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Implementing Second-Generation Road Funds

Lessons Learned

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This Technical Note is based on a review of experience with the operation of second-generation Road Funds in Benin, Ethiopia, Ghana, Kenya, and Zambia. Findings of this review are based on an assessment of the structure and process of setting up and implementing the Road Funds, as well as of an assessment of the objective achievements to date. While all countries have not moved at the same pace, they have progressed to various stages to introduce institutional and financial reforms, in the spirit of the RMI. The specific circumstances faced by each country defy generalizations and make it necessary to evaluate the progress in the context of the original design, national priorities, and objective achievements.

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The rehabilitation of the road network and the build up of institutional and financial capacity for their continued maintenance are the most critical challenges confronting transport planners and policy makers in Africa. To address road maintenance needs, Road Funds (RFs) were set up during the 1970s in a number of countries in Africa. Experience with the Road Funds (referred to as the "first-generation" Road Funds) was not entirely satisfactory. The RFs were set up as a line item in the national budget that represented plain earmarking of government revenues to finance a service, administered and largely delivered by government departments and allocated according to more or less pre-defined priorities. They often fell short of their goals as manifested in poor governance, poor collection and disbursement and inadequate contribution to the Fund for yearly maintenance of the country's road network.

In response to deteriorating condition of the road network and high associated economic cost, various stakeholder consultations were held during the 1980s under the umbrella of the Bank-managed and donor-financed Road Maintenance Initiative (subsequently renamed as the Road Management Initiative-RMI), which set the broad outlines of a new policy framework for the road sector. The

RMI has, since 1988, undertaken to develop awareness about the importance of road maintenance and has supported country level programs designed to identify the root cause of the problem and to initiate actions needed to set the management and financing of roads on a sustainable basis. As part of the new policy framework, and reflecting the pioneering experience of Zambia, the concept of "second-generation" RF has emerged. Second-generation RFs are intended to support commercialization of road management, increase domestic resources made available to road maintenance and increase efficiency of resource allocation and use. In the new arrangement, road financing is entrusted to a new autonomous body, jointly managed with road users, and financed "off-budget" by designated road user charges, based on the user-pays principle.

Structure

Evaluation of the early performance of the Road Fund Boards suggests that, while it has been easy to set up institutional arrangements, implementation of concomitant policy and legislative framework throughout the sector has been more difficult. The difficulties result from the mind set and governance in the countries, which go beyond the man-



date of reforms in a particular sector. It also takes time to build the institutional capacity necessary to bring about sustainable reforms. Implementation of institutional reforms in Zambia, for instance, remain somewhat weak, despite a strong user representation and dynamic leadership of the Roads Board. This is largely because of inadequate action on the part of government with respect to the definition, clarification, and assignment of authority with matching responsibility as well as the legal foundation for the Board's control over setting user rates and collection of proceeds. The Ghana Road Fund, in contrast, has a firm basis, with detailed internal and external monitoring procedures to ensure efficient use of money and accompanied by monthly progress reports and external financial and technical audits. The Road Fund in Ethiopia receives strong support from the government as laid out in the Road Sector Development Program (RSDP), a strong bureaucracy and evidence of political will to support reforms in the roads sector. However, even after two years of existence, the Ethiopia RF Secretariat is yet to be fully established, with less than 30 percent of the designated professional positions filled.

Process

The evidence on the *implementation stability of the second-generation RF* base offers mixed results. The Road Fund Boards have not always been successful in protecting the flow of funds and stabilizing resources for road maintenance. In Zambia and Benin, the fuel levy is channeled into the RF account from the Petroleum Commission through the Ministry of Finance, creating delays. In Zambia, RFs continue to be impacted by "budget" allocations, with long elapsed time and large arrears. However, the Zambia Roads Board is working to reduce delays and streamline procedures beginning FY01. In Ghana and Ethiopia, fuel levy is credited directly from Petroleum Enterprise into the RF account, regularly on a monthly basis, creating a stable basis for the RF. It may be too simplistic to assume that RFs will always be inviolate. It is essential to design RFs to maximize the probability that they will not be abused, rather than simply legislating a RF into existence. Raiding of the RF may still be possible because of legal or bureaucratic holes in the system. MoFs usually find a way for using funds for national emergencies (which may even be justified) as well as for non-emergencies. The structural safeguards necessary to provide protection to the Road Funds require a strong political will. Full commercialization of the road sector would provide a strong barrier to such intervention. In addition,

user representation and transparent dissemination of the Board's activities are required to establish a check-and-balance system to improve accountability in the day-to-day activities. It is important for the RFs to be supported by well established enforcement tools to recover money owed to the RFs.

One of the requirements of the second-generation RFs is to set up arrangements for *independent monitoring of performance* of the flow of funds and the quantity, quality, and cost of the road works. The available evidence offers mixed results. In Zambia, the ability of the NRB to manage the RF is compromised by an absence of a framework for annual planning, programming and budgeting, though efforts are being made to develop an Annual Works Program based on identified needs of the road agencies, as in the case of the IDA-financed ROADSIP. The Zambia RF accounts are prepared on a quarterly basis and audited by an independent external auditor. Though preparation of audited accounts is a big step forward in improving accountability in the use of funds, the accounts are prepared without any explanation in the use of funds and leave a number of unanswered questions. In Ethiopia, special procedures have been introduced to monitor the performance of the National Roads Agency (Ethiopian Road Authority, ERA) based on preparation and approval of payment certificates and monthly progress reports. The weaker regional and urban authorities have a long way to go before any performance based systems can be established. Currently they are required to report on funds utilization. Ghana Roads Fund Board has established proper planning and programming of road works with well defined disbursement and accounting procedures, which have facilitated timely contracting arrangements. Arrangements to systematically carry out independent technical audit are still lacking in most countries, with the remarkable exception of Ghana.

Objective achievements

Available evidence suggests that setting up dedicated financing arrangements, even under second-generation principles, is a necessary but not a sufficient condition to ensure that a sustainable and stable basis for road maintenance is established. This, in turn, will ultimately translate into improved service delivery and operational efficiency. Clearly, in all the countries examined, establishment of the RFs has contributed to an increase in funding for road maintenance and enhanced transparency in the use of funds. However, the critical issue is the extent to which RFs have been able to lead to production effi-

ciency gains and service improvements. In this analysis, performance of the RFs is evaluated in terms of four parameters: (i) quality of the road network; (ii) operational efficiency; (iii) allocative efficiency; and (iv) development of local construction industry.

Quality of the Road Network. Absence of a detailed time-series data on road conditions makes it difficult to empirically establish road improvements though a comparative evaluation based on available data provides indications of an increase in length of “good” quality paved roads in all the countries examined. Moreover, it is difficult to separate effects on road condition from maintenance and rehabilitation. In Zambia, the impact of reforms in the roads sector in terms of improved quality of road network is substantial and there appears to be in place a sound strategic framework to reverse the deteriorating trend and address the neglect of past decades. In Ethiopia, the proportion of main roads in “good” condition has increased from 15 percent in 1996 to 25 percent in 1999. In Ghana, the proportion of “good” roads has increased from 21 percent in 1997 to 30 percent in 1999. However, the benefits of improved maintenance have been confined to the main and urban roads. Condition of the rural/feeder road network does not appear to have improved. Even when funding is available, lack of capacity at the sub-national level is a key constraint to poor maintenance of the rural road network.

Operational Efficiency. In terms of operational efficiency, improved contract management and disbursement arrangements have resulted in a reduction in road maintenance cost per kilometer by 10 percent to 20 percent in Zambia, Ethiopia and Ghana. In Zambia, a community initiated cost sharing road improvement scheme has also been introduced. Well-managed contracts financed from the Road Fund have enabled timely payments to contractors which is resulting in lower contract rates for road maintenance. The share of maintenance works contracted out has increased to almost 90 percent in Zambia and Ghana, though in Ethiopia road maintenance continues to be carried out using force account. ERA is seeking to improve its effectiveness by establishing commercial operations in maintenance districts and jointly implementing performance contract agreements with the RFA. Gradually, ERA also expects to introduce contracting for maintenance works. In any case, road maintenance expenditure in Ethiopia has more than doubled over the past five years.

While these are encouraging trends and represent a significant departure from the past, road administrations continue to suffer from past ills of the civil service; and technical assistance and knowledge sharing is required

over some time before effective arrangements can be put in place. The absence of a fully functional maintenance management system makes it difficult to ensure that the maintenance budget is correctly allocated and is often well below what would be economically rational. In addition, not all the money collected in the RF is being disbursed. In Ethiopia, less than 40 percent of the Road Fund has been disbursed over the past two years (mainly because of the lack of capacity especially in regional and urban agencies) and the remaining amount is invested in treasury bills. In Benin, incapacity to disburse the available RF has resulted in surplus over the past three years, which can be quite dangerous when other government departments are strapped for resources. Experience with other RFs has shown that large unspent cash balances usually leads to “raids” on the RF.

Resource allocation. In terms of *allocative efficiency*, the second generation RFs are much better set up, with their commercial orientation and strong constituency, as compared to the classic first generation Road Funds. However, resource allocations for road maintenance continue to be dictated by “standard formula” rather than a planned review of programs put forward by various road administrations. This is most apparent in Zambia, Kenya, Ethiopia and Benin. The disbursements are biased towards urban and main roads to the detriment of the rural/feeder road network. In Kenya, substantial contractual commitments have been made on the non-core road network while facing increasing demands on the core priority network. In addition, even the planned expenditures are not fully disbursed, especially for the rural road network, primarily because of lack of capacity at the regional level. In Ethiopia, for example, only about 20 percent of the planned allocations for the rural road network were disbursed during FY99 because of the lack of absorptive capacity.

The RFs in Zambia and Kenya have not been sufficiently immune to the kinds of political interference that has impacted the classical first generation Road Funds. Resources have been diverted to rehabilitate roads in the capital city over the past two years to the exclusion of road maintenance needs of the country’s network. This is not surprising as after years of resource constraints, for the first time since establishment of the RF, executing agencies have resources at their disposal. The first beneficiaries have been residents of large capital cities, in view of their high political profile, and the fact that the most ardent supporters of the RF are urban residents, who also account for a dominant share of car ownership. However, to ensure sustainability of the RF and adequately

address the broader issues related to the quality of the road network, it is critical that in the coming years, attention is given not only to high volume urban roads but also to rural/feeder road network, to ensure equitable distribution of resources.

Capacity of local construction industry. The RF has helped to insulate road maintenance contracting and payment issues from financial uncertainties. One of the impacts of the RF has been on improvements in work programming and a move towards contracting and the resurgence of the domestic contracting industry, which has brought efficiency gains in resource use. In Zambia and Ghana, for example, force account is used for only less than 10 percent of the maintenance works in the recent years. In Zambia, the number of local contractors have increased from four in 1994 to 450 in 1999 and local consultancy from six to 20 over this period. In Benin, the share of maintenance works carried out using force account has declined from 47 percent in 1997 to 40 percent in 1998. There is, however, considerable scope for further improving the capacity of local construction industry in all of the countries examined. In fact, one of the key constraints to efficient use of RF resources is the lack of sufficient local capacity in road maintenance.

Key lessons

(a) The common thread across all reviewed countries is that incremental user charges are being collected for road maintenance, managed by autonomous Roads Boards, with a clear separation between financing and executing functions as well as transparency and accountability in the use of funds. Funding for maintenance shows consistent increases, but the amounts are still short of total requirements.

(b) Roads Fund Boards arrangements represent progress on management, accountability, transparency and increased awareness on the need to address long neglected road maintenance needs and this is expected to result in efficiency gains in the long run.

(c) Setting up dedicated financing arrangements is a necessary but not a sufficient condition to ensure that a sustainable and stable basis of road maintenance is established which translates to improved service delivery. It is equally necessary to ensure that: (i) political commitment exists to safeguard the use of money; (ii) there exists a check-and-balance governance system to restrict government's discretionary powers and arbitrary use of funds; (iii) aggregate resources are sufficient to cover all of the road network; (iv) road user fees are based on the maintenance "needs" of the road network; (v) RF Boards

are capable of defining and enforcing contractual agreements; (vi) RF Boards include diverse interest groups to ensure equitable distribution of resources; (vii) clear allocation of responsibilities between RF authority and government departments; and (viii) road administration/agencies have the capacity to carry out road maintenance works efficiently and effectively.

(d) While maintenance of main and urban road network has improved, quality of feeder/rural road network continues to deteriorate. This is partly a reflection of an inadequate planning and programming framework and partly a lack of capacity in the regional administrations. Years of neglect has limited the capacity of the road agencies to carry out maintenance works, a deficiency most apparent in rural and feeder road administrations.

(e) Gains in productivity efficiency have been registered only when the RFs were instrumental in fostering the outsourcing of works and services with private suppliers.

(f) Revenue-raising through Road Funds should match absorptive capacity rather than identified maintenance expenditure needs.

(g) Ability of the Road Fund Boards to determine user fees/expenditures, even when supported by some legal basis, in practice may not always be exercised. The best that can be hoped for is that: (i) Boards are capable of working out and supporting sustainable financing strategy based on road user charges; and (ii) Boards are successful in convincing governments (still the ultimate owner and decision-maker) that it is in the national interest to raise charges to meet road maintenance needs.

(h) There is no clear evidence yet to support notion of an optimum size (number) and mix (public vs. private) in the composition of Road Fund Boards. These decisions will be influenced by the country's size, length of the road network, characteristics of the work, role of the civil society and governing arrangements.

(i) Technical auditing functions should involve continuous auditing of projects-in-progress for improving performance. This would eliminate projects being technically audited after the event rather than during the event. There is a need to: (i) establish a credible and independent external auditing process to monitor the quantity and quality of work and ensure transparency and accountability in the use of road maintenance funds, most of which are now derived from the road-users; (ii) set up appropriate responsibilities for reporting and follow-up of the audit recommendations to ensure its effectiveness; (iii) develop an updated and rationalized inventory and condition survey of the classified road network.