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Improving Management and Financing of Roads in Central African States

Review of the Road Sector in Member Countries of the Customs and Economic Union of Central African States (UDEAC)

This note is based on a Review of the Road Sector in Customs and Economic Union of Central African States (UDEAC), April 1999, conducted by Ole Kr. Sylte, a Norwegian consultant, with assistance by five local consultants in the study area. This and similar reviews in the other parts of Sub-Saharan Africa, have been carried out as part of the Road Management Initiative's (RMI) strategy to make its findings available to all countries in Sub-Saharan Africa. The key concept to emerge from the RMI for solving the pervasive maintenance problem is commercialization; bring roads into the marketplace, charge for their use on a fee-for-service basis, and manage them like any other business enterprise.

The purpose of this series is to share information on issues raised by the studies and work of the SSATP. The opinions expressed in the notes are those of the authors and do not necessarily reflect the views of the World Bank or any of its affiliated organizations.

For information on these notes, contact the SSATP in the Africa Region of the World Bank, Washington, DC. Internet address: ssatp@worldbank.org.

The *Union Douanière et Economique de l'Afrique Centrale* (UDEAC) includes seven member countries: Cameroon, Central African Republic (CAR), Chad, Congo, Equatorial Guinea, Gabon, and São Tomé & Principe. The Democratic Republic of Congo (DRC) is also included in the survey. The eight countries, here referred to as the "region," cover 5.366 million square kilometers and have a combined population of about 57 million. The average population density is 11 persons per square kilometers, compared to 18 in the SADC region, 32 in the COMESA area (Eastern and Island Countries), and 32 in the ECOWAS region.

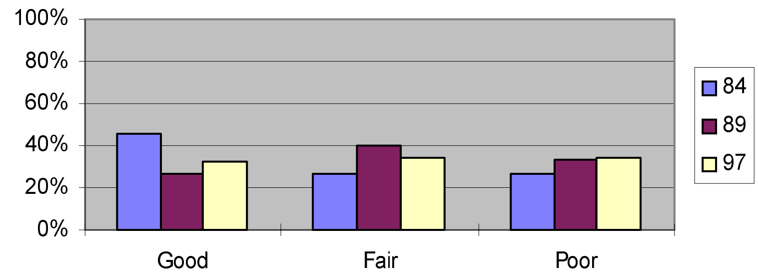
These eight countries in the UDEAC region struggle, as most do other countries in Sub-Saharan Africa, with a persistent road maintenance problem—the public road network deteriorates faster than governments can repair and rehabilitate it with donor assistance.

In the recent past, economic development in the UDEAC region has been hampered by civil wars, political unrest, and frequent changes of governments. Six of the eight countries have in varying degree been hit by some sort of political and economic disturbance during the last decade. Gabon is an exception and, with a GNP per capita of US$ 3490 (1996), is the only country that belongs to "upper-middle" income economies. The seven other countries belong to the "low-income economies," with GNP per capita ranging from US$120 to 650. The average GNP per capita of US$355 compares with US$180 in the COMESA area, US$1081 in the SADC region (including RSA), and US$358 in the ECOWAS region.

The demand for road infrastructure service

The total vehicle fleet in the region was probably around 400,000 vehicles in 1997, or some 20,000 fewer than in 1989. This corresponds to an average vehicle density of 68 vehicles per 10,000 persons, which is about the same as in the ECOWAS region (72), but well below the average for the SADC region, excluding South Africa (150). Although there was an average decrease, some countries experienced a growing demand. In Chad, with the lowest vehicle density of 49 vehicles per 10,000 persons, the vehicle fleet and traffic increased some 25 percent per year in the early 1990s, in step with the improved economy. Because of weak economies, governments have been unable to expand road networks to serve the most remote rural areas. Improving transport infrastructure has therefore been identified as a priority action to reduce poverty in rural areas. A survey in Cameroon found that as much as 86 percent of people interviewed thought that poor transport was the major cause of poverty. Many of the problems of the poor were compounded by the limited or non-existent road infrastructure, which cut off many villages and made some inaccessible for up to four months during the rainy season. The CAR and Chad are the two truly landlocked countries in the region. Also the DRC faces much of the same problems because of the vast land area and the narrow outlet to the Atlantic Ocean in the west. These countries are dependent on transit road traffic through neighboring countries for their export and import. However, road transport in the UDEAC region is supplemented more by rail and river transport than are other SSA regions.

Figure 2.8: Main paved road condition: UDEAC



The road network

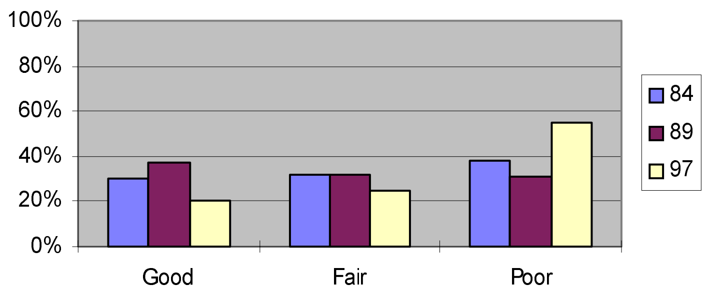
The total road network in the region amounted in 1997 to about 256,668 km, including 90,148 km of main roads, 135,923 km of rural roads, 2,215 km of urban roads, and 17,073 km of farm roads, forest roads, and other roads. The main road network alone is estimated to have a replacement value of some US$ 6.5 billion and to require annually some US$ 243 million for sustainable maintenance. (excluding rehabilitation needs). The length of paved roads has increased about 4 percent annually over the last three decades, from a total of 3997 km in 1970 to about 10 588 km in 1997, but is still fairly modest in terms of length per million inhabitants, at about 185 km, compared to 399 km in the ECOWAS region, 192 km in the COMESA area, and 592 in the SADC region.

Figures 2.8 and 2.9 show the changes in average road conditions in the period 1984–1997 according to available data. These data should, however, be treated with caution since monitoring of road conditions are not done regularly and not all based on the same parameters. However, the data indicate that the condition of the “main paved” network have remained fairly stable during the last 10 years, with about a third of the network being in either “good,” “fair,” or “poor” condition. This apparently stable condition is probably mostly due to massive rehabilitation efforts in many of the countries during the period, mainly by donor funds, and not the result of regular maintenance efforts. For the “main unpaved” road network, the data indicate a deterioration over time that most likely is caused by inadequate maintenance and heavier traffic.

Financing

The often poor and deteriorating condition of the road network in the region may, to a large extent, be explained by insufficient funding for maintenance. In 1997, the eight countries only spent a total of about US$ 65 million on recurrent costs for road maintenance, which amounted to some 25 percent of the estimated US$ 243 million needed to keep just the main road network in a stable condition. Cost recovery is poor. Direct road user fees collected by the governments in 1997 totaled about US$20 million, which was less than 10 percent of total maintenance requirement for the region’s main roads. All revenues collected from road users in 1997, including government taxes and duties, totaled about US$130 million, or just over 50 percent of the requirements for sustainable maintenance of the main roads.

Figure 2.9: Main unpaved road condition: UDEAC



Various designs of road funds have been tried for a long time. For example, the present road fund in the Central African Republic gradually developed from a "special account" in the 1960s and 1970s—maintained at the Ministry of Finance and funded through the general budget—to the legally and financially autonomous public institution created in 1981. But the "special account" mechanism of the national budget did not provide timely and adequate financing of road maintenance. A new type of road funds, referred to as "second generation road funds," which involve road users in management, have now been established in the Central African Republic and in Chad. Also the governments in Cameroon, Gabon, and Equatorial Guinea are considering the concept.

Road management

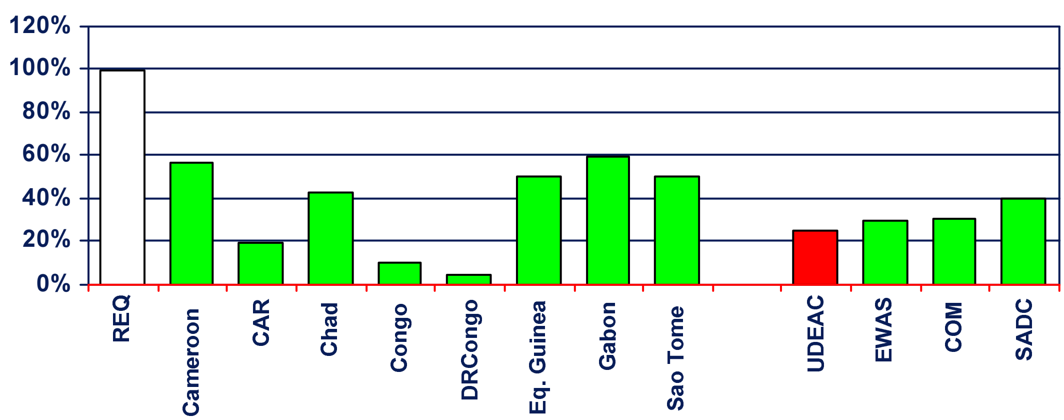
The main roads in all eight countries are managed by government departments that face the same constraints as other civil service agencies with inadequate salaries and service conditions. Urban roads are managed mainly by the municipalities, or city councils, and rural roads by district administrations. Central coordination of rural road development and maintenance, both technical and financial, is arranged differently in each country. In some countries the coordination is done by a section in the Ministry of Local Government, while rural roads in others are under the responsibility of various agricultural agencies, such as cotton companies, coffee companies or livestock companies. Limited budgets have, however, prevented most agencies from adhering to regular maintenance programs. Consequently, provision of inputs and collection and marketing of cash crops and food crops have become difficult and costly because of the high vehicle operating costs.

Employment conditions in road agencies are poor. Road agency staff in all eight countries have salaries well below those in the private sector. Engineers are typically paid annual salaries in the range of US$1,200 to 2,500 compared to US$5,000 to 15,000 in the private sector. While the public sector has so far been able to attract well qualified personnel, this pattern is now breaking up as the private market becomes more stable and attractive to young professionals.

Work execution

In the UDEAC region, as elsewhere in Sub-Saharan Africa, there has been a marked change over the last three

Figure 2.10: Maintenance expenditure as percentage of requirements (1997)



to five years towards more use of private contractors for routine and periodic maintenance. Earlier, force account brigades received almost all of whatever scarce funds were allocated for maintenance. Maintenance programs proposed for the coming years include a planned progression in participation of private contractors. In Chad, the *Office National des Routes* **(**OFNAR) went through a process of commercialization and privatization during the last ten years that culminated in a delegation of all its activities to a new company, the *Société Nationale d'Entretien Routier* (SNER), and the private sector. While SNER in 1995 was allocated half of all routine maintenance works on a sole source basis, all maintenance works are now opened to competitive bidding. The intention now is to open SNER's capital to private shareholders.

The change from force account operations to contracting has also altered the role of management. There is now more emphasis on the need to design and specify all road works, quality control, and tight supervision of works execution. This change in roles has made road agencies realize that they lack the capacity to carry out all the functions of an effective client, i.e., procurement, cost and quality control, and supervision. Some road agencies have therefore adopted a model of outsourcing contract management as used successfully in other West African countries, such as Mali and Senegal. Part of routine maintenance is there typically carried out through works agreements delegated to an Agency for the Execution of Work of Public Interest for Employment (AGETIPE) that, on an annual basis, act as project manager, and procure and manage local contractors.

In the past, all the countries in the UDEAC region have relied on public plant pools for force account operations. These plant pools were managed either directly by the road agency or by a separate department. Most countries are now moving away from publicly owned fleets of plant and vehicles and towards use of public/private commercial plant pools and private contractors with their own equipment. Chad has no public plant pool, and the road agencies in Equatorial Guinea and São Tome & Principe have only skeleton equipment fleets left. Road agencies in Congo and the DRC, which used to have large equipment fleets, have now lost their fleets through negligence or war operations.

Special issues

Overloading of vehicles is a major problem in the region—axle loads of up to 20 tons have been recorded. While road agencies operate some weigh-bridges, these represent only a token effort considering the scope of the problem. As effective enforcement of axle load limits needs regional coordination and support by the professional trucking industry, UDEAC organization could play a vital role in curbing this problem.

Road traffic safety is another pressing problem in the UDEAC region, as in most other regions of Sub-Saharan Africa. The average annual fatality rate per 10,000 vehicles is probably higher than 60 given the available data, since there is widespread underreporting. Pedestrians and passengers of public service vehicles are probably the main victim groups.

Road Management Initiative

The RMI was launched in 1988 by the United Nations Economic Commission for Africa (UNECA) and the World Bank, under the auspices of the Sub-Saharan Africa Transport Policy Program (SSATP). The countries taking part in the RMI are Cameroon, Kenya, Madagascar, Rwanda, Tanzania, Uganda, Zambia, and Zimbabwe. Others receiving assistance from the program include Benin, Ethiopia, Ghana, Lesotho, Malawi, Mozambique, and Togo. RMI is administered by the World Bank's Africa Region, and is co-financed with the governments of Denmark, France, Germany, Japan, the Netherlands, Sweden, Switzerland, and the European Union. France, Japan and Norway provide senior staff members to work on the Program.