964 when the Northern section of the Uganda Railways reached Pakwach.

In this connection, it should be recalled that there are people who travel to and from Northern and North-Western Uganda who may wish to use trains but who, for a variety of legitimate reasons, may not wish to pass through Eastern Uganda. At present, they have no alternative — that is, if they wish to travel by train. This is unfortunate. That is where the pre-1964 arrangements become relevant. Yet, they depended on a skilful integration of water, rail and road transport. At present, the water link is virtually missing or inefficiently managed except on Lake Victoria. A Marine Transport Corporation would fill this gap.

Air Transport

Air transport in Uganda is provided by the Uganda Airlines Corporation, established under Decree No. 15 of May 1976. It began operating in 1977. It took over from the East African Airways Corporation which broke up along with the main regional body — the East African Community.

Uganda Airlines falls under the Ministry of Transport and Communications. It aims at establishing, providing, developing and operating safe, efficient, adequate, economical and

properly co-ordinated air transport services. It operates services from Entebbe International Airport to and from London, Brussels, Cologne, Rome, Cairo, Dubai, Nairobi and Dar-es-Salaam. It also services eleven domestic airfields including Arua, Mbarara, Kasese, Gulu, Mbarara and Soroti.

More will be said about this mode of transport in the section where we will examine in some detail selected management issues, especially those related to the management of human and financial resources.

Postal and Telecommunications Services

In order to promote the efficiency and complementarity of the four modes of transport, government has taken care of other aspects that share vital but which, in the mind of the ordinary Ugandan, are not easily and immediately associated with transport and communications. Here our brief discussion will limit itself to postal and, especially, telecommunications services which serve several purposes including linking the country with the outside world.

The country's postal and communications facilities have very much deteriorated since 1971. There were several causes of this deterioration but the major ones were: poor or lack of maintenance, lack of spares and equipment and the widespread looting during the latter part of the 1978/79 Liberation War and after the 27 July 1985 Coup d'etat.

Government is determined to rehabilitate and improve these facilities. Consequently, with the help of friendly countries and organizations, Government has obtained and set aside funds for the rehabilitation of the local communications network, such as, the automatic exchange switch gear, the repair of ventilation and air conditioning at the exchange; and the Masaka-Mbarara microwave route. Already, the Kampala exchange has been completely replaced by a digital system. Additionally, materials, equipment and spares for the continued rehabilitation of the postal and telecommunications network are being procured.

Furthermore, under the Kagera River Basin Organization (KBO) project, Uganda, Rwanda and Tanzania, will be linked by a microwave route running through Mbarara and Kabare to Bujumbura on the one hand, and from Masaka to Bukoba on the other, with an exchange at Kabale of 3,000 lines. This project is funded by the African Development Bank and implemented by the KBO.

Within Uganda, the Eastern and Northern regions will be linked by a microwave route from Kampala through Jinja, Tororo, Mbale, Soroti, Lira, Gulu and Arua, on a backbone microwave with spur links to other towns in the two regions. This project will be integrated with the Railways and signalling project along the Northern Extension, that is, from Tororo to Pakwach. Similarly, Kampala, Fort Portal and Kasese will be linked by a microwave route through Mubende with spur links to Heina and Masindi. This project will be integrated to carry radio and television signals. Lastly, under the Rural Telecommunications Project, manual exchanges, radio call services, public call services and a rural multi-access radio system will be provided to cater initially for 240 subscribers.

POLICY ISSUES

Government's policies are summarized in the Ten Point Programme of the National Resistance Movement. Of the ten points, the point concerning the "building of an independent, integrated and self sustaining national economy" is the most relevant to the development of the transport and communications sector. For instance, clearly both Government and private entrepreneurs are partners in the development of the country's transport sector. This is a factor to constantly bear in mind as we discuss policy and management issues.

Government's strategy in the transport field has four objectives, namely:

- (i) The transfer of long distance freight traffic to rail;
- (ii) Improvement of the maintenance of existing infrastructure;
- (iii) The rehabilitation of the main rail and road routes; and
- (iv) The strengthening, and restructuring of the institutions involved in the transport sector.

The transfer of long distance traffic from road to rail provides significant savings in transport costs both for Uganda and for those countries relying on her as a transit route. Furthermore, increased use of rail facilities reduces the volume of long distance heavy lorries, and thus helps protect the main road system from damage.

The emphasis on the maintenance of existing infrastructure is obvious in view of the fact that this infrastructure deteriorated alarmingly over the past fifteen years as a result of cumulative neglect. In addition to the need to protect the existing infrastructure through regular maintenance, Government is determined to move speedily and energetically to rehabilitate the main rail and road routes, especially those sections which form the designated international transit corridors. These routes have suffered from lack of maintenance, heavy trailer traffic, and the increase in heavy road traffic due to shortage of rolling stock and equipment for the Uganda Railways Corporation (which was made worse by the poor state of the track and an outdated signalling and communication system).

The building, strengthening, or restructuring of the institutions involved in the transport sector are an important part of the management of the country's transport system because they are complementary to the planned improvements in physical infrastructure.

The basis of Government transport policy is to improve the allocation of scarce resources between the different modes of transport — road, air, rail and maritime — so as to increase the efficiency of the sector. Government feels that the allocation must have an important role to play in the sector's ability to satisfy the demands imposed on it.

There are several issues connected with Government's transport policy. They are:

- (i) The role and degree of Government regulation of entry to, and operation within, the road transport sector;
- (ii) The technical standards of design, safety and the operation of vehicles;
- (iii) The setting of maximum vehicle weights and axle loads to protect the highway network;
- (iv) The enforcement of regulations;
- (v) The role of public and private investment in the transport industry, and the structure and nature of ownership;
- (vi) The role of the different transport modes in domestic and international traffic;
- (vii) The level of operating and financial performance to be expected from public and private sector operators; and
- (viii) The co-ordination of policy with neighbouring countries.

MANAGEMENT ISSUES

However good policies are, they will remain political dreams unless efficiently implemented. The implementation will involve many actors — whether in the public service, public corporations or the private sector and the policy makers themselves. Also, it is worth recalling the fact that bureaucrats are intimately, or should be intimately, associated with policy formulation since otherwise its implementation is likely to run into difficulties. Hence, the relevancy of management issues and problems, the major ones of which shall be highlighted below.

Instead of examining the individual public corporations or private companies involved in the management of transport, we shall be selective and highlight only these issues/problems that are major and common to the different organizations and or modes of transport (whether public or private) or those which, though unique to particular organizations or modes, are nevertheless very important.

Furthermore, for the sake of clarity, we will deal with them not independently of each other but under five specific headings namely:

- Political Issues;
- Issues of an institutional nature;

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- Issues related to personnel management;
 - Issues related to economic and financial management; and
 - Issues related to regional co-operation.

The discussion will follow the format whereby for each issue raised, we will mention the reform undertaken or to be undertaken where such are known.

POLITICAL ISSUES

These issues are essentially problems and revolve around the political instability that has characterized Uganda since the Coup d'état of 25 January 1971. This instability has led to three inter-related problems — which have affected the entire nation and its different peoples, institutions and aspects including the transport sector — namely:

- incoherent political direction;
- absence of a clear ideology; and
- political interference in managerial decisions.

Since 1971, the country has had seven governments led by Amin, Lule, Binaisa, Muwanga, Obote, Lutwa and, since 26 January this year, Museveni. The styles and policies of these leaders were and are vastly different. In particular, the regime of 1971–79 was particularly lacking in political, administrative, and economic skills. It was very sensitive to views that differed from its own, however well-intentioned. The leaders that governed the country between 11 April 1979 and 12 December 1980 were confronted with many problems and their regimes were truly unstable. From 1981 to 1985, there was virtual civil war in the country, whose ferocity is attested by the skulls in Luwero, West of Kampala.

During the period 1971 to 1985, the country moved from a situation of virtually no defined ideology (especially in the 1970s) to a mixed economy in the early 1980s. But the latter policy could hardly work effectively in view of the strong opposition to the Government of the day.

The resulting problems had serious consequences for national life, including transport. For instance, before 1971 (and more specifically 1964), the present railway line had been constructed. Since then, no centimetre has been added. That applies to the road network. Instead, since then, due to lack of repair and maintenance, a number of rural feeder roads have become virtually impassable, especially where bridges broke down. Kampala is just recovering from its ugly sight of pot-holes, after a major resurfacing exercise that is still continuing; and repairs on the main roads such as that between Kampala and Masaka did not begin until in the early 1980s. The roads in the three districts forming the Luwero Triangle were left to overgrow with weeds during 1981–1985 and repairs on them did not become possible till after January 1986.

Transport parastatals had a truly hard time. For instance, Transocean (U) Ltd., formed in 1969 with a modest fleet, had a fleet of 480 vehicles by April 1979 — having grown from 4 lorries in 1971 to 180 lorries/trailers in 1975. In June of 1979, this fleet had been looted and reduced to 90. In April 1986, the fleet was 58, of which only 4 trucks and 3 trailers were operational. However, since May 1986, the new Transport Manager, who had been the Corporation's Workshop Engineer until forced to flee into exile in 1975, has moved energetically to redress the situation. Thanks to his efforts and those of an equally new General Manager, the operational fleet was increased to 17 trucks and 4 trailers in a matter of weeks during May. By 20 November 1986, thorough mechanical tests and repairs had increased the number of operational units to 41 (70.7 per cent of the fleet) and established the fact that 17 units were totally unserviceable and had to be sold (by public auction) as scrap.

Political interference in managerial decisions affected virtually all parastatals, transport or other (and, indeed government ministries). It took several forms, some subtle and others crude. In the 1970s, it was largely crude with retirements "in the public interest" or suspensions or outright dismissals being announced on the radio; officers were being abducted and murdered either because they had made mistakes or refused to carry out managerially unwise decisions, or simply, because

someone wanted their job(s); or for some other petty reason (such as clashing over a man or a woman). The interference manifested itself in two major areas: personnel and finance. Holders of political power sometimes insisted on giving key jobs to ill-qualified people (relatives, friends or political supporters). Also, they sometimes used parastatals as a source of ready cash in cases where parent ministries had problems of liquidity and were still waiting for releases from the Treasury; or used the facilities (like buses) of such bodies, hardly ever paying up.

However, since January 1986, Uganda has had a government which, though not elected, enjoys great support among the vast majority of the people — and this in spite of the activities of rebels and cattle rustlers in parts of the North and North East. At last, we have a government that is genuinely broad based, committed to national unity and has clear policies. We believe that for the first time since 1971, we can look forward to a period of political stability with all its benefits.

ISSUES OF AN INSTITUTIONAL NATURE

These issues relate to the organizational framework within which government plays its role in the transport sector. A number of ministries and organizations are involved in the management of this sector.

The Ministry having the greatest formal responsibility is that of Transport and Communications. Its broad functions are four, namely:

- (i) Acting as the parent Ministry to the following parastatals:
 - (a) The Uganda Transport Company (1975) Ltd.;
 - (b) The People's Transport Company Ltd.;
 - (c) The Uganda Railways Corporation;
 - (d) The Uganda Airlines Corporation; and
 - (e) The Uganda Posts and Telecommunications Corporation.
- (ii) Handling legislative matters related to the different modes of transport and, more specifically, road, rail, air and water.
- (iii) Handling matters related to the Traffic and Road Safety Act, 1970 as amended by Decree No. 18 of 1973 and the Transport Licensing Board established under the Act; and
- (iv) Handling the economic analysis, calculation of maximum rates chargeable by bus operators and other matters concerning passenger services in Uganda.

Second, there is the Ministry of Works. It is responsible for the: construction and maintenance of the main roads in the country; planning and designing of the road system; and undertaking the necessary surveys to determine traffic composition.

Third, there is the Ministry of Commerce. It has jurisdiction in matters related to transit goods movements into, out of and through, Uganda. It also acts as the parent Ministry of Transocean (U) Ltd.

The fourth and fifth ministries are Local Government and Planning and Economic Development. The former is responsible for rural feeder roads. The latter, which has a Transport Economics Section, takes care of the overall investment planning of the country.

The sixth ministry that is actively involved and interested in Uganda's transport sector is that of Marketing and Co-operatives. Its involvement is manifested in two main ways. The first is through the Uganda Co-operative Transport Union (UCTU). This is the largest transport operation in Uganda, with a fleet of 145 lorries. It operates road freight transport services, mainly for its member or affiliated co-operative unions and societies; and gets and sells lorries and spare parts to the same. The second is through acting as the parent ministry of the Coffee, Lint and Produce Marketing Boards which are big users of transport facilities in the country. For instance, the Coffee Marketing Board is the largest single transport customer in Uganda.

The above organizational arrangements are not very satisfactory. They make coordination in matters of policy and management rather difficult if not actually then potentially. For instance, the Coffee Marketing Board and the UCTU are naturally likely to be more loyal to their parent ministry than to that of Transport and Communications. Similarly, the Ministry of Planning and Economic Development is likely to rely on, and listen to, their own Transport Economist rather than seeking advice from the Ministry of Transport and Communications.

Nevertheless, the manpower problem is one that can be easily solved especially with increased political stability and economic recovery: these should create conditions conducive to the continued returning to Uganda of our very highly qualified manpower now abroad, and specialized training of existing staff.

ISSUES RELATED TO PERSONNEL MANAGEMENT

Personnel issues in the transport sector are the usual ones — usual in the sense that they characterize other organizations especially in the developing countries. We will therefore not enumerate them. Only two need mention — overstaffing and lack of manpower in technical, professional and management grades.

A clear case of overstaffing are corporations, particularly the Posts and Telecommunications, the Railways and the Airlines — all of which were formerly East African Community Services. When the Community broke up, each state formed its own bodies and had to absorb those employees of the defunct regional bodies who were its citizens and wished to be absorbed. This led to overstaffing. For instance, in early 1984, the Uganda Posts and Telecommunications Corporation (UP&T.C.) had slightly over 4,000 employees when it could have done very well with half that number. At the beginning of August 1986, the Uganda Airlines had 1,044 employees to run 5 aircraft, 1 airport and 11 airfields. The Uganda Railways Corporation has also been found to be overstaffed by 30 per cent.

Needless to say, such overstaffing does not promote efficiency. It also puts a heavy strain on the finances of the Corporations concerned. It also puts a heavy strain on the finances of the Corporations concerned. We are nevertheless happy to report that some measures have been taken in respect of two of the Corporations. Thus, in 1984, UP & T Corporation reduced its staff to just under 2,000. For its part, the Uganda Airlines reduced (31 August 1986) its staff by 378 (or 36 per cent) to 666 — in response to a recommendation made by the International Air Transport Association (IATA) in June 1985.

The problem of manpower shortage is critical and common to the entire economy. It is also a manifestation of a cruel paradox; for, while there is acute manpower shortage in certain fields, there is rampant unemployment. The causes of this problem are several and are rooted in our country's recent history, especially since 1971. They include a faulty educational system which neglected technical and scientific training, and aimed at producing job seekers rather than job creators; lack of, or poor careers guidance in schools; and prolonged political instability. The latter factor had its own severe consequences. For instance, it led to economic stagnation, disruption and, as far as certain sectors are concerned, retrogression. It also led to the destruction of many lives including many of our most highly qualified personnel. Most of those who survived were either driven into lonely exile or refugee camps or forced to lead a life of near slavery in their own country. For their part, the working population particularly those in government and parastatals, lost morale. This made productivity drop sharply.

The present leadership is keenly aware of these and similar problems and, through its ten - point programme, is prepared and determined to face and try to solve them, and as speedily as possible. For instance, our last national manpower survey was in 1967. However, in late 1986, Government launched another survey. Earlier on, in 1985, a comprehensive manpower survey, financed by the World Bank, was carried out in the transport sector. Furthermore, in early 1986, a committee based in the Ministry of Public Service and Cabinet affairs was set up with several objectives including

the identification of all vacant posts in the public sector, and their compilation; and assisting the statutory bodies to fill them through either the re-absorption of former employees, who had been driven out of their jobs for political and similar reasons, or the recruitment of new ones. Thus while aware of the need to promote efficiency in those bodies charged with the management of the transport sector by reducing overstaffing, Government has taken steps to combat unemployment and under employment in other sectors of the economy.

ISSUES RELATED TO ECONOMIC AND FINANCIAL MANAGEMENT

There are several issues and problems associated with economic and financial management in Uganda's transport sector. We will only mention five. First, the transport parastatals tend to be undercapitalized. Second, many suffer from poor management especially in matters of economics and finance. This is a weakness shared by many government departments. Poor financial management has given rise to corruption and embezzlement of funds. Third, government's supervision of parastatals is sometimes inadequate and weak.

Fourth, some of these bodies have faced unfair competition from private commercial operators both inside and outside Uganda. Lastly, private bus operators have fared rather badly. We will elaborate on the last two points. At the local level, it was evident that some people, some of whom were in government, and in the company itself, tried to weaken the UTC so as to divert its urban and rural passengers to their own vehicles. The process of weakening the corporation started as early as 1972. Then, UTC had 157 buses, 135 of which were operational. The corresponding figures for selected years, with the number of operational units indicated in parenthesis, tell their own story; 1975, 305 (83); 1977, 305 (38); 1978, 103 (35); 1979, 83 (17); 1980, 114 (60); and 1983, 145 (48). During 1985 up to June 1986, the operational fleet averaged around 22 against a requirement of 582 for both town and country service.

The result was two-fold. First, there was excess staff for existing operations — some 919 for about 22 buses during 1985 and 1986. Second, there was considerable suffering on the part of the travelling public, especially those with low incomes, many of whom were forced to walk to and from work. For, not only were the private vehicles more expensive than the state owned buses but they were also insufficient. The fate suffered by UTC had more or less overtaken its sister — People's Transport Company — whose fleet at around the same period was 12 instead of the 217 it needed.

Luckily, steps have been taken by Government to arrest the scandalous situation and alleviate the people's suffering. Government's intervention has not led to the suppression of private operators. Government has instead purchased 50 new buses, giving 26 to UTC and 24 to People's Transport Company. The delivery was done between the end of July and the beginning of November 1986. Government has also set up an *ad hoc* committee of inquiry to look into the past and present management of UTC with a view to determining areas of weakness so that the Corporation can be strengthened and enabled to serve the public better.

Another example refers to the partially successful efforts that were made in the 1970s and 1980s to divert freight transport from rail to road and thus earn fantastic profits. These efforts began in 1976. According to the Coffee Marketing Board figures, Uganda Coffee was transported exclusively by rail between 1973/74 and 1975/76. From 1976/77 road and air modes, especially the former, began competing with rail. The share of the air mode was modest and was non-existent in 1981/82. But that of the road mode grew steadily from 41,490 tonnes (against 112,669 for rail) in 1976/77 to 76,461 tonnes (against 93,162 for rail) in 1981/82.

The above efforts — which were made by highly placed and powerful individuals who worked hand in hand with some equally powerful outside interests completely disregarded the fact that rail transport is cheaper than road transport. Thus, according to the figures available in 1983, the comparative costs per tonne in US dollars from Mombasa to Kampala by road and rail for three products/goods were as follows (the figure(s) for road being indicated first): coffee (94 and 50); petroleum products (120 and 57); and merchandise (85 – 100 and 50 – 60). According to the figures

supplied by the Uganda Railways Corporation in the second half of 1986, rail transport is still cheaper as far as freight is concerned. Thus, whereas the road charges from Mombasa to Kampala are of the order of US\$116 per tonne, the Kenya/Uganda Railways Service offers a freight charge for the movement Mombasa — Kisumu — Jinja — Kampala journey at a rate ranging from \$35 to \$40 per tonne. And with the new transit arrangements, the normal transit time between Mombasa and Kampala should rarely exceed seven days.

Government is committed to a mixed economy approach. This commitment applies also to the transport sector. So, while there are parastatals engaged in the transport of goods and passengers, private operators, too, have been encouraged to play their part, in the promotion of the sector. Thus, foreign exchange has been availed to them to import vehicles and run them. Indeed, according to UTC internal documents, the estimated fleet situation in the country in March 1985 showed that private operators had a total of 300 large and 1970 small buses against a mere 57 large buses for the two passenger parastatals. Also, of the total seat — kilometres operated, some 91 per cent were in private hands with the parastatals providing only 9 per cent of total capacity.

Unfortunately, some private operators, especially of buses, have not performed well. The tendency has been for the companies to do well when their fleet of buses was small — usually between two and three — and to literally collapse or experience serious operating difficulties when they tried to expand. It would seem that with a few exceptions — especially for those operating in the war zone during 1981/85 — the main problem has been poor management particularly where finances are concerned. Poor financial management has been aggravated by lack of training in transport management, and poor training for drivers.

In spite of these problems — concerning private operators — government has not panicked or been angered into measures that would squeeze the private sector. Private operators are still encouraged and assisted in their work. The problem of poor training is true of government departments also and is being energetically tackled by government. For instance, the Ministry of Co-operatives and Marketing has been organizing courses for the drivers of co-operative unions and societies so that they can improve on their skills. Efforts have also been taken in the area of transport management. In the first instance, and when funds permit, some officers are sent to the Arusha (Northern Tanzania) based Eastern and Southern African Management Institute (ESAMI) for courses in the field. Secondly, in Uganda, the Management Training and Advisory Centre (MTAC), which is under the Ministry of Industry and Technology, has done its best to organize suitable courses in transport management.

MEASURES TAKEN TO IMPROVE THE ECONOMIC AND FINANCIAL PERFORMANCE OF TRANSPORT PARASTATALS

In the part dealing with issues related to personnel management, we referred to some measures taken by different parastatals to reduce excess staff. These measures were intended to have, and have had, direct and positive financial benefits as the records from Uganda Airlines show. Additionally, Government has taken two specific measures of direct financial nature which we will now deal with.

First, Government has ensured that parastatals get the capital that they are entitled to under the Acts or Decrees establishing them. A good example of this measure is the Uganda Airlines Corporation which, at the beginning of the 1986/87 financial year, was promised Uganda Shillings 7 billion or US\$5m (US\$1 = Uganda Shilling 1,400/-) as capital contribution. It would be given more money in instalments until it had received a total of U. Shs. 105b or US\$70 m which is the authorized capital.

For record purposes, it is important to note one or two facts concerning these figures. According to Decree No. 15 of May 1976 establishing the Airline, the latter's authorized capital is U. Shs. 500m, worth US\$70m at the time (1976). During the discussions held between government and the corporation in April 1986, it was agreed that the figure of US\$70m would form the basis for the calculation of, and contribution to, the authorized capital. Since the *priority exchange* rate stood at

US\$1 = U. Shs. 1,500/-, it meant that the authorized capital was no longer U. Shs. 500m but U. Shs. 105 billion (i.e. 70,000,000 x 1,500). It was agreed further that all other forms of subsidies to the airline were to be withdrawn. Lastly, it is gratifying to note that as at 18 November 1986, Government had contributed U. Shs. 2.3 billion of the promised U. Shs. 7 billion is evidence that it was prepared to live up to its promises.

Furthermore, Government is insisting on rigorous financial and general managerial accountability in the running of parastatals, including transport ones. In future, and in accordance with the Acts establishing them, these bodies will have to present their annual accounts to the National Resistance Council (legislature) annually instead of at a time convenient to them, and after several reminders as in the past. Government has also instituted ad hoc Committees of Inquiry to investigate the management of the (headquarters of the) Ministry of Transport and Communications (namely: the Departments of: Surface Transport; Administration, Finance and Establishments; and Planning) and all the units that are attached to it namely:

- Civil Flying School, Soroti;
- Directorate of Civil Aviation;
- Meteorological Department;
- Uganda Airlines Corporation;
- Uganda Railways Corporation;
- Uganda Transport 1975 Ltd.; and
- People's Transport Company.

We must hasten to add here that the phenomenon of *ad hoc* committee of inquiry is not unique to the transport sector, it concerns the entire public sector. Most government ministries and departments plus public enterprises are already being investigated. It is also extremely important to note that efforts associated with these inquiries are not haphazard. Far from it. They are part and parcel of the NRM Government's Ten-Point programme. They are specifically meant to implement point number seven whose objective is the elimination of all forms of corruption and abuse of power.

We wish also to recall the fact that Government has made it absolutely clear that no witch-hunting or political victimization of any sort are intended. The intention is simply to find out the root causes of mismanagement including corruption and abuse of office, with a view to removing them and taking other measures which can promote overall efficiency, and save the taxpayer's money. In some cases, such measures have included the suspension of allegedly or truly corrupt officials pending the completion of investigations into their alleged corrupt practices or the taking of appropriate legal action where there is sufficient evidence to merit such a step.

We sincerely hope that, in spite of the difficulties the country has been passing through, the above and similar measures will go a long way to improving the economic and financial management of organizations involved in the transport sector and thus help in the reconstruction and development of the country's overall economy.

ISSUES RELATED TO REGIONAL CO-OPERATION

Prior to the break up of the East African Community in 1977, Uganda's transport and Communication network was closely linked with that of Kenya and Tanzania. Hence, when the regional body broke up, the country suffered considerable disruption and hardship in the transport sector.

Nevertheless, we did not indulge in sulking. Nor did we lose faith in regional co-operation. Uganda is still committed to this ideal and that of African Unity. In pursuit of this commitment, she has joined, and participates actively in appropriate regional organizations such as the Preferential Trade Area and, nearer home, the Kagera River Basin Organisation.

Because of the foregoing commitment, and given her geographical position, Uganda has joined several bodies concerned directly or indirectly with transport. Thus, she is a member of: the

Northern Corridor Transport system, grouping Burundi, Kenya, Uganda, Rwanda and Zaire; and which aims at removing or reducing both the physical and non-physical barriers to transit traffic among the signatory states to the Agreement. The Trans-African Highway Authority (TAHA), whose objective is to link East and West Africa (Mombasa—Lagos) thus promoting interstate trade and other exchanges, the Trans-East African Highway Authority (TEAHA) meant to link Cairo and Gaborone (Botswana); and the Inter Governmental Committee on Shipping (ISCOS). Uganda has also concluded a number of bilateral agreements with its neighbours particularly in the field of air and rail transport.

In the civil aviation Uganda has signed an air services agreement with other countries in East Africa. Furthermore, Uganda, Tanzania and Kenya, represented by their Directorates of Civil Aviation meet regularly (the last meeting having been held between 3–6 November 1986 at Entebbe, Uganda) to review areas of co-operation, such as, air traffic services, search and rescue and the recognition of each other's licenses and standards. Regarding marine transport services when Tanzania's *MV Victoria* has been repaired, marine passenger services are to be resumed between the three countries (ports of Mwanza, Bukoba, Port Bell, and Kisumu) in the first quarter of 1987. These are but very few examples of the many areas in which Uganda is co-operating with her ex-partners in the East African Community in the transport sector.

Discussion of regional co-operation would be incomplete without a word on the Northern Corridor Transit Transport System. The Northern Corridor Transit Agreement, came into force on 15 November 1986 and is intended to increase the speed; reduce transit costs; increase security of goods; and eliminate the non-physical barriers on the flow of transit traffic through the contracting states namely, Kenya, Uganda, Rwanda, Burundi and Zaire. This will be ensured through the various protocols of the Agreement.

There is need to mention the protocols on Documentation and Customs Control, whose objectives are essential for increasing the speed, and ensuring the smooth flow, of transit traffic along the Northern corridor transport axis. Under these protocols, the Road Customs Transit Document (RCTD) has been introduced to replace the former Multiple Custom transit documents and will be used as a sole customs through declaration document; it will also be used for the cancellation of bonds. The use of the document was to be fully implemented by 15 November 1986. More ways are being sought to increase the efficiency and effectiveness of the document in a bid to increase the benefits arising out of its application.

CONCLUSION

There is no doubt whatsoever that transport is a critical element in any country's overall development. Uganda fully recognizes this fact. We also appreciate the fact that the absence of a well managed transport network can greatly frustrate such development.

In the preceding pages we have outlined Uganda's transport network, the organizational framework in which it operates, and the problems and issues that relate to it, as well as measures that have been taken, or which could or should be taken, to make the network more efficient.

Our country is slowly emerging from about 15 years of past politico-administrative mismanagement, which has had disastrous consequences for lives and institutions. Nevertheless, we are not daunted by the task of reconstruction that lies ahead. Relying largely on our own efforts but also helped by friends outside our borders and with God's help, we are determined to forge ahead and rebuild our country, including sectors like the transport one.

FOOTNOTES

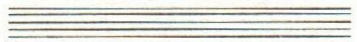
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CHAPTER 14



Policy and Management Issues in Transport: The Zambian Experience

BACKGROUND

Zambia is a landlocked country covering an area 753,000 km² and lies between latitudes 8°S and 18°S and stretches from longitude 22°E to about 34°E.

The country's population is 6.44 million with an annual growth rate of 3.1 per cent. The population is projected to reach 7.53 million by 1989. In the Eastern and Southern African Subregion, Zambia has the highest rate of urbanization, with 43 per cent of the population in urban areas and this raises implications on urban transport planning. Although large, the country is sparsely populated with only 7.5 persons per km². Zambia is a typical case of a mono export oriented economy. The country depends on mining, primarily copper, for employment and export earnings. Copper accounts for 15 per cent of the Gross Domestic Product (GDP) and 94 per cent of total export earnings. In recent years, Zambia's economy has stagnated or only grown marginally due mainly to declining copper production and receipts and reduced agricultural output as a result of unfavourable climatic conditions among other factors.

Any decline in copper revenue has a direct adverse impact on the economy, hence government's determination to diversify the economy away from mining to a broader base resting on agriculture. Towards this end, the government has taken a number of structural adjustment measures including: liberalization of the economy, removal of subsidies and prices control.

The determination of the exchange rate through market forces, or as it is commonly known the Auction system has been the single most significant development in the restructuring programme.

STRUCTURE OF THE TRANSPORT SECTOR

Transport in the economy

The contribution of the Transport Communications and storage sectors to GDP has averaged 5.8 per cent over the last years. In real terms, the transport sector grew marginally between 1981 and 1982. During 1984, the sector registered a decline of 5.6 per cent reflecting the general contraction in the level of economic activity throughout the economy. Historically, the development of Zambia's transport sector closely followed the pattern of colonial exploitation, essentially mining. Thus, railway transport was built first to cater for mineral traffic which was bulky in nature. Whatever roads were developed, were meant to be feeders to the railway and to support largely settler agriculture which developed to cater for the needs of the mining industry. Thus economic activity concentrated on the railway strip leading to the mines, hence up to today, Zambia is known as a "Line of Rail Economy".

During the colonial era, therefore, transport infrastructure developed without due regard to opening up the country and to integrating the economy.

Following the attainment of political independence, the government was determined to correct this imbalance and towards this end, massive investments were channeled into transport infrastructure. However, due to Zambia's geo-political position and the liberation wars on all her borders, the country was forced to diversify her trade routes away from the south. This involved, among other things the construction of the TANZAM Highway and TAZARA Railway line developed at a cost of US\$500 million. These developments were again aimed at ensuring that the export sector was well serviced, thus diverting resources away from transport development to meet internal needs. Currently, government emphasis in the transport sector is on rationalization of available facilities and resources through rehabilitation and upgrading of existing infrastructure rather than new construction.

Transport modes

Zambia has a well developed road, railway and air transport infrastructure in physical facility terms.

Roads and road transport

The country has 35,000 km of roads out of which 19,000 km are primary and secondary roads under the Roads Department of the Ministry of Works and Supply (MWS) and 16,000 km are tertiary roads administered by local government authorities. Of the total network under the Roads Department, 4,600 km are asphalt paved, 7,600 km are all-weather gravel and the remainder earth roads. Five major inter-State road links cater for the country's external trade as well as transit traffic for Malawi, Zimbabwe, Zaire, Rwanda and Burundi. Zambia's inter-State road links are:

- (i) The Great North Road from Lusaka to Nakonde on the Tanzanian border. This is part of the TANZAM Highway which terminates at the port of Dar-es-Salaam. It is also part of the Trans-East African Highway (TEAH);
- (ii) The Great East Road from Lusaka to the Malawian border;
- (iii) The Lusaka-Copperbelt Road to the border with Zaire;
- (iv) The Southern Road route from Lusaka to Livingstone and the Zimbabwean border at Victoria Falls. This road also leads to Botswana via the ferry at Kazungula; the latter is part of the TEAH; and
- (v) The Lusaka-Chirundu road at the border with Zimbabwe leading to the major transshipment point, Lions Den in Zimbabwe.

Zambia has a fairly well developed road transport system for both freight and passengers, but its full utilization is hampered primarily by lack of serviceability of transport equipment due to problems of spare parts and the high cost of replacement equipment. The industry is made up of public and private operators.

Following the demise of the Zambia-Tanzania Road Service (ZTRS) which had a sole franchise on the Dar-es-Salaam route, due to operational and liquidity problems, Contract Haulage Ltd. (CHL) is the only parastatal road haulage company. Apart from domestic operations, CHL operates on international routes to: Botswana, Zimbabwe, Malawi and Zaire. However, the bulk of road freight capacity is offered by the private operators grouped under the Truckers Association of Zambia (TAZ). TAZ provides about 85 per cent of the total capacity. The private sector is made up of: Zambian operators (48 per cent), Non-Zambian operators resident in Zambia (27.4 per cent) and foreign operators (24.6 per cent).

In the earlier years, government policy was to ensure that public companies provided the bulk of passenger services. The United Bus Company of Zambia (UBZ) has the franchise to operate passenger services throughout the country. Since its inception in 1972, UBZ was a protected monopoly which received government subsidy. However, due to multiple problems of low vehicle availability, under-capitalization and management weaknesses, UBZ could not cope with demand and as a consequence, the Government was compelled in 1976 to liberalize the passenger market. This has had the effect of weakening UBZ's monopoly position. As a result of this development, throughout the country, particularly on urban and inter-urban routes, the company is facing increasingly stiff competition from private operators. In urban areas private operators not only offer more capacity, but also control a larger segment of the market, estimated at 90 per cent. As can be appreciated therefore, any government policy aimed at improving the road transport industry has to pay particular attention to the needs of the private sector if it has to succeed.

Railway transport

The total railway network in Zambia is about 2,000 km. Zambia Railways (ZR) wholly owned by the government through the Zambia Industrial and Mining Corporation (ZIMCO) was established in the sixties following the dissolution of the Unitary Rhodesia Railways (RR) system. ZR operates a single 1,260 km line from the Mineral rich copperbelt in the North through Zaire linking with the Benguela railway up to the Angolan port of Lobito and to the south to the border with Zimbabwe at Livingstone connecting with the National Railways of Zimbabwe (NRZ) up to the South African Transport System (SATS) and ports. ZR handles 35 per cent of total export traffic and 55 per cent of imports including Zairean transit traffic.

The Tanzania-Zambia Railway Authority (TAZARA) or the Great Freedom Railway (UHURU) as it is termed, stretches a distance of 1,860 km from New Kapiri Mposhi in Zambia to Dar-es-Salaam in Tanzania. TAZARA handled the bulk of Zambia's export traffic, about 60 per cent and 45 per cent of the import traffic. The government's deliberate policy is to encourage utilization of the TAZARA route in order to reduce dependence on South Africa, and to re-coup the massive investments committed to the railway line. The two railway systems face similar problems of inadequate motive power and rolling stock and in the case of ZR, old age of the track which needs replacement in most parts. Currently, both systems have major on-going investment programmes aimed at rationalizing and improving performance.

Air transport

Zambia has three major airports, Lusaka, Ndola and Livingstone. Lusaka International Airport (LIA) handles all international traffic. The two other airports are Ndola on the Copperbelt and Livingstone in the South which caters for tourist traffic. In total, there are about 150 aerodromes and airstrips ranging from those owned and serviced by the government to privately owned ones. The Department of Civil Aviation (DCA) under the Ministry of Power, Transport and Communications (MPTC) is responsible for construction, maintenance, equipping and management of 52 of these aerodromes and air strips.

Zambia Airways Ltd., a wholly owned government company under ZIMCO is the sole scheduled commercial airline in the country. The airline operates international and domestic services as well as an all cargo service. Through its subsidiary, Africa Bound, Zambia Airways seeks to promote tourist traffic. There are also a number of private charter operators in the country.

The major problem besetting the airline is high operating costs, most of which are in foreign exchange. Over 50 per cent of the airline's costs are interline bills through the International Air Transport Association (IATA). As with most airlines in Africa, Zambia Airways operates fewer aircraft to fewer destinations over shorter distances relative to other world airlines, hence the high interline billings. Because of technical inadequacies, the airline also relies highly on foreign assistance through management contracts, a factor that also adds to increased costs.

Water transport

Being landlocked, Zambia has limited water transport potential. Mpulungu port to the north on Lake Tanganyika is the only port and it is increasingly becoming important as a regional port handling traffic to Rwanda and Burundi from Zambia, Zimbabwe and Malawi.

Lake transport is the only means of mobility for communities living on Lakes Mweru and Bangweulu and the surrounding island in the North. A limited amount of inland water transport exists to cater for these communities. However, its full realization is constrained by inadequate funds to procure vessels and absence of qualified manpower.

Policy and management issues

The organization and management of the transport sector in Zambia is characterized by multiplicity of institutions.

Ideally, the Ministry of Power, Transport and Communications (MPTC) has the overall jurisdiction for transport policy, planning and regulation. However, in practice, this role is shared by other institutions. The Ministry of Works and Supply (MWS) is responsible for roads and government plant and equipment including procurement and distribution of vehicles. The Contingency Planning Secretariat (CPS) under the Office of the Prime Minister is responsible for mobilizing and allocating road freight capacity in the country. ZIMCO is the holding company for all transport companies and is responsible to them on their day-to-day operations. In theory, MPTC is supposed to address policy issues of transport companies while ZIMCO is meant to be responsible for operational issues. In practice, however, the distinction between policy and operational issues is not often very clear.

Transport planning

A major weakness at institutional level is the lack of effective co-ordination amongst the various institutions. This is partly, a consequence of the absence of a proper planning capability and data base as well as inadequate professionally qualified manpower. MPTC only has a skeleton Planning Unit manned by three transport economists. Neither ZIMCO nor the other agencies involved in transport have a proper planning of economic utilization of resources. Thirdly, weaknesses in the planning capability outlined earlier and the absence of a data base has also inhibited the evolution of a transport policy.

However, aspects of transport policy exist and these are contained in various documents such as the UNIP Manifesto of 1962, UNIP policies for the Decade, 1974–1984 and 1985–1995 as well as National Development and Annual Plans. However, these policy statements tend to be broad declarations of intent and listings of objectives without due regard to the practical implications of implementation. For example, some of the elements of the current policy are:

- (i) To provide decent bus services throughout the country while keeping fares at reasonable level;
- (ii) To provide decent railway passenger services while maintaining fares at levels the majority of the people can afford;
- (iii) To provide decent air services domestically and internationally, at reasonable fares taking into account the cost of operating such services;
- (iv) To provide an efficient cargo haulage service.

The predicament that both the Government and operators find themselves in is obvious. For example, take the noble objective of providing bus services at reasonable fares. The policy does not define what a decent bus service is and what reasonable fares are given rising costs and the general price levels in the economy as a whole. Even the definition of efficiency is not clear. In monetary terms, or in physical terms such as accessibility to the service and areas served and other indicators.

Thus, as can be appreciated, the transport policy as it stands now is vague and cannot be interpreted for practical implementation. It is also not dynamic enough to take account of the changing economic and social environment. For example, given the country's current economic climate, it seems unlikely that air services can be provided at reasonable levels while at the same time, taking into account the cost of operating such services. The ambiguity in the current policy also leads to a directional crisis for operating transport companies because the objectives towards which they should work are not clear. Often, public transport companies are expected to provide a social service and be profitable at the same time, objectives which are in practice contradictory.

There is an urgent need, therefore, to evolve a comprehensive transport policy which will address all these issues in clear practical terms while taking into account the socio-political and economic objectives of the country in order to ensure that the development of the transport sector proceeds in line with the intended goals, at national, regional and international levels.

Transport pricing

Linked to the question of transport policy is pricing. Government policy is to regulate all pricing in the transport sector for all transport modes. Any proposal for a rate or fare increase has to be submitted to the government for approval. Railway rates and air tariffs are submitted directly to MPTC for approval. However, this is more of a formality than real vetting of the increases, because in practice the increases asked for are granted, sometimes with minor variations.

Road freight are more regulated than rail and air. The Road Traffic Commission (RTC) under MPTC is responsible for administering fares and freight rates through the Road Traffic Act of 1976. The current practice is that private operators under TAZ and the parastatal road haulage company, CHL, often submit a joint proposal for rate adjustment to the RTC. The RTC then considers the proposal and meets the operators to negotiate with them a "reasonable" rate. However, the RTC does

not at the moment have either the data nor the professionals capability to address the question of transport pricing effectively. Freight rates are currently uniform throughout the country regardless of accessibility, condition of roads or availability of transport capacity in a particular area. This has proved to be a disincentive to operators and the Government has received considerable criticism over this issue from various donor agencies, particularly the World Bank.

· Passenger fares are considered in the same way as freight fares except that historically, UBZ, the parastatal road transport company, has provided the lead. It has been automatic that once UBZ is granted a fare increase, the same is done for private operators.

The practice of awarding uniform fare increases to the private and parastatal operators has led to a distortion in the fare structure and to the general fare level. Because of persistent operational, liquidity and manpower problems and the need to raise enough revenue to cross-subsidize its unprofitable rural operations, UBZ has requested for and been granted fare increases on a regular basis. Apart from these factors, UBZ also has a labour force that is much higher than its requirements as well as plant and equipment in terms of workshops which is above its current needs given its reduced fleet. This means that the company has high overheads which it has to cover. This therefore tends to exaggerate its costs. On the other hand, private operators are mostly owner operators with very little overheads but they benefit from increases necessitated mainly by UBZ's structural problems.

A significant feature in transport pricing is that it is still regulated despite price decontrol in other sectors of the economy and the general liberalization trend. It is not very certain why this has remained so but, given the central role of transport, and its impact on the economy, the price of transport services affects the competitiveness of the whole economy. It is necessary to continue to regulate passenger fares in order to protect the consumer and because it is such a public issue with a lot of social and political implications.

Manpower and training

The transport sector has to be organized and managed in such a way as to promote the development of a balanced, integrated and evolutionary transport system which should effectively respond to existing and future demands. The management of the transport sector has two aspects. The first is the need to have properly defined and co-ordinated institutions whose functions and objectives should be clearly spelt out in order to ensure that the institutions properly represent the various needs and address themselves to the objectives laid out in the various transport sector blueprints. The second is the need to have properly qualified professional manpower to man these institutions in the right numbers and places.

Professionally qualified manpower is currently a major constraint to the effective performance of the transport sector. Both at Government and operating company level, there is a critical shortage of manpower. The areas most seriously affected by this deficiency are transport policy formulation, planning and monitoring of the transport sector, in terms of investment, pricing and regulation. At the operational level costing, pricing, planning as related to forecasting and market analysis are adversely affected. Marketing is also another major deficient area.

Currently, transport training at professional and management levels is non-existent. The ZIMCO Institute of Management is the only institution in the country that provides some transport training. However, the training is limited to basic artisan training in such areas as motor mechanics, driving and other middle management courses. Vocational training colleges such as Northern Technical College (NORTEC), Zambia Institute of Technology (ZIT), Evelyn Hone College of Applied Arts and Commerce do not provide any courses in transport. Even the University of Zambia does not run a single course in transport.

Transport training is, therefore, a major deficient area that needs urgent attention.

CONCLUSION

In a paper of this length, it is not possible to address all management and policy issues in the transport sector in Zambia. An attempt has been made to highlight the most critical ones.

The government is aware of the problems in the foregoing as they are well documented in various reports and appraisal papers, both internal and external.

A number of measures are being undertaken to remedy this unfavourable situation. The first, which is likely to have a major positive impact is the establishment of a fully fledged Transport Planning Unit (TPU) in MPTC staffed by qualified manpower. This should go a long way towards addressing the problems of transport policy, planning and data base outlined earlier. There is also a move towards more effective co-ordination of the various institutions involved in the transport sector through regular meetings and consultations. Transport training, through more use of scholarships has been stepped up and most of the larger transport companies have their own in-house training facilities which are being expanded and improved.

A major constraint to attaining all these objectives is lack of funding. A lot of donor support will therefore be required if these various measures are to succeed.