Africa Transport Technical Notes

Sub-Saharan Africa Transport Policy Program (SSATP) Road Maintenance Initiative (RMI)
UNECA and The World Bank

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Privately Financed Road Infrastructure

A Concession Company's Point of View

Africa faces a great challenge as it seeks to mobilize sufficient funds to build, improve and maintain a network of high capacity freeways to serve the needs of the region's rapidly growing road transport industry. Given the acute shortage of government revenues, many governments increasingly turn to the private sector for assistance. In most cases, this will entail permitting the private sector to build and operate these roads under concession agreements.

Under such an arrangement, the state will grant a concession company the right to finance, build, own, operate, and maintain public infrastructure for a given period, and to charge users for that service.

These firms can be expected to consider as minimum conditions for their service:

- whether traffic volumes exceed 3,500 vehicles per day. If so, revenues will usually be sufficient to cover operating costs, and routine periodic maintenance, although true concessions require much higher traffic volumes; and
- the extent to which revenue leakage is a problem.

Traffic

Traffic forecasts are very important, regarding the estimated road usage both with and without a toll. If surrounding roads are heavily used, the concession company is more likely to absorb the risk, assuming that a sufficient number of motorists will pay a toll in order to save time and avoid congestion.

Toll Collection

The efficiency of toll collection is determined mainly by the concession company. To the greatest extent possible, the concessionaire will automate toll collection and install efficient security systems. However, the concession company will pressure the government on some related policies, in particular that the government not impose onerous employment-related requirements on the concessionaire.

This note is based on the SSATP Working Paper, No 26, by Michael J. Hamilton: *Privately Financed Road Infrastructure:A Concession Company's Point of View,* May 1996.

This series is intended to share information about issues raised in various SSATP reports. The views expressed in the study and in this series are those of the authors, and are not intended to represent the opinions of the World Bank Group, UNECA or any of the RMI stakeholders.

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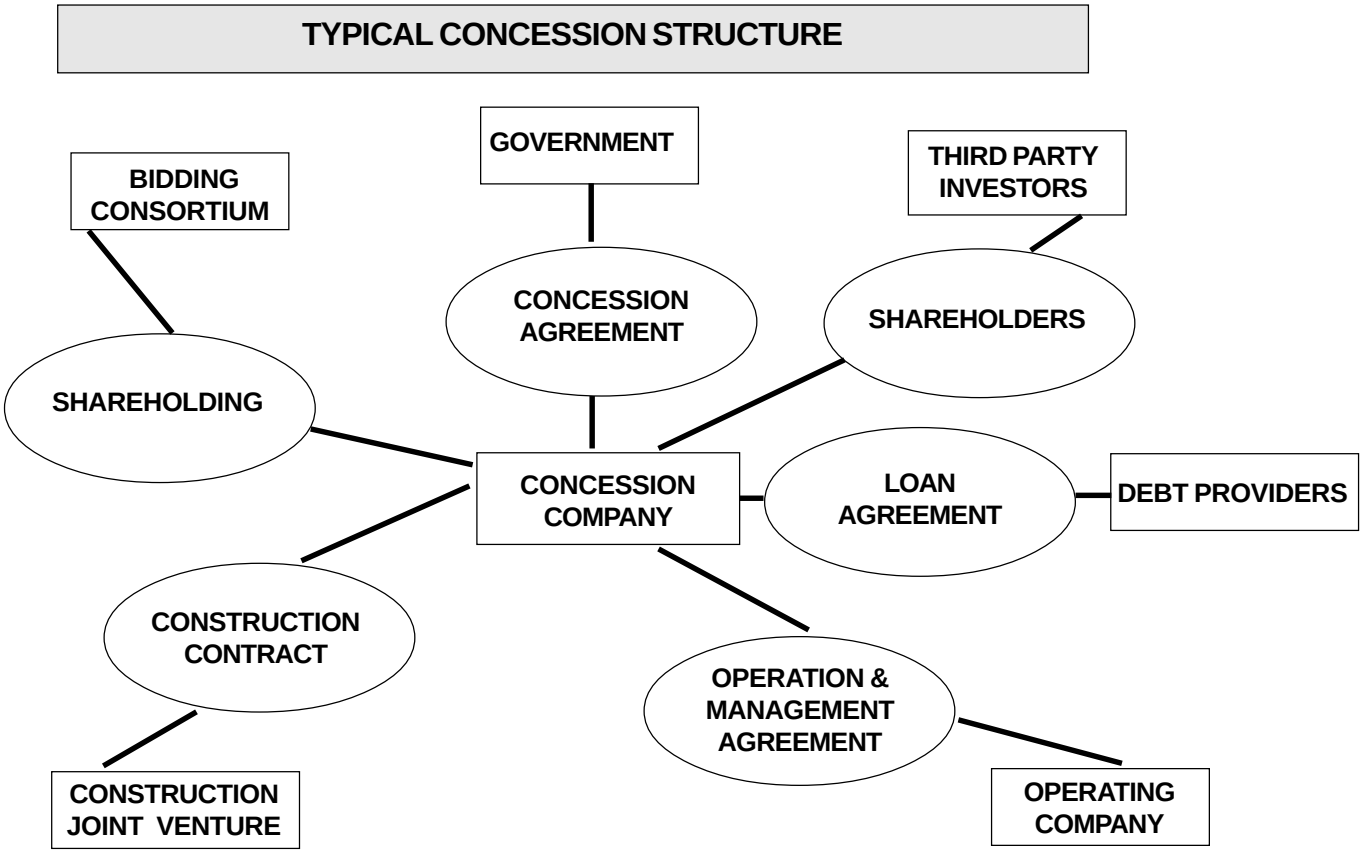

Toll rates

Three factors influence the amount of tolls collected:

- the toll rates;
- the amount of traffic; and
- the efficiency of collection.

The thorniest issue for concessionaires is the problem of determining toll rates. In most cases the jurisdictional government is the final authority. It is essential that the concession company, particularly if it is privately owned, be assured by statute or by agreement that it can set tolls at sufficient levels and in a timely manner so that debt can be serviced and the acceptable return on equity obtained.

The concession company holding the Birmingham Northern Relief Road has an unfettered right to set whatever toll level it chooses. The reasoning behind the government's agreement to these terms was that the competition arising from the existing M6 motorway (which has no toll) would provide sufficient restraint on toll levels so as to protect the public interest.

Because toll revenues are collected in local currency, a foreign exchange risk exists for foreign-held concessions. Both parties must be clear as to who assumes the risks. Financing schemes for projects in the Far East have not been carried through, because none of the parties involved were prepared to accept the risk. In the 1960s and the 1970s, the Spanish government accepted the foreign exchange risks of the concession companies, but by the mid-1980s, found that the cost of doing so had become unacceptably high.

Financial structure

Concession companies typically have a financial structure consisting of modest amounts of equity and substantial amounts of debt raised from domestic and international financial markets. The period of the concession will depend on the composition of the financing of the project.

The duration of motorway concessions average about thirty years. In general, the concession should run for a period of time long enough to enable the company to service all debt and earn the required return on equity. But there are no hard and fast rules. For example, the Birmingham Northern Relief Road has a concession length of fifty-two years, and the duration of Dulles Greenway's concession expires ten years beyond the final maturity of the longest-term debt used in the initial financing (making the concession forty-two years). In Mexico the initial concession period of one private roadway was seven years, although this relatively short period has proven to be nonviable.

Construction companies have traditionally been thought to be natural investors in road concessions since they would receive not only the construction contract, but also recover their equity investment from tolls charged. Experience has shown, however, that the conclusion is correct, but for different reasons than previously understood. In both Europe and North America, the construction business has been cyclical, and many construction companies were hard hit by the recession of the early 1990s. Now, many are interested in obtaining road or other infrastructure concessions to ensure non-cyclical earnings. Examples of such construction companies include Trafalgar House, John Laing, Mowlem, Amec, and Wimpey in the United Kingdom; GTM-Entrepose, Spie Batignolles, and Bouygues in France; Philipp Holzmann and Hochtief in Germany; and Bechtel Group, Kieweit, and Morrison-Knudsen in the United States.

Motorway concessions face high initial construction costs and slow growth in revenues. During their initial operating period, they almost always incur losses. These deficits must be covered, and both private promoters and the banks that loan to them usually demand government subsidies with which to do this.

Concession companies may be public or private sector entities, or an hybrid of both. In France there are seven publicly owned concession companies, or Sociétés d'Economie Mixte (*SEMs*), and one private company, *Cofiroute*. In Italy there are eighteen publicly owned concession companies, operating 97 percent of the toll roads, and one privately held concession, operating the road between Milan and Turin. Of the publicly owned Italian companies, Autostrade S.p.A. is the largest by far, operating approximately 55 percent of the toll roads in the United Kingdom. The New Jersey and Pennsylvania Turnpike Authorities are the best known public entities that have long operated toll roads in the United States. Nevertheless, in the 1990s, state and federal governments are increasingly turning to the private sector to provide new roads and bridges.

Sources of Revenue

The major source of revenue for concession companies is the total of tolls collected. Revenue from other activities, such as rent from motorway service areas, is another source of revenue, but gains from property development are not normally accepted as reliable enough on which to base loan decisions. The debt is therefore principally serviced by revenue from tolls, which also covers operating and maintenance costs.

Investors

Who invests in toll road concession companies? In France and Italy, governments have been the primary investors, preferring to contract the work to concession companies rather than rely on the Ministry of Works to construct highways. In Spain, banks, construction companies, insurance companies, and wealthy individuals comprised the initial investors in road concessions.

Today, the character of the investors has broadened to include large construction companies, road-operating companies, toll equipment suppliers, banks or other long-term financial institutions, newly formed infrastructure funds or emerging market funds, multilateral institutions such as the International Finance Corporation, and new infrastructure companies.

Concession company investors are primarily interested in the rate of return that they can earn from their investment relative to what they might earn in other sectors or enterprises. They are interested in both the profit that they will earn from providing a service or good (such as construction services or toll equipment), as well as the return on their equity investment.

Where projects are not financially viable, the government must determine the public-good value of the project, in view of the risks it must assume, and irrespective of the expected rate of return. One example of this is the Channel Tunnel High-Speed Rail Link, the cost of which was so great, that private investors would not undertake the project without government support.

Government Policy

The decision to create a toll road concession requires a firm government policy, with an emphasis on the benefits of private operation and the partnership that the government is extending to the private sector. Government support can be given in several ways, by creating the appropriate legislative structure so that the concession can operate effectively, providing an equitable regulatory environment to set toll rates, and protecting the concession companies from competition during the early years of operation.

The Road Maintenance Initiative (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.

History of Concessions

Between 1789 and 1900 there were more than 2,000 private corporations operating turnpikes in the United States, mainly because local, state and federal governments were not able to perform this function.

Although motorways existed prior to the 1950s in Europe, the first concession-type motorways in France and Italy were constructed in the 1950s and 1960s. Concessions were awarded to publicly owned motorway companies, and the idea of establishing a concession network to manage both the profitable and unprofitable sections of motorways germinated in Italy, where Autostrade S.p.A. was established for this purpose.

Spain embarked on its motorway program in the mid-1960s, a full decade after France and Italy. In response to inadequate national budget resources for extensive development of roads, the government turned to the notion of toll roads run by concession companies. All of these Spanish motorway companies were private entities, albeit subject to a high degree of state monitoring and control.

The energy crises of the 1970s had a deleterious impact on motorway development in France, Italy and Spain. Construction costs rose dramatically, and only short-term loans were available, at high interest rates. Traffic growth slowed, and revenues fell. In Italy, state grants were given to motorway companies in both 1982 and again in 1985, culminating in the state taking control of all three shortly thereafter.

Similar developments in Spain led to the collapse of three companies in 1983, representing about 15 percent of the motorway sector. Again, the public sector eventually took control of their assets, creating a state-owned holding company instead.

By the late 1980s, the fortunes of the motorway companies had revived due to improved economic conditions and unexpectedly high traffic growth. Today, the concession companies in both Spain and Italy are profitable, and the shares of some are traded on local stock exchanges.