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The Dakar Bus Renewal Scheme

Before and After

Ajay Kumar and Christian Diou

Bus Renewal Scheme in Dakar

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Sub-Saharan Africa Transport Policy Program

The SSATP is an international partnership to facilitate policy development and related capacity building in the transport sector in Sub-Saharan Africa.

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Contents

Foreword

The International Development Association (IDA) approved in May 2000 an urban mobility improvement project including, inter alia, the implementation of a leasing mechanism to accompany the renovation of an aging mini-bus fleet and the facilitation of access to credit for private transit operators, with a view to leasing by the Urban Transport Financing Group (*Association de financement des professionnels du transport urbain de Dakar* – AFTU) of about 500 vehicles.

At the end of 2002, the mini-bus operators were not ready to participate in the leasing scheme. In a decisive move from the Executive Council for Urban Transport in Dakar (*Conseil executive des transports urbains de Dakar* – CETUD), the mobilization of the independent operators built up and the registration of operators into Economic Interest Groups finally firmed up early 2003. The leasing mechanism itself took off in November 2003 when the first contract for new mini-buses was signed. The leasing mechanism operated at full speed after May 2005 when the economic interest groups created their own micro-finance institution (MECTRANS).

In September 2008, 505 new mini-buses were in operation under the leasing scheme, achieving the objective of partly renewing the aging fleet, as well as improving operations and passenger comfort. This scheme—a first in the Africa Region—replaced about one-fifth of the existing fleet. Acquisition of these new mini-buses has dramatically changed the face of the urban transport industry in Dakar. Minibus routes and stops have been formalized and passengers are satisfied with

the quality of transport services. As a result of the new business model implemented for the new vehicles, revenues for owners have increased while fare increases have been kept to a minimum through negotiations. Surveys show that the leasing scheme is sustainable and the reimbursement rate is 100 percent.

The government is now willing to further develop this leasing mechanism and identified additional resources to do so: a new credit and the recycling of the reimbursements from the existing lessees. It seemed motivating and valuable to the IDA and SSATP to analyze the reasons why the leasing scheme developed under this project was successful, identify the shortcomings and risks ahead, and provide the stakeholders with guidance based on the existing operation.

Stephen Vincent
SSATP Program Manager

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Acronyms and abbreviations

AFTTR	Africa Technical Transport
AFTU	*Association de financement des professionnels du transport urbain de Dakar* (Urban Transport Financing Group)
AFTUW	Africa Technical Urban and Water
AWB	Attijari Wafa Bank
BRT	Bus rapid transit
BST	Banque sénégalo-tunisienne
CETUD	*Conseil exécutif des transports urbains de Dakar* (Executive Council for Urban Transport in Dakar)
CFAF	C*ommunauté financière Africaine franc*
CGU	C*ontribution globale unique* (business tax)
CSTC	*Compagnie sénégalaise de transports collectifs*
DDD	Dakar Dem Dik (Dakar bus operator)
DTT	*Direction des transports terrestres*
EIG	economic interest group
FCM	*Fonds de caution mutuelle*
FPE	*Fonds de promotion économique*
GoS	Government of Senegal
IDA	International Development Association
LoC	Letter of credit
Mec-Trans	*Mutuelle d'épargne et de crédit des transporteurs de la région de Dakar* (Mutual saving and loan association for transport operators in Dakar)
PAMU	*Programme d'amélioration de la mobilité urbaine* (Program for urban mobility improvement)

PSO	public service obligation
PSV	public service vehicle
PTB	*Petit train de banlieue* (Dakar suburban rail service)
SDR	Special Drawing Rights
SGBS	*Société générale de banques du Sénégal*
SOE	state-owned enterprise
SOTRAC	*Société des transports en commun* (former Dakar bus operator)
SSA	Sub-Saharan Africa
TSM	traffic system management
VAT	value-added tax

Exchange Rates (November 2007)

	=	US$1.589
SDR 1.00	=	EUR 1.09
	=	CFAF 714
	=	SDR 0.630
US$1.00	=	EUR 0.685
	=	CFAF 449
	=	SDR 0.919
EUR 1.00	=	US$1.480
	=	CFAF 656
	=	SDR 1.40
CFAF 1,000	=	US$2.23
	=	EUR 1.52

Note: The CFAF is tied to the euro

Executive summary

Background

The population of Senegal is about 12 million. Over 3 million people live in the Dakar metropolitan region, which is growing at twice the pace of the country as a whole (the population growth rate of Dakar is about 3.6 percent per year compared with the national rate of 2.2 percent per year). As in most cities in developing countries, authorities have found it difficult to meet the service demands of the growing population, particularly those of the poor, who are the most dependent on the public provision of water, electricity, transport, and other services. The absence of policies on land use and economic development has led to urban sprawl, which only magnifies the challenge posed by rapid growth. Dakar was founded on a peninsula, and the city has now expanded outward in a funnel shape. Many of the newer satellite towns and suburbs are over 15 kilometers from the city center, where most of the employment is located. This situation has resulted in commuter trips that are longer than the average in most cities of this size.

In Dakar over 75 percent of the daily person-trips are made by means of the public transport system, which provides a mix of formal and informal operators. The formal sector operators are the public bus company, Dakar Dem Dik (DDD) or Dakar Commuting, which took over the routes of the failed state-owned company, SOTRAC (*Société des transports en commun*), in 2001, and the suburban rail company, *Petit Train*

de Banlieue[1] (PTB), supplemented by licensed or unlicensed taxi operators. The importance of the formal sector has declined in recent years because government controls on fare levels have made it difficult for both the bus and rail companies to maintain and renew their fleets. The DDD recently took delivery of over 400 new buses, but the company is still facing increasing financial and operating difficulties. The PTB has only a very small share of the total market, although its share is expected to increase once the current track improvement program is complete.

The informal sector, which consists of a fleet of 2,500–3,000 minibuses or *cars rapides,* provides over 80 percent of the public transport demand, supplemented by illegal taxi operations.

Until recently, the *car rapide* fleet was very old and generally in poor condition. It provided a dense network of services and fares were relatively low, but service quality was poor and disorderly. The operators were able to cover their running costs, but unable to afford vehicle maintenance or renewal. The result was a general shortage of public transport capacity.

Bus renewal program and study objective

In response to the declining standard of bus services, the government proposed in the early 1990s, a program whereby it would finance renewal of the minibus fleet[2] with the objective of formalizing (and professionalizing) operations through the introduction of a formal system of route allocation and an official fare structure, together with technical

[1] The PTB was once called the *Petit train bleu* (Small Blue Train) because of its color.

[2] As part of the Urban Mobility Improvement Project, the World Bank, through the International Development Association, provided the government of Senegal with a credit to procure 505 new minibuses under a leasing scheme.

assistance and training for operators and drivers. The program was also expected to reduce pollution by offering incentives to operators to scrap old minibuses on a one-to-one basis.

With this program, a city in sub-Saharan Africa (SSA) was for the first time attempting to implement bus renewal using public sector finance to benefit private sector operators and leveraging this financing to formalize bus operations.

The objective of this study is to (1) establish how effective the finance scheme has been in improving the quality of urban transport services in Dakar since its implementation in 2005; (2) examine whether the approach is proving to be financially self-sustaining and what effect the introduction of new vehicles is having on other service providers; and (3) determine whether, on the basis of the available evidence, the scheme offers a sustainable approach (both operationally and financially) to improving transport service provision in other SSA cities.

Program design and development

In this program for which the government financed the purchase of new minibuses to be operated by the current operators of *cars rapides*,[3] participating operators were required to form cooperatives, or economic interest groupings (EIG), which were to be collectively responsible for loan repayments. Of the 14 EIGs, 9 are participating in the program, involving some 245 operators. These EIGs collectively formed the Urban Transport Financing Group (*Association de financement des professionnels du transport urbain de Dakar,* AFTU), which purchased the vehicles and leased them to the EIGs. The program did not result in any increase in transport capacity, because for every new vehicle leased, the

[3] The funding was used to finance 75 percent of the purchase price of the new vehicles, with the remaining 25 percent to be provided by operators up front as a down payment for the purchase.

operators had to scrap a legally licensed high-polluting existing vehicle for which they received compensation payments averaging CFAF 2.46 million ($5,000).[4]

A detailed vehicle specification was drawn up and put out to tender, with the requirement that the vehicles be maintained in Senegal and that the warranty covers the first 200,000 kilometers or five years, whichever came first. The contract was won in January 2004 by an Indian supplier, Tata International, with an offer of about CFAF 22 million ($44,000) per vehicle, in collaboration with a local company, SENBUS, as the nominated maintenance agent.

Each EIG was required to enter into a concession agreement with CETUD, the Executive Council for Urban Transport[5] that specified the routes to be followed, the fares to be charged, and certain key operating practices. The participating operators had to commit to stop at official bus stops, to abandon practices of short-tripping and use of unofficial fare stages (common with the *car rapide* services), and to issue tickets to all passengers. The agreements gave CETUD the right to monitor service provision and required the operators to provide the Executive Council with operational and financial data. The concession agreements were, in principle, to specify service intervals and other service quality parameters, but CETUD was unable to reach an agreement with the operators on these issues, and so the requirements were omitted.

Participating operators received training in transport fleet management, with special emphasis on financial management. Drivers and ticket collectors were given instruction in dealing with the public, in operating and maintaining vehicles, and in what was required of them under the

[4] All dollar amounts are U.S. dollars unless otherwise indicated.

[5] CETUD was set up in 1997 to plan and coordinate the urban transport sector in the city, including allocating routes and monitoring and imposing service conditions.

concession agreements. In addition, the EIGs and AFTU received technical assistance, funded by the International Development Association (IDA) credit, in line management and accounting.

The program started very slowly because operators were initially reluctant to form EIGs or to use buses from an unfamiliar manufacturer in Senegal. Further delays arose in raising the operators' 25 percent deposits (down payments) on the vehicles and in arranging letters of credit, in part because of the inexperience of the key players. Thus it was not until December 2005 that the first tranche of vehicles was delivered. Problems associated with raising the initial deposits by the operators also delayed the delivery of subsequent tranches.

Operational experience

Currently, 505 buses are in service in Dakar under this financing arrangement. The vehicles are generally performing well, with relatively few mechanical problems. But monitoring has proven problematic, and AFTU has provided no firm data on utilization or service frequency. However, specific studies are being commissioned by CETUD on ad hoc basis. Interviews with operators suggest that utilization rates are still relatively low, with average annual use for only 48,000 kilometers (about 160 kilometers a day based on 300 days of operation per year) and an average service interval of 11 minutes. Service is usually provided from 6:30 a.m. to 9:00 p.m., but only one crew is used per day for these new buses. The drivers, not surprisingly, complain of fatigue, but they are happy with their new vehicles.

The program is not designed to increase public transport capacity, and thus the impact on other transport operators has been minimal. Service quality has improved to the satisfaction of the general public. Indeed, journeys are somewhat faster, because the AFTU minibuses stop only at official bus stops, and overall costs to the passenger are said to be lower because the crews no longer extort additional payments. The use of ticketing has resulted in a reduction in the crew's earnings—they now

have to hand over all the receipts to the owner—and in an increase in the owners' earnings.

Detailed information on the financial return to investments is not available. The technical assistance program, designed to collect operational and financial data, encountered problems when only a few operators were willing to cooperate. The evaluation presented here is based on some data provided by the willing operators and the information gained from interviews with the operators and drivers. The available evidence suggests that the revenues received by the owners are much higher than before (in part at the crews' expense) and that certain unofficial charges that used to be levied at bus stations, or by the police, have now been eliminated. As for the passengers, they are more satisfied with the service than before.

Despite the substantial implicit subsidies received by the operators through overly generous compensation for scrapped vehicles, easy credit terms, and technical assistance, it appears, on balance, that the operators are just able to cover the total costs of operation (both operating and fixed). The central point to note here is that although incomes have gone up, so have the costs, stemming from the need for improved maintenance standards and repayment of capital.

Evaluation of the program

Overall, the bus renewal program has improved the level of transport services in the city along project corridors. However, contrary to the initial thinking, the improvement is attributed more to the formalization of the sector, the introduction of a formal system of route allocation, and improvements in fare collection than to the renewal of the bus fleet itself. However, the financing of bus renewal was a necessary condition for incentivizing the operators and regulatory authority to undertake public transport reforms.

The formalization of bus operations through introduction of franchise agreements has introduced three major improvements in the quality of service operation: (1) a faster and more reliable dispatch of vehicles at points of departure and a more reliable itinerary along the bus route (informal vehicles leave the terminal only when full of passengers and often still change their routes along the way); (2) the predictability of the user's fare (in the informal sector fares may be changed arbitrarily by the driver or conductor based on demand); and (3) revenues received by owners of the new buses have increased (in the informal sector almost 20 percent of revenue is lost through unofficial payments).

Today, all planned buses are in operation, service quality has improved, and reimbursements are made on a regular basis (only one payment was delayed beyond 30 days). By September 2009 the operators had reimbursed AFTU for over 45 percent of the total leasing amount, or $7 million. Because one of the requirements of the renewal program was that an old licensed vehicle would be scrapped for every new vehicle, the program has not resulted in an increase in transport supply.

A second phase of the bus renewal financial scheme is being considered, and the present financial scheme is expected to be rolled over based on a revolving financial mechanism.

To sustain the benefits derived from the program, the public authorities will need to focus on the following:

- The operations appear to be technically viable, but financial sustainability has been achieved through the provision of substantial hidden subsidies.[6] It may be difficult to maintain these subsidies

[6] The hidden subsidies are as follows: (1) the compensation payment for the scrapped vehicles (at an average of about $5,000 per vehicle) represents more than 10 percent of the cost of new buses and substantially more than the worth of old buses; (2) the terms of financing were concessional; (3) the administra-

if the program is extended. For example, the government was already facing difficulties in making payments for the last batch of scrapped vehicles. The operating costs will also likely increase with a raise in fuel prices and other factor inputs. It may therefore be critical to adjust fares on a regular basis to ensure financial sustainability in the long run.

- Although the new buses are in a better shape than the *cars rapides*, their condition has deteriorated over the last few years, particularly their bodywork, lights and windscreens. This deterioration may reflect the fact that the bus operators do not own the vehicles—they are collectively owned by the EIGs. The quality of a vehicle should perhaps be part of the franchise agreement, to be monitored by CETUD, and penalties should perhaps be imposed on any operator who fails to comply with the quality maintenance requirements.
- The project design focused on renewing some buses and formalizing operations on a few selected corridors without interfering with operations on other corridors by other operators (including informal ones). However, experience from Dakar suggests it is difficult to formalize and improve part of the transport sector without integrating the reforms with a large and growing informal sector and introducing citywide reforms. Dakar is facing two particular problems. First, the concession agreement guarantees the concessionaire an exclusive right to operate on the specified route. However, CETUD is unable to enforce the agreement terms and thus is facing illegal competition from the informal operators. Second, new bus operators share bus stations and stops with the informal *cars rapides*, introducing competition in the route that undermines the basic framework of the concession agreement. The informal operators are not obliged to maintain

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tive cost of the program has been funded by the World Bank; and (4) foreign exchange risks have been borne by the government.

any standards of safety or operations and often flout traffic rules by making payments to the traffic police. Because of the fast-growing demand, the number of informal *cars rapides* will continue to increase substantially, compromising the operational and financial viability of the new buses. The priority should now be to gradually extend the concession agreement principle to the other *car rapide* operators (with or without fleet renewal) and develop the professional skills needed to empirically assess transport demand and design the appropriate route and fare structure in a comprehensive manner.

- Introduction of a good monitoring system is critical for the success of the program. In the Dakar bus renewal scheme the concession agreement requires the operators to produce business plans and annual accounts, but such reports are not being prepared. Collection of basic statistical information on system operation is critical to evaluating the impact of the system and providing a planning basis for reviewing the route plan, operational framework, and fare structure, among other things.

Lessons learned from regional experience

Most recent urban transport projects in the developing world have recognized that fleet renovation is a fundamental issue, but countries have taken two very different approaches to addressing the issue.

The traditional approach, particularly where there is a public sector passenger service provider, has been to procure buses to support the state-owned enterprise (SOE). This procurement is sometimes linked to reforming transport regulation or restructuring the operator as part of the overall project concept. Until the early 1990s subsidized financing by government for the procurement of buses to be operated by the state-owned public undertakings was common practice. In some countries support of a SOE continues even today—examples are Metro Mass Transit in Accra, Lagbus in Lagos, and the transport systems in large

metropolitan cities in India. However, when such support has been provided without addressing the fundamental inefficiencies in the operating system, it has proven to be unsustainable.

A more recent approach has focused on public-private partnership, with the public sector financing the enabling environment (including infrastructure development), the private sector retaining all operational responsibilities, including rolling stock finance and management. However, even the private sector often needs an initial impetus through subsidized financing for fleet renovation, primarily because the existing private operators are often financially constrained and lack the market knowledge needed to invest in standard good quality buses. Commercial banks are often reluctant to lend to operators until the business model for financing new buses is proven. The result is an increase in the number of old, small secondhand buses, which operators can finance from personal savings.

Besides the financial constraints, multiple other reasons underlie the difficulties with fleet renewal, including inappropriate regulatory frameworks, lack of effective traffic management which reduces bus productivity, the difficulty in providing security for the financing agency (whether public or private), and the problems that informal sector operators face in accessing maintenance and other technical services.

Past experience in sub-Saharan Africa and South Asia indicates that certain actions would create the conditions necessary for a successful bus renewal program. The most important element of an action program is to define the roles of the public and private sectors: the public sector would provide the facilitating environment and common infrastructure investment facilities, and the private sector would provide the operating services and take the commercial risk. A bus finance scheme based on the lessons learned from the regional experience would have the following characteristics.

Enabling environment

- Regulatory reform to introduce "controlled competition" for operating rights
- Service contracts of sufficient duration for recovery of vehicle investment
- Traffic system management that enhances operational performance in the affected area
- Consideration of effective bus priority mechanisms, including the bus rapid transit (BRT) system
- Public provision of operating depots and technical facilities for the new fleet

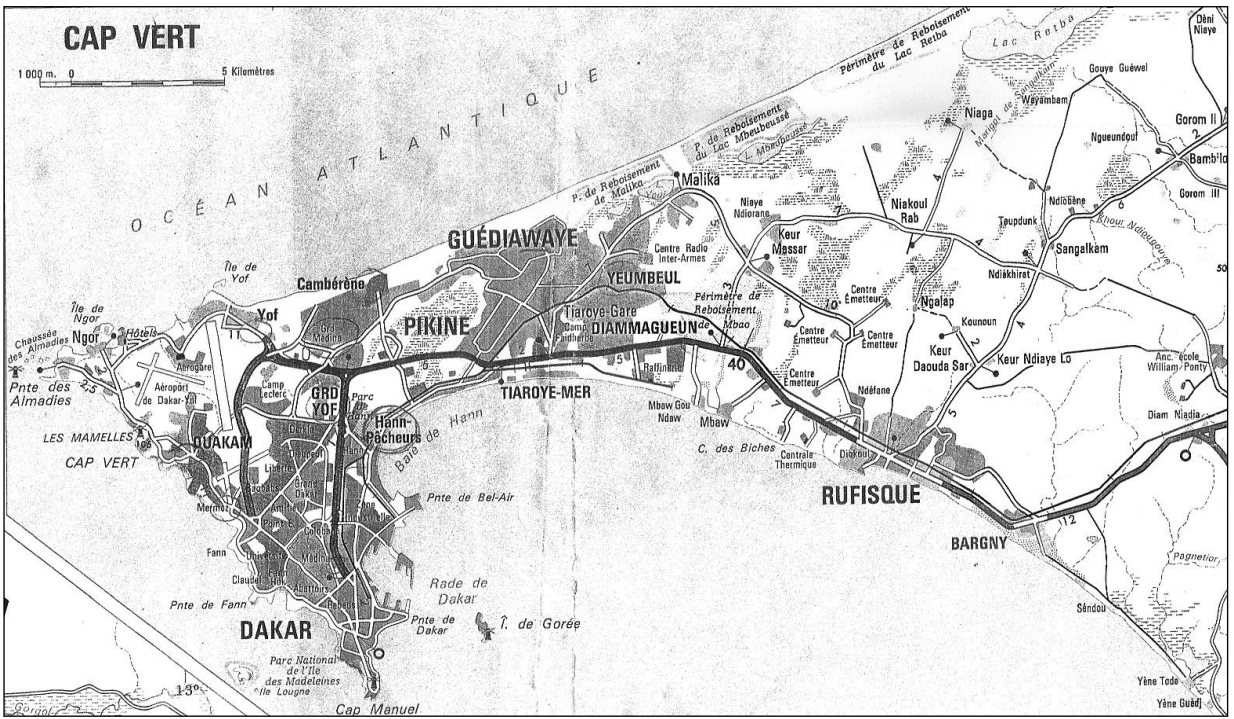
Finance package

- Operating lease to integrate maintenance provision with vehicle finance
- Financier security through lien on income arising from service contracts
- Deposit restricted to level required for time to secure an alternative customer
- Finance tenor extended to more closely coincide with the useful economic life of the vehicle

Support services and other provisions

- Contract counterparty to be a legal entity covering a collective of operators
- Members of the collective required to accept joint responsibility for conditions
- Self-insurance of vehicle and operating risks within the collective of operators
- Vehicle maintenance through a specialist contractor, with obligation on operator
- Full involvement of the bus supplier in all aspects of operational delivery.

Greater Dakar Region



I. Introduction

In the early 1990s, the Government of Senegal proposed using World Bank financing to help renew the fleet of big buses run in Dakar by SOTRAC (*Société des transports en commun*), Senegal's national bus company. However, at the time SOTRAC was close to failure, and so it was then suggested that the World Bank funds be made available for renewal of the minibuses, or *cars rapides,* operated by the informal private sector. After many delays, the renewal program was launched in 2005, and it has provided funding for the purchase of 505 buses.

Although there are many examples of governments that have injected public financing into state-owned bus companies, this is the first program in Sub-Saharan Africa in which a city has attempted a bus renewal program using public sector finance to benefit private sector operators.

Background

Traditionally, bus companies were nationalized in the process of decolonization, ushering in a regulated regime of public transport. Fares were regulated, and government support consisted of financing for capital cost (buses and other infrastructure) and operating deficits. However, in the controlled fare structure environment, as operating deficits grew and public subsidies did not grow commensurately, operators had difficulty maintaining and replacing the fleet. Like most state-run public transport companies in West Africa, SOTRAC was left to operate in a deregulated environment. Its financial position then deteriorated, and

the fleet declined from about 500 buses in 1987 to almost none by 1996. Not surprisingly, as a result of the decline in state-run bus transport services, the number of small, privately owned minibuses (*cars rapides*) increased from only a few hundred to about 3,000 over this period.

In Dakar, the bus fleet renewal program was aimed at leveraging bus financing to introduce long-term reforms in the transport sector. The proposed reforms focused on the formalization (or professionalization) of the sector with the introduction of a formal system of route allocation and an official fare structure, together with technical assistance and training for operators and drivers. The minibus operators were expected to finance up front 25 percent of the cost of the new buses, pay back the loan (though on more favorable terms than available from commercial banks), and operate the minibuses as a business as usual, without any direct subsidy from the state. The project closed on 30 September 2008, and some of the minibuses have now been operating for over four years.

Study objective

The objective of this study is to (1) establish how effective the finance scheme has been in improving the quality of urban transport services and whether the design is financially self-sustaining; (2) examine the effect of the introduction of new vehicles on other service providers; and (3) determine whether, on the basis of current experience, the scheme offers a sustainable approach (both operationally and financially) to improving transport service provision in other African cities.

The study is divided into five sections. Section II presents the urban transport background of the city of Dakar, focusing on the supply and demand of transport services, the institutional framework in which the urban transport system operates, and the operating characteristics of the services. Section III details the design of the bus financing program, its financial structure, and implementation issues. Section IV describes

the framework of the leasing structure, route structure and services, and operational performance. It is followed by section V, which evaluates the operational, financial, and institutional performances of the program. Section VI presents the lessons learned from the regional experiences with bus finance schemes and their application to the design of the Dakar bus finance scheme.

II. Background urban transport services

Geographical context

The population of Senegal is about 12 million. Over 3 million people live in the Dakar metropolitan region, which is growing at almost twice the pace of the country as a whole (the population growth rate of Dakar is about 3.6 percent per year compared with the national rate of 2.2 percent per year). As in most cities in developing countries, authorities have found it difficult to meet the service demands of the growing population, particularly those of the poor, who are the most dependent on the public provision of water, electricity, transport, and other services. The absence of policies on land use and economic development has led to urban sprawl, which only magnifies the challenge posed by rapid growth. Dakar was founded on a peninsula, and the city has now expanded outward in a funnel shape (see map). Many of the newer satellite towns and suburbs are over 15 kilometers from the city center, where most of the employment is located. This situation has resulted in commuter trips that are longer than the average ones in most cities of this size. The situation has further deteriorated with the increase in traffic jams because of the lack of investment in the primary road network over the last two decades.

Overview of the transport system

The urban public transport system in Dakar has four major components. The formal sector consists of the bus services provided by Dakar Dem Dik (DDD), a private company, and the rail services provided by the *Petit train de banlieue* (PTB), previously known as the *Petit Train Bleu*, supplemented by a large fleet of legally registered taxis. The in-

formal sector consists of minibus services (*cars rapides)* provided by a large number of generally small-scale private operators and of illegal (or clandestine) taxi services known as *clandos*.

The state-owned bus company, *Compagnie sénégalaise de transports collectifs* (CSTC) was created in the late 1940s to provide public transit services between the Plateau and the Medina areas of Dakar. Later, the CSTC was restructured and renamed SOTRAC (*Société des transports en commun*). Fares were regulated, and the company offered discounts to certain groups of favored travelers such as schoolchildren, pensioners, the military or the police. The government was unwilling to raise fares to keep up with inflation, and so was increasingly unable to provide the agreed-on compensation. During the Structural Readjustment Programs of the mid-1990s, the financing problems were compounded by the withdrawal of the tax concessions (on import duties and value-added tax) that the company had enjoyed. SOTRAC's financial position then deteriorated, preventing the company from replacing old vehicles. Both SOTRAC and the railway faced increasing operating difficulties, and SOTRAC ceased to operate in the late 1990s.

Table 2.1 Transport mode share, 1997

Mode	Share (%)
Large bus (DDD)	3
Minibus (*cars rapides*)	73
Taxi	6
Motorcycle	6
Private car	11
Rail (PTB)	1

Note: Walking trips are excluded

With encouragement from government, a new private company, Dakar Dem Dik, took over the assets of SOTRAC and commenced operation in 2001. The company's capital stock is shared between the government (76.6 percent) and private Senegalese investors. The DDD began with 60 buses, but by 2004 it had fewer than 40, resulting in spotty service, long intervals between buses, and frequent breakdowns. Over the last two years 409 additional buses (60 Volvo and 349 Tata) were procured with bilateral assistance. The

terms of the financial arrangements between the DDD and the government are not publicly available, but the basis of the DDD's concession is that it will continue to charge the same fares as its predecessor, SOTRAC. The DDD is receiving a regular subsidy, but the amount is not known. In spite of recent progress, the DDD's current situation remains precarious, and only about 300 buses are available for operation on a daily basis.

The gap in transport supply was filled by informal operators, who converted imported secondhand commercial vans, mainly Mercedes or Renault, into makeshift minibuses, known as *cars rapides.* Today, *cars rapides* are by far the most common form of road-based public transport in the Dakar area. The reason for converting vans rather than buying specially made minibuses is partly economic—import duties on commercial vehicles are significantly lower than on passenger vehicles. Commercial vehicles are also practical because spare parts are readily available and local mechanics are familiar with them. *Cars rapides* seat between 23 and 32 passengers, depending on model type. Access is through doors at the back. Most of the vehicles are more than 25 years old and generally in poor condition. By 1997, the date of the last full traffic survey, the informal sector accounted for over 70 percent of all passenger trips (see table 2.1 for mode shares).

The informal sector is lightly regulated. There is no longer any formal route structure, and the official fare and fare stages are often ignored. Fares, which are negotiated, are often lower than the official rates, but drivers make their own decisions on stages (sections), and passengers often have to make two or three separate payments to complete a journey. There are no formal bus stops for the *cars rapides*; passengers are picked up and dropped off on demand. This practice may be convenient for the passenger, but it often results in dangerous maneuvers.

Illegal taxis, or *clandos*, are private cars used to provide taxi service when not in use by the owners. Often the driver takes the owner to

work and then uses the vehicle in a remunerative fashion until the owner needs it again.

Institutional framework

A coordinating body for urban transport, the *Conseil exécutif des transports urbains de Dakar* (CETUD), was set up in 1997 with World Bank's support to create order in the public transport system, which was characterized by confusion among the multiple central and local government institutions. An autonomous body responsible to the Ministry of Transport, CETUD is run by representatives of the principal stakeholders in the public transport sector. It is managed by a 19-member plenary assembly representing urban transport professionals, state and local authorities, private firms, operators, and consumer associations.

CETUD's operations were to be financed through the *Fonds de développement des transports urbains*, or Urban Transport Fund, with the state providing an annual sum of CFAF 400 million ($800,000) and with local authorities and transport sector companies expected to match that contribution. However, the financing from the local authorities and sector companies has not been forthcoming, and that allocation must be strengthened to provide a basis for sustained operation.

In principle, CETUD can allocate routes, set fares, and impose service conditions, although some payments require the agreement of the Ministry of Finance. It also acts as the point of contact between the government of Senegal and international donors interested in urban transport.

Despite its name, CETUD has very few executive powers. It can make concession agreements with licensed operators to allocate routes and can propose the terms of a compensation agreement with the operators if the official fares do not cover costs. However, CETUD has no control or even influence over the issuing of licenses to operators, and the implementation of any compensation payments requires the agreement of

the Ministry of Finance. Indeed, CETUD has allocated routes only to the operators of the new minibuses and has not yet attempted to impose any effective control on the activities of informal sector operators.

Both vehicle and driver licensing are controlled by the Ministry of Transport. Fares are set (officially) by the Ministry of Finance. The official route structure for bus and minibus services was established by a decree of the Governor of Cap Vert in 1976, and new routes were created in the late 1970s and again in 1993.

Structure of public transport operations

Dakar Dem Dik

Dakar Dem Dik is, in principal, a limited company whose capital stock is shared by the Senegalese government (76.6 percent) and private Senegalese investors. It took over the assets of SOTRAC and commenced operations in 2001. The DDD began with about 100 buses, but by 2004 that number had been reduced by half, resulting in spotty service, long intervals between buses, and frequent breakdowns. In 2005, 409 additional buses (60 Volvo and 349 Tata) were procured with bilateral assistance, of which 300 are in operation on a typical weekday. It is recognized that the DDD cannot make a profit at the current level of fares (which were last raised in 2001), and the state has agreed to provide public service obligation (PSO) payments to the DDD. However, to date payments have not been made on a timely basis, and the company is facing severe cash flow problems, which are threatening its ability to continue to provide service.

Table 2.2 presents details on changes in passenger volume and bus-kilometers (bus-km) over the period 2001–2008. The operating performance is not efficient in view of the bus utilization factor of 70 per-

cent: the average bus-kilometers per day are between 180 and 190, and the passenger volume per bus per day is between 500 and 600.[7]

The DDD provides services throughout Dakar and its satellite towns and has a monopoly on services in the central business district of Plateau and for buses with more than 51 seats. The DDD argues that it, together with the *Petit train de banlieue*, should provide services on the most heavily trafficked routes, with the minibus services covering more lightly trafficked and feeder routes. However, in practice minibus services are also provided alongside all DDD routes[8] outside the Plateau, in part because of the peninsular shape of the Dakar metropolitan region. Nevertheless, the DDD does not view the *cars rapides* as a major competitive threat; the DDD's load factors are generally high because of the general lack of transport capacity in the city.

Rail services

The *Petit train de banlieue*, or PTB, is responsible for providing passenger rail services in the Dakar region. Track provision and maintenance were previously the responsibility of the national railway company, but those tasks were recently concessioned to a private company, Transrail. A track improvement program, PAMU (*Programme d'amélioration de la mobilité urbaine*), has been undertaken as part of a scheme to improve urban mobility. The program will provide double tracks for 27 kilometers and three tracks for 9 kilometers. PAMU also includes station improvements, pedestrian overpasses, and the purchase of rolling stock, including passenger coaches for the suburban system. Because of delays

[7] The standard benchmarks for an efficient operation are a bus utilization rate of greater than 90 percent, daily bus-kilometers of more than 250, and number of passengers carried per bus daily of more than 1,000.

[8] The start and end points of the routes are not always the same. The DDD routes tend to be longer.

in financing from the government, the work is still not completed and thus so far has had no impact on the supply side (the work is intended to provide the PTB with one track in and one track out of Dakar).

Table 2.2 DDD Bus Operating Statistics, 2001–2008

	Avg. no. of buses in operation	*Passenger volume (millions)*	*Passenger volume/bus/day*	*Bus-km (millions)*	*Bus-km/bus/day*
2001	95	5.4	190	n.a.	n.a.
2002	125	18.5	495	n.a.	n.a.
2003	79	11.8	500	n.a.	n.a.
2004	54	8.1	500	3.9	241
2005	[a]	27.6	510	9.9	180
2006	288 [b]	46.9	540	16.6	191
2007	288	50.6	585	15.5	179
2008	280	49.6	590	16.0	190

Source: Obtained by the authors

n.a. Not available.

[a] In 2005 the number of buses increased from 44 in January to 297 in December. The monthly average used for these calculations is 180.

[b] The highest figure was 310 buses in November.

The PTB is 100 percent state-owned, and the initial capital was provided by the state, as a subsidiary of the former railway company, SNCS. However, the PTB is expected to pay for the operation, maintenance, and replacement of rolling stock from the revenues it generates.

The PTB has a natural competitive advantage over road transport in serving the outer satellite towns such as Rufisque because rail travel times are substantially shorter than those of bus services. However, service quality in recent years has been poor, initially because of the lack of investment, but more recently because the track improvement program has seriously disrupted train operations. Consequently, passenger volume fell from about 20,000 per day in 2004 to 12,000 per day in 2007. The year 2006 was not good for the PTB, but the situation has been

improving since 2007, following the introduction of new rolling stock in 2006 (20 coaches and 5 locomotives). Completion of the track work and further delivery of coaches and locomotives is expected to lead to additional recovery in passenger volume levels.

Both the DDD and the PTB recognize the potential benefits of integrating their activities more closely. On some routes, joint ticketing is already in place, and a study was recently undertaken of how best to integrate the two organizations financially. Options examined included forming a single operating company or continuing as separate entities, with cross shareholdings. However, there are currently no proposals to integrate the route or service structures.

Cars rapides

The exact number of *cars rapides* operating in Dakar is unknown, but is commonly believed to be between 2,500 and 3,000. Apart from the new Tata minibuses, all the *cars rapides* were originally cargo-carrying vans, imported secondhand from Europe and converted into passenger vehicles in local workshops in Dakar. This system, which is also found in some other African countries, was reportedly the direct consequence of the import tax regime, which made it significantly more expensive to import passenger vehicles than commercial vans or trucks.

The Dakar public transport fleet suffers from a serious shortage of capacity, as evidenced by the large number of *cars rapides* registered for interurban use or for other cities but operating illegally in Dakar. No new licenses have been issued for public service vehicle operation in Dakar for over 10 years.

In Dakar three main types of secondhand vehicles are in use

- Renault SG2, which is licensed for 25 seats
- Renault SG3/4, which is licensed for 35 seats
- Mercedes (also known as "Ndiaga Ndiaye" after the operator who first imported them), which is licensed for 35–40 seats

All these vehicles are old (some more than 40 years) and in poor condition. Interviews with the operators suggested that the old *cars rapides* are reliable and rarely out of service because of a well-established cadre of competent mechanics in Dakar who keep the vehicles operating by means of running repairs in the off-peak hours. However, most of them would not pass any serious motor vehicle inspection, mechanical breakdowns are very common (brakes, flat tyres, and unsafe, uncomfortable and highly polluting vehicles).

On average, the *car rapide* services start at 6:30 a.m. and cease at 9:00 p.m. (new buses), although some of the old buses run until the early hours of the morning. Normally one crew is used each day, but on some of the old buses fresh crews take over when the official team is too tired, with ad hoc arrangements between crews. The smaller SG2 vehicles make more round-trips per day than the larger Mercedes and earn rather lower revenues per section, presumably because they are used mainly on shorter routes (see table 2.3).

Estimates of operating costs and revenues for c*ars rapides* are summarized in table 2.4 for 2005. These costs make no allowance for the costs of capital (interest on capital invested and provision for vehicle renewal). In 2005 fuel constituted some 35 percent of total costs, and fines and other unofficial payments accounted for 17 percent.

Revenues are estimated from details provided by the drivers about the fares charged, the numbers of sections per route, and the round-trips per day. The revenues remitted to the owners are substantially lower because the crews acknowledge that they retain a large proportion of the fares they collect.

At the fuel prices prevailing in 2005, the *cars rapides* were generating a substantial overall operating profit before capital charges. However, fuel prices have doubled since then, and it is likely that most operators are now having difficulty breaking even.

Table 2.3 Operating characteristics, Car rapide fleet

Daily demand level		
		Overall
Percentage of seats occupied per trip		
SG2		93
M-35		105
M-40		104
Overall		102
Trips per day		
SG2		6.0
M-35		5.4
M-40		5.0
Overall		5.4
Revenue/day (CFAF thousands)		
SG2		37.6
M-35		46.1
M-40		52.2
Overall		45.8
Revenue/passenger/day (CFAF)		
SG2		84.7
M-35	111.4	
M-40	112.2	
Overall	105.9	

Source: Dakar Bus Financing Study, IBIS, Working Paper (April 2008)

Table 2.4 Estimated costs and revenues* in 2005 (CFAF thousands)

	SG2	*M-35*	*M-40*	*Overall*	*Percent*
Materials					
Fuel	2,794.9	3,585.3	3,688.3	3,442.7	35
Lubes	124.1	202.1	223.6	190.8	2
Tires	249.9	262.9	234.8	253.1	3
Spares	159.8	208.5	273.3	214.3	2
Miscellaneous	132.5	208.6	121.3	170.6	2
Subtotal	*3,461.2*	*4,467.4*	*4,541.3*	*4,271.6*	*43*
Services					
Maintenance	277.3	428.3	376.8	383.3	4
Repairs	171.6	237.3	214.3	217.6	2
Miscellaneous	78.2	311.0	34.0	192.4	2
Subtotal	*527.1*	*976.6*	*625.1*	*793.3*	*8*
Staff & administrative					
Salaries	1,075.4	843.2	1,344.2	1,017.5	10
Crew food	717.1	980.8	980.8	924.7	9
Other allowances	600.2	371.9	391.9	425.5	4
Accommodation	167.5	125.0	141.8	138.2	1
Insurances	561.5	611.5	655.8	611.9	6
Licenses	30.6	28.3	32.1	29.7	0
Parking	52.1	54.9	53.8	54.0	1
Subtotal	*3,204.5*	*3,015.7*	*3,600.4*	*3,201.6*	*32*
Fines and penalties					
Legal fines	80.4	115.5	277.6	148.4	1
Illegal fines	454.8	440.7	397.4	432.9	4
Other					
Coxeurs (dispatchers)	572.1	363.7	395.7	416.1	4
Bus station assistants	191.1	272.8	297.5	261.6	3
Washing	88.4	139.3	145.1	129.9	1
Miscellaneous	297.0	230.9	308.6	264.3	3
Subtotal	*1,683.7*	*1,562.9*	*1,821.8*	*1,653.2*	*17*
Total costs	8,876.5	10,022.6	10,588.6	9,919.7	100
Estimated revenue	11,726.3	14,375.2	16,278.8	14,285.8	
Net profit	2,849.8	4,352.6	5,690.1	4,366.1	

Source: "Study of Financial Viability of Public Transport by *Car Rapides* in Dakar," Fideco, January 2005.

III. Program design and development

Design concept

In 2005 the World Bank provided a credit for $15.9 million (€12 million or CFAF 7.9 billion) to help renew the Dakar's bus fleet and strengthen the capacity of bus transport operators. The credit was intended to cover 75 percent of the cost of renewals, and the remaining 25 percent was to be financed by bus operators as part of their up-front payment. The purchase price of the buses was denominated in CFAF (tied to the euro). The foreign exchange risk was borne by the government and the bus supplier.

Bus specification

A specification for the vehicle was drawn up and put out to tender in September 2003. A condition of the tender was that after-sales service for the vehicles be available in Senegal. Another condition was that the warranty covers five years or 200,000 kilometers, whichever came first. The contract for the supply of 505 buses was won by an India-based supplier, Tata International, which offered a technically acceptable vehicle for CFAF 22 million ($50,000), including taxes, or about half the price quoted by the nearest competitor. The vehicles were to be assembled by a newly formed local company, SENBUS, with government support. Tata also included in its bid partial assembly of the buses at a local factory.

Conditions for participation

Operator groups

Participants were required to join, or form, an operator group, known as an economic interest group (EIG), that would collectively be responsible for loan repayments. Only existing operators with a valid vehicle registration were permitted to join. For every new bus put into service, an existing bus had to be taken out and scrapped.

The Urban Transport Financing Group de Dakar (AFTU) was formed in 1999, to specifically administer the operators' component of the renewal program. AFTU was responsible for representing EIGs in their dealings with the planning and coordination authority (CETUD) and the bus supplier (Tata International). Of the 14 existing EIGs, the members of 9 EIGs are participating in the renewal program.

Concession agreement

CETUD identified 18 routes (or lines) for the Tata buses, of which 4 were new lines, providing public transport in previously unserved areas. To participate in the program an EIG had to agree to operate the lines in accordance with a concession agreement that specified the number of buses to be used and the fares to be charged (see appendix). The concession agreement also set out the conditions for fare revisions and provided for subsidy payments in the event the operators could not break even at the controlled fares.

In principle, such a concession agreement should also specify the level of the service to be offered (in terms of vehicle-kilometers), the hours of operation, and the frequency of service. However, CETUD was unable to reach an agreement with the EIGs on these matters, and the relevant annexes to the concession agreement were never prepared (see appendix). Nevertheless, there was apparently an informal understanding that the service interval would be 5 minutes during peak hours and 10 mi-

nutes during off-peak hours, although not enough vehicles seem to be in service to provide this level of service.

Financial conditions

As noted, each operator was required to contribute 25 percent of the price of the new vehicle (that is, to make a deposit), with the balance provided by the state. Operator financial security was not required to enter the program, but AFTU set up a mutual guarantee fund (MGF) that could be used to cover defaults; a portion of the repayment was dedicated to this fund. In addition, the vehicles had to be insured for third-party, fire, and theft (though not damage).

As discussed in more detail in a later section, very few operators were able (or perhaps willing) to make the deposits from their own funds. Accordingly, arrangements were made to borrow the money, initially from a state development bank and later through Mec-Trans, a transport operators' microcredit organization.

Technical assistance to operators

It was recognized early on that the operator organizations would require technical assistance to strengthen their capacity to comply with the concession agreements. AFTU was assisted in administration of the program by a local company of accountants and management consultants. Until recently, this assistance was financed by the International Development Association (IDA) credit. However, because the credit has been closed, AFTU must now pay for these professional services from its own funds, which will almost certainly require an increase in the fees charged to the operators. CETUD has provided the operators and their staffs with training, and the IDA credit funded assistance to the EIGs with operational control and monitoring. Since March 2008 the EIGs have had to pay for the operational control staff themselves. As a consequence, the staff has been reduced.

Box 3.1 Leasing options

In a lease, the use of an asset is transferred by an owner (the lessor) to a user (the lessee) for an agreed-on period in consideration of which the lessee pays rentals to the lessor. Leasing falls into two categories: (1) a finance lease and (2) an operating lease.

Finance lease

A lease is classified as a finance lease if it transfers substantially all the risks and rewards of ownership from the lessor to the lessee.

A finance charge is usually non cancellable, and rentals paid by the lessee in the fixed period of the lease contract will be sufficient to repay to the lessor his full capital outlay on the asset, together with a return on the funds invested.

The fixed period of the lease will be for the major part of the useful life of the asset. At the end of the fixed period of the lease, the lessee will usually have an option to continue using the asset for a nominal rental and may in some cases have the right to purchase the goods, as specified in the contract.

The lessee will usually be responsible for maintenance and insurance. The terms of the lease will specify the levels of insurance and the type of maintenance required to ensure that the security value of the asset is maintained. It is possible for a lessor to insist that a particular maintenance contract is entered into by the lessee as part of his contractual obligations under the lease contract.

Operating lease

In an operating lease all risks are the rewards of ownership and are not transferred to the lessee. The lessor, for example, depreciates the assets in his accounts and shows it in his balance sheet, whereas in a finance lease this is done by the lessee.

An operating lessor will recover his investment and profit through a combination of rentals and the residual value of the asset. An operating lease contract will usually include a charge in the rental for maintenance and insurance of the asset. An operating lessor is concerned with both—the asset management and the financial elements of the lease contract. Two elements of asset management are (1) accurately estimating residual value and (2) ensuring adequate maintenance.

Residual values are determined based on (1) the secondhand market; (2) the level of asset utilization by the lessee; (3) the condition in which the asset is operated; and (4) maintenance quality.

An operating lease agreement for a bus could be structured for a short time relative to the useful life of the bus. A lease could, for example, be structured for a period equivalent to a franchise period.

Financing the operators' deposits

Most of the operators had difficulty raising funds for the deposits. Even those who were able to pay refused to contribute their own funds in "solidarity" with those who could not pay. This lack of funding for deposits threatened to derail the whole program.

The problem has been tackled in two phases. In the *first phase*, for the first tranche of 105 buses the *Société générale de banques du Sénégal* (SGBS), a commercial bank, provided AFTU with a loan that was partly guaranteed from a blocked account containing CFAF 180 million from the proceeds from scrapping the cars, which were funds borrowed from a state development bank.

This arrangement was generally considered unsatisfactory since it appeared to expose the government to undue risk. Therefore, in the second phase Mec-Trans (*Mutuelle d'épargne et de crédit des transporteurs de la région de Dakar*), the Mutual Saving and Loan Association for Transport Companies of Dakar, was set up for the transporters involved in the scheme. This fund, which operates as a kind of saving and loan scheme, receives deposits from members and offers them credit. Mec-Trans was founded in January 2006, although it was only formally registered with the tax authorities in October 2007. Mec-Trans received a loan from the *Fonds de promotion économique* (FPE), a state-owned development bank, to fund the operators' deposits. The security for the loan is in part from the mutual guarantee funds and in part from a blocked account for the allowances for the second and third tranches of scrapped vehicles.

Mec-Trans employs, using its own resources, a qualified manager who has worked for microcredit agencies. The organization is run by an administrative council, which has to present audited accounts to the members every year. Mec-Trans has expanded its membership base to

include any transport operator who wishes to become a member and also accepts deposits from non-transporters.

Box 3.2 Finance structure of the bus renewal program

1. The operators, through AFTU, agree on an allocation of lines and a concession agreement with CETUD.
2. The money for deposits is borrowed, initially through AFTU, and later through Mec-Trans.
3. AFTU asks CETUD to assist with the purchase of a tranche of vehicles by
    a. Securing the release of IDA funds
    b. Opening a letter of credit for the purchase of the vehicles.
4. AFTU places the order with Tata.
5. Tata assembles and ships the kits to Senegal.
6. SENBUS assembles the buses.
7. The buses are inspected by
    a. The vehicle registration authority (*Service des mines*), a branch of the Land Transport Department (*Direction des transports terrestres*), to ensure that they conform to Senegalese standards for public service vehicles (PSVs)
    b. UNITECH, the local Tata servicing agent, for quality assurance
8. Tata is paid:
    a. CETUD authorizes the payment of 75 percent by the Ministry of Finance directly to Tata, of which 65 percent is paid in Euro and 10 percent in CFAF)
    b. AFTU pays the balance in CFAF
9. The buses are delivered to the operators in the numbers agreed on within AFTU, the authorization to operate as public transport is transferred to the new vehicle, and operations commence.
10. Simultaneously, the existing vehicles are scrapped:
    a. The operators provide evidence that the vehicle they are handing over for scrapping is legally licensed and authorized to operate as a public passenger transport.
    b. Compensation payments *(scrapping premium)* for the scrapped vehicle, which are paid by the government, are set by a technical committee composed of representatives of CETUD and AFTU. Payments were expected to vary from CFAF 1.0 to 2.5 million ($2,275–5,680) depending on vehicle condition. The average payment was, in fact, CFAF 2.46 million, or nearly $5,500, a generous payment in view of the age of most of the scrapped ve-

hicles, but the government agreed on the payment to jumpstart the operation.

c. The compensation is paid into an account held by AFTU and is used in part to fund the deposits and in part to pay for the first year's vehicle insurance.

d. The scrapping process is undertaken by a private contractor under CETUD supervision.

11. Once operations commence, a three-month trial period allows the operators to test the lines. At the end of this period, CETUD and the operators may agree to amend the contractual obligations.

12. In the fourth month the operators commence repayments to AFTU:

    a. Payments for months 4–6 are deposited in a mutual guarantee fund held by AFTU. Payments from month 7 on are paid into a blocked account initially intended to repay the loan but currently intended to form the basis of a future revolving fund.

Financing structure

Table 3.1 sets out the details of the various loan accounts and the repayment terms. Broadly, the loans are designed to be paid off over five to six years, with interest rates ranging from a low of 6 percent (to AFTU for the IDA credit) to 10.5 percent (for the SGBS loan to pay the deposits). The value-added tax (VAT) is payable on the lease charges and is included in the operator repayment charges.

The urban transport financing group AFTU is registered for the VAT, and the VAT it collects on the lease payments is credited against the VAT paid on the purchase of the vehicles. Any operator who is VAT-registered would have to collect the tax on ticket sales, but would be able to offset the VAT paid on the lease. However, most operators are not VAT-registered and pay a simple business tax, known as the *contribution globale unique* (CGU), which is set on a sliding scale, depending on declared turnover.

Originally, AFTU was supposed to reimburse the Ministry of Finance on a quarterly basis for the IDA credit for this operation. When the

leasing operation proved successful, and because the government was willing to go ahead with another operation, the Ministry of Finance and the World Bank agreed on the creation of a revolving fund to finance the additional leases. Therefore, the reimbursements are now kept in a secured account and remain at CETUD's and AFTU's disposal for a new operation.

Implementation issues

Delivery of the new buses experienced delays for two reasons. First, many of the operators were initially unhappy with the choice of Tata as the only vehicle available under the program. At that time, Tata was an unknown brand, and they were reluctant to commit to purchasing the vehicle until there was a better understanding of how it would perform in Senegal. Second, as noted earlier, most of the operators were unable to fund the deposits from their own resources, and so AFTU had to borrow from SGBS. The problems with the first tranche were compounded by the reluctance of local commercial banks to open a letter of credit (LoC) without the security of a deposit for the whole amount.

Some six months passed before CETUD could secure the funding so the letter of credit could be issued.

Table 3.1 Loan Accounts and Repayment Terms

Description	*Lender*	*Borrower*	*Amount* *	*Loan period*	*Grace period*	*Interest***
IDA credit	IDA	GoS	SDR 11			
IDA credit lent on AFTU Commercial credits for deposits	GoS	AFTU		6 years	12 months	6.0
Tranche 1	SBGS	AFTU	557	4.5	—	10.5
Tranches 2 and 3	FPE	Mec-Trans	1,000	4.5	—	9.5
Hire purchase for vehicles	AFTU	EIG	16.5/vehicle	5 years	3 months	8.0
Revolving fund/repayment to GoS	AFTU	BST	Monthly EIG repayments less deductions	—	—	1.5
Guarantee accounts						
Mutual Guarantee Fund	AFTU	BST	100% for first 3 months of repayments; then 3% of all subsequent payments	—	—	1.5
Blocked account—tranche 1	AFTU	BST	180	—	—	0.0
Blocked account—tranche 2	Mec-Trans	AWB	199	—	—	0.0
Mec-Trans accounts						
EIG borrowings for deposit	Mec-Trans	EIG	5.5/vehicle	—	—	9.5
Transport members' borrowing	Mec-Trans	Members		—	—	10.0
Associate members' borrowing	Mec-Trans	Assoc. members		—	—	12.0
Members' deposits	Members	Mec-Trans		—	—	0.0

*in million CFAF ** % per year

Source: Dakar Bus Financing Study, IBIS Transport consultants, June 2008

Note: GoS = government of Senegal; BST = Banque sénégalo-tunisienne; AWB: Attijari Wafa Bank

The first tranche of vehicles was delivered in December 2005. The second tranche of 225 vehicles took over 18 months to deliver. This delay stemmed in part from difficulties at the assembly plant and in part from the problems the operators were still having in raising funds for the deposit. The third tranche of 131 vehicles was delivered between November 2007 and early 2008. There were some delays in ordering the final 44 vehicles because Mec-Trans apparently had difficulties raising the finance for the deposits. By mid-2008 all 505 vehicles had been delivered.

IV. Operational experience

The concession agreement

The concession agreement consists of two separate documents (see appendix), the convention and the contractual obligations. The convention sets out general principles, and the contractual obligations are intended to provide the framework for the services, with annexes to provide the detailed requirements for each line.

The principal clauses of the convention

- Require a minibus to operate with fewer than 50 seats
- Specify the region of operation (Dakar) and period of the concession and provide for renewal, extension, and revocation as appropriate
- Provide the concessionaire with a monopoly (exclusivity) of minibus services on the agreed route
- Require the concessionaire to provide a business plan every six months and to present annual accounts
- Specify procedures for increases in fares and for compensation payments if fare increases are refused

The contractual obligations specify that:

- Buses should have a capacity of fewer than 50 passengers (not seats) and should have two lateral doors (A requirement that only seated passengers should be carried was removed from the agreement. For a transition period of six years, buses with rear doors can be used. All new vehicles have side doors)

- Buses should use predetermined bus stops, which are clearly marked
- Tickets should be issued to all passengers
- Compensation is payable if fares are held at a level below break-even
- CETUD has the right to monitor the concessionaire's operations

The route to be followed and the fares to be charged are set out in annexes. The contractual obligations also refer to two further annexes that should specify the services to be provided (hours of service, vehicle kilometer, and so forth), and the frequency of service and journey times. However, no agreement was reached on these issues, and they do not form part of the agreement.

The details on the terms of the concession agreement appear in the appendix to this report.

Monitoring

As noted earlier, the day-to-day operations are monitored by a line manager, and bus departures are controlled by dispatchers. Initially, the monitoring staff was paid by CETUD as technical assistance to the EIG, funded from the IDA credit. However, with the closing of the credit the monitoring staff was employed by the EIG, though in fewer numbers than before.

In principle, the line managers record each vehicle as it departs on a route card and note the ticket numbers in the possession of the collector at departure and on return. In addition, they record the gross and net revenues (after payment of expenses such as meals and fuel) on a pay-in slip. The net revenues are then paid to the operators, who may deposit them the same day with Mec-Trans. In addition, the line manager prepares a statement of expenses incurred for each vehicle.

Until February 2008 copies of the monitoring records were given to a local consultant employed by CETUD, who was responsible for preparing a summary report on the operation of the new system. Unfortunately, many of the operators were unwilling to cooperate, and those who did cooperate did not provide complete information. One of the problems encountered in collecting the cost data was that not all expenditures (such as maintenance and repayment of deposits) were relayed to the line managers. Partial cost data are available for 95 buses, and revenue data are available for 70 buses.

Finally, AFTU deploys surveyors for each route to ensure that non participating operators are not infringing on the routes.

The record-keeping function must be strengthened. With the closure of the project operations monitoring has been further weakened. No procedure is in place for regularly reporting operational and expenditure data to CETUD. The operators freely admit that they are unable to prepare accounts and operations reports.

Route structure and services

Most of the routes chosen for the new buses are relatively short and uncongested; they were selected to give operators the best possible chance of meeting the requirements of the contractual obligations and making the new system work.

By November 2007 (the time of the fieldwork) 18 routes were in operation using 341 buses. Analysis of the data provided by the operators suggests that average route length is 19 kilometers, and the operators make an average of 4.3 round-trips per day. Services are offered from about 6:30 a.m. to 9:00 p.m.

On average, each line provides 81 departures each day, or 5.6 per hour. It is clear that the operators are unable to provide a five-minute service interval at rush hour or a 10-minute interval in the off-peak hours.

The routes cover most of the Greater Dakar region, and often run parallel to services provided by the DDD. Most the routes follow the existing lines, but four are completely new routes into previously unserved areas. Table 4.1 gives details of the services on each line, and table 4.2 presents the bus operating statistics for 2009.

Fare levels

Fares for all the *car rapide* routes rose by about 10 percent in 2005,[9] and a new system of six stages (or sections) was introduced. Officially, the new buses charge the same as the old. However, in practice the older *cars rapides* charge lower fares but have a more "flexible" stage structure. The new services issue a ticket for each journey, with color coding to indicate how many stages the passenger has paid for. Passengers report that, for most journeys, it is cheaper to use the new services because the official stages are respected by the operators.

The fare stages do not depend in any systematic way on mileage, but are negotiated between CETUD and the operators and are partly based on the old official tariffs. The fares rise in seven steps, from a minimum of CFAF 100 (e.g., from Centre to Colobane) to CFAF 225 to Rufisque and CFAF 240 to Diamniado.[10]

[9] The fares were revised in July 2008, increasing by about 25 percent from 2005.
[10] The corresponding fares in 2008 were increased to CFAF 125 from Centre to Colobane, CFAF 285 to Rufisque, and CFAF 315 to Diamniado.

Table 4.1 AFTU routes operated, December 2007

Line	GIE	From	To	Km	Stages	Buses	Round-trips/day		Km/day
							Per bus	Per line	(per bus)
1	Nayobé	Dieuppeul	Petersen	10	2	11	6.0	66.0	120
2	Darou Salam	Petersen	Parcelles Assianies	13	3	19	4.0	76.0	104
3	Dimbalanté	Petersen	Yoff	17		12	5.0		170
3	Kheweul Aéroport			17	3	3	3.0	76.5	102
3	Diamaguene			14	4	3	2.5		70
4	Transports Mboup	Petersen	Yoff-Tonghor	14	4	20	5.0	100.0	140
5	Sopelli	Petersen	Parcelles Assianies	16	3	23	4.0	92.0	128
24	Dimbalanté	Fann (hospital)	Guediawaye	15		18	4.5	81.0	135
25	Nayobé	Parcelles Terminus	Petersen	14	4	18	4.0	72.0	112
26	Sopali	Parcelles Terminus	Pikine	14	3	18	5.0	90.0	140
27	Ave. du Sénégal	Petersen	Guediawaye	12	5	20	5.0	100.0	120
28	Darou Salam	Petersen	Hamo 6	16	5	17	4.0	68.0	128
29	Nayobé	Camberene 2	Petersen	18	4	22	4.0	88.0	144
31	Darou Salam	Pikine Icotaf	Abasss Ndao	16	4	23	4.0	92.0	128
32	Darou Salam	Daroukhane	Sahm Abass Ndao	18	5	18	4.0	72.0	144
38	Nayobé	Cité SHS	Sahm	17	4	25	4.0	100.0	136
51	Thiaoye Yembeul	Porte Pekine	Keur Nassar	16	4	14	2.5	35.0	80
52	Sopali	Pikine	Keur Nassar	24	3	24	5.0	120.0	240
53	Darou Salam	Petersen	Yeumbeul	19	5	16	4.0	64.0	152
55	Ave. du Sénégal	Petersen	Rufisque	20	6	10	4.0		160
55	Diamaguene	Petersen	Rufisque	25	6	7	3.0	61.0	150
	Totals			345		341		1,453.5	
	Average per line			19.2	4.3	18.9	4.3	80.8	138

Source: Interviews with representatives of the GIEs

Table 4.2 Mini Bus operating statistics, 2009

Total tickets sold	825,000
Total buses	505
Buses in operation (90%)	454
Tickets sold per bus	180,000
Tickets sold per bus per day	580

Source: Dakar Bus Financing Study, IBIS Transport consultants, June 2008

Table 4.3 Bus Lease/Purchase Program, by Operator Group (EIG), as of September 2009

	EIG Dimbalanté	*EIG Mboup*	*EIG Nayobé*	*EIG Darou Salam*
No. of vehicles delivered	39	24	122	150
No. of operators involved	17	3	59	75
No. of vehicles repos-sessed/reallocated	0	0	+2	+2
Amount of IDA credit disbursed**	1.23	0.75	3.84	4.72
Operator contribution*	0.41	0.25	1.28	1.57
Total amount disbursed (4 + 5)*	1.64	1.0	5.12	6.29
Scrapping allowance paid to oper-ators*	0.19	0.11	0.58	0.72
Expected monthly payments to the Mutual Guarantee Fund (FCM) on delivered vehicles**	128	77	408	508
Monthly dues paid into FCM*	104	64	$320	394
Percentage of monthly payments to expected amount	82	83	78	77
Total amount of installments due from operators**	673.0	455.3	1,654.4	1,889.9
Total amount of installments paid by operators**	671.0	455.3	1,652.6	1,886.3
Arrears (total installments due *minus* amount paid, 11- 12), based on payments of $609 per bus per month**	1.8	0	1.8	3.7
No. of operators delaying pay-ments	2	0	3	5
No. of days in arrears	14	0	14	14
No. of cases in litigation	0	0	0	0
Total amount in litigation**	0	0	0	0

*US$ million

**US$ thousand

EIG Sopelli Transports	*EIG Thiaroye Yeumbeul*	*EIG Diamaguene*	*EIG Ave. Sénégal*	*EIG Kheweul Aéroport*	*Total*
78	24	9	55	4	505
35	12	3	39	2	245
+1	+2	(10)	+2	+1	0
2.45	0.76	0.28	1.73	0.13	15.90
0.82	0.25	0.10	0.58	0.04	5.30
3.27	1.01	0.38	2.31	0.17	21.20
0.36	0.097	0.092	0.26	0.015	2.42
260	77.7	50.4	186.0	11.5	1,708
206	60	46	142	8.9	1,345
79	77	92	76	77	79
1,118.8	309.8	247.7	616.6	62.1	7,027.8
1,118.8	308.0	231.1	609.9	62.1	6,995.4
0	1.8	16.6	6.7	0	32.4
0	1	1	1	0	13
0	14	0	0	0	
0	0	1	0	0	
0	0	16.6	0	0	16.6

Source: Obtained by author

Operating costs and profitability

Capital repayments

Currently, the operators are regularly making monthly repayments of CFAF 307,402 ($609) per bus to AFTU.

Table 4.3 provides details on the operating and financial performances of the program. As of September 2009 all 505 buses were delivered to the nine participating EIGs, composed of 245 operators. The total IDA credit of $15.9 million was disbursed, and operators contributed $5.3 million as part of their 25 percent up-front contribution. Total arrears from operators were $32,000, which is less than 1 percent of the total expected installments. Thirteen operators have fallen behind payment by about 14 days, but only one operator in the EIG Diamaguene has a delinquent account in litigation. Ten vehicles from two operators have been repossessed and reallocated to other operators.

In addition to the repayments to AFTU, the operators have to repay the money they borrowed for their deposits, either from Mec-Trans or the SGBS. The monthly repayments to Mec-Trans are CFAF 168,000 ($375), and those to the SGBS are CFAF 129,170 ($290). AFTU collects the payments for the SGBS, whereas Mec-Trans recovers its money by debiting the accounts in which the operators deposit their daily takings. No arrears have been reported.

Operating costs

The operating cost structure shown in table 4.4 (averaged over all operators) is based on interviews with the operators. The table shows the main operating items, but makes no provision for insurance and other general overhead.

Compared with the estimated costs for the older *cars rapides* (see table 2.4, fuel costs are significantly higher (as would be expected in view of the increase in fuel prices), and crew, maintenance, and tire costs are a

little higher. However, the new buses are not subject to unofficial charges from the police or the *coxeurs* (dispatchers).[11] Moreover, reported revenues are significantly higher because the crews are unable to retain any of the revenue. Overall, on the basis of the information provided, it appears that the EIGs were able to make a small profit of approximately 5 percent of revenue before allowing for overhead.

Table 4.4 Operators' Reported Cost Structure

Item	*Annual cost (CFAF millions)*
Fuel	8.4
Crew costs	2.9
Tires	1.0
Maintenance	1.6
Total direct operating costs	13.9
Capital repayments	6.5
Total annual costs	20.4
Reported revenue	21.6
Net profit (excluding overhead)	1.2

Source: Based on interviews with operators

A detailed analysis of the available data on operator costs and revenues from four EIGs comprising 95 vehicles (see table 4.5 for details) revealed that the data were incomplete—not all cost items had been recorded for all buses, and certain major expenditures paid directly by the operators (in particular, repayments of the deposits and the costs of maintenance and tires) were not recorded (reported in columns 3, 4, and 5). On this basis, the operators appeared to be making a substantial

[11] The operators no longer have to pay unofficial fees to police or dispatchers, and there are no complaints about police harassment because the new vehicles are correctly licensed and allowed to operate without being checked.

profit before allowance for overhead, with revenues nearly 40 percent higher than costs. However, when allowance is made for the missing costs and for the 25 percent increase in fuel prices, the profit margins are eliminated.

Table 4.5 Operators' Costs and Revenues, Monitoring Data, Dec. 2007

	Costs (excluding repayments, maintenance, tires)				*Revised costs*	
	No. of records	*Daily**	*Monthly**	*Annual***	*Monthly**	*Annual*
Tickets (printing)	1	0.5	6.0	0.07	6.0	0.07
Fuel	69	22.5	642.5	7.71	803.1	9.64
Transport costs	5	0.2	5.9	0.07	5.9	0.07
Maintenance	39	1.3	36.0	0.43	132.7	1.59
Tires	—	—	—	—	125.0	1.50
Insurance	93	2.3	64.7	0.78	64.7	0.78
Guards	29	0.2	5.9	0.07	5.9	0.07
Cleaning	54	0.2	6.2	0.07	6.2	0.07
Other external charges	27	0.5	14.3	0.17	14.3	0.17
Parking (paid to bus stations)	37	0.6	17.0	0.20	17.0	0.20
Crew wages	93	7.7	220.8	2.65	220.8	2.65
Crew food	57	2.4	67.5	0.81	67.5	0.81
Capital repayments (AFTU)	93	12.4	353.3	4.24	390.0	4.68
Capital repayments (deposit)	—	—	—	—	150.0	1.80
Total		50.8	1,440.1	17.3	2,009.1	24.11
Revenues		70.0	1,995.0	23.9	1,995.0	23.9
Revenue/costs			1.39		0.99	

*thousand **million

Source: Dakar Bus Financing Study, IBIS Transport consultants, June 2008.

Note: Costs are averages taken over those buses for which records were available.

V. Evaluation of the program

Program design

Beginning in the early 1990s the urban transport market underwent a major transformation. Formal public transport services declined and were gradually replaced by informal, unregulated private transport services. The imposition of fare controls and an inability to maintain compensating payments mainly contributed to the decline of big bus and suburban rail systems in Dakar. The informal sector operators who replaced them provided minibus services that were poorly regulated and controlled. This change did not result from a conscious decision to deregulate public transport; rather, it was an indigenous response to a growing demand and commercial opportunity. Furthermore, import regulations and restrictions on the issuance of new licenses discouraged the importation of replacement vehicles, whether new or secondhand. Consequently, capacity shrank and the aging fleet was not renewed.

The bus renewal program was designed to formalize and professionalize the provision of public transport services and to provide an initial impetus to renew the bus fleet. In addition, the program was intended to reduce the air pollution (particulate emissions) produced by the old minibuses.

The program attempted to meet these objectives simultaneously by linking the development of a formalized route licensing system to the provision, on favorable financial terms, of new vehicles. The decision to select new vehicles rather than to import approved reconditioned secondhand vehicles apparently was made in part for administrative convenience and in part as a way of helping to establish a vehicle assembly and manufacturing industry in Senegal. Although the IDA agreement allowed the creation of a financial lease system for any type of approved

vehicle, the government decided to go ahead with one brand of vehicle. Tata was selected later based on an international bidding process.

This approach ensured that the government, in the form of CETUD, would be at the center of the process. CETUD was involved in drawing up the specification for the vehicle, in evaluating the bids, and in pursuing the complex processes for the release of funds both through the IDA credit and through the issuance of letters of credit. In addition, CETUD acted in its role as a transport planning authority, designing the route structure, setting fare levels, and negotiating the terms of the concession agreements.

Because earlier experiences with providing credits to the informal sector had resulted in defaults, a more structured approach was required, involving the creation of EIGs whose members would have a mutual responsibility for repaying the loans. The negotiation of the concession agreements between CETUD and the EIGs was also the basis for the professionalization of the industry; participating EIGs would receive technical assistance and training to help improve the quality of service they could offer.

It also became evident that the EIGs would need some kind of association to represent them jointly in their dealings with CETUD, the financial institutions, and the vehicle suppliers. This role was played by AFTU, which also acted, in effect, as a leasing agency. AFTU was initially unprepared for its role, and so it received technical assistance to ensure that it could successfully handle financial transactions.

As the findings of this report make clear, the bus renewal program in Dakar has been subject to delays and has had to overcome many obstacles, but it is finally working reasonably well.

Options considered and rejected

The use of a private sector leasing agency to provide the vehicles or manage the leasing program was envisaged at an early stage. Reliance on existing institutions was thought to lead to lower costs and to speed up the program. Early consultation processes with the Senegal banking system resulted in very high intermediation costs, and so this option had to be dropped.

"My work involves organizing the departure of TATA buses from the terminal. Drivers are disciplined, quality is superior to cars rapides, buses are faster and stop at fixed stops" —A dispatcher

The option of using reconditioned secondhand vehicles was never strongly envisaged by either the operators or the government. The option would have created a very important and cumbersome issue of vehicle quality control.

Service quality

"TATA buses are much better than cars rapides with regard to comfort and safety. Uders prefer to stand in a TATA bus than sit others. I work from 6:00am to 6:00pm with three days' rest" —A dispatcher

Service quality has definitely improved. The AFTU lines offer a more regular, reliable and comfortable service than the old *cars rapides*. Passengers appreciate the introduction of both ticketing and fixed-fare stages, which have reduced the tensions associated with travel, and the general improvement in operating discipline. Passengers report that, on average, fares are lower than in the old system because they are not subject to arbitrary "sectioning" or short-tripping. The use of fixed stops also appears to have reduced travel time.

The operators claim they scrupulously observe the terms of the contractual obligations and that, in particular, they keep carefully to the timetable and do not wait for buses to fill up before leaving the terminal.

Some passengers, however, believe that driver discipline is slipping. There is other anecdotal evidence of a return to informal sector practices. It is claimed that some operators are using the new buses to provide services to companies to transport employees to and from work (in breach of their concession agreements) and that some drivers still change routes to "capture" passengers. It also has been observed that the general condition of the vehicles has deteriorated significantly since their introduction, particularly their bodywork, lights, and windscreens.

In addition, competition with the "old" minibuses is still not under control. The number of new minibuses (505) represents only about 20 percent of the entire minibus fleet. Reaching a critical mass is needed to increase the impact of the program.

Sustainability

Operational

The choice of the Tata minibus appears to have been appropriate for the local environment. The vehicle is robust and relatively easy to maintain, and there have been very few reports of vehicles requiring major repairs. However, at the current rates of utilization the warranties on most vehicles will expire after some four years, and increases in both maintenance problems and costs must be expected.

"The after sales service is not adequate. Spare parts are very expensive" —A EIG cooperative

The vehicles are available for operations over 95 percent of the time; only one and a half days per month are lost for maintenance. However, the improved availability does not appear to have translated into increased service provision because the AFTU services make fewer round-trips per day than the old *cars rapides*. Operating costs have not been reduced because the expenditures on maintenance and tires appear to be higher than those

for the *cars rapides*, probably because of the higher standards being achieved, and the capital costs of the new vehicles are substantial.

Finally, commendable efforts have been to professionalize both the operators and the crew.

Financial

The revenues received by the owners have increased. Unofficial payments, which account for nearly 20 percent of the costs of the old *cars rapides*, have been eliminated. However, the operating costs overall are significantly higher for the new vehicles after capital payments are included.

> "People prefer TATA buses even if they have to stand and we are suffering from the competition. I work from 5:00am to 10:00pm and have to pay 30 percent of my daily earnings to the owner" —Driver of a non-participating EIG

The services appeared to be making a modest profit, but since the latest increase in fuel costs they are probably only just breaking even. Further increases in fuel prices and the increases in maintenance costs that can be expected as the vehicles age will further erode profitability. Fare increases were approved in July 2008 to ensure that the system remains viable (bus fares were increased by about 25 percent in July 2008 over the 2005 fare structure). For the moment, the operators appear satisfied that, even though they are not making much money, they are acquiring a new vehicle that they will be able to use for many years and with a comfortable increase in revenues after the repayments are completed.

The operators have benefited from substantial implicit subsidies, the costs of which are borne by the government. First, the compensation payments for the scrapped vehicles, at CFAF 2.46 million ($5,500) per vehicle, represent more than 10 percent of the costs of the new minibuses, and are substantially more than the old vehicles were worth. Because the government had difficulty making the payments for the last lot of vehicles, it seems unlikely that it will be possible to continue sub-

sidies if the program is extended. Second, the terms of the IDA credit are significantly easier than could be obtained commercially (about 17 percent). Third, the administrative costs of the program, which are substantial, have been funded through the IDA credit and will eventually have to be repaid by the government. Finally, foreign exchange risks are borne by the government and the bus supplier (TATA).

Implementation problems

Delays in the program

The program suffered severe delays, principally because the detailed design was not available at the beginning, this program was very innovative, and the problem of raising funds for the deposits had been underestimated. The problem with deposits appears to have been compounded by the lack of administrative capacity in AFTU and CETUD to process the loans and to obtain letters of credit. The creation of MecTrans during implementation of the program was not planned initially. The delays undoubtedly created problems for the manufacturers, both TATA and SENBUS, and likely increased their unit production costs, although the escalation clause in their contract was not triggered.

Concession agreement

The concession agreement should include specifications both of the level of service to be provided and of the frequency of service. However, it appears that CETUD and the operators were unable to agree on the terms, and these key elements are missing from the agreement.

The concession agreements require the operators to produce business plans every six months and to prepare annual accounts, both of which are to be made available to CETUD. However, there is no evidence that the plans or the accounts have ever been produced.

CETUD put in place a short-term monitoring system, collecting information on daily operations, revenues and expenditures. This system

should have allowed it to produce basic statistical information on the system, which would have facilitated assessment of the scheme and provided a good basis for reviewing the fare structure and for setting future operational goals. Currently, no monitoring is under way.

It is clear that an effective monitoring system is required to provide CETUD with basic information about the performance of the system, to help it with planning improvements and extensions, and to provide the public authorities (initially CETUD, and then the Ministries of Transport and Finance) with a sound basis for judging whether fare increases are justified. Officials are currently considering whether to provide technical assistance to the operators to collect and process the basic data and deliver it to CETUD in accordance with their obligations under the concession agreements (this possibility is included in a new project under preparation).

The concession agreements guarantee the concessionaires the exclusive rights to operate on the specified routes for a period of five years, which is renewable subject to satisfactory performance. However, it is evident that the concessionaires are frequently subject to illegal competition and that CETUD is unable to enforce the monopoly.

Relationship with other transport modes

Clearly, a more integrated approach to transport planning in Dakar is needed. This role officially belongs to CETUD, but it currently lacks the professional resources to carry it out effectively. It is fair to say that at present, the major players are operating independently. Major expenditures have been made on rail investment, on the purchase of new big buses for the Dakar bus operator DDD, and on the AFTU renewal program without any thought given to the role that each service should play. In particular, AFTU and the DDD operate side by side and compete on many routes, but no effort has been made to exploit the potential complementarities of the small and large buses.

Undoubtedly, it will be difficult to bring about effective integrated transport planning while the majority of the passenger services are being provided by the unregulated informal sector's *cars rapides*. The priorities for CETUD should now be to gradually extend the concession agreement principle to the other *car rapide* operators (with or without fleet renewal) and to develop the professional skills to make proper assessments of transport demand and to design appropriate route and fare structures. This move should also be supported by the introduction of an age limit for all public transport vehicles to create additional incentives for the operators to join the fleet renewal program.

Overall conclusions

On balance the bus renewal program has improved the level of public transport services in Dakar along project corridors. However, contrary to the initial thinking the improvement is attributed to a greater extent to formalization of the sector, introduction of a formal system of route allocation, and improvements in fare collection rather than to renewal of the bus fleet. Nevertheless, the financing of bus renewal was a necessary condition for incentivizing the operators and regulatory authority to undertake public transport reforms.

The formalization of bus operations through the introduction of franchise agreements has introduced three major improvements in the quality of service operation: (1) a faster and more reliable dispatch of vehicles at points of departure and a reliable itinerary along the bus route (informal vehicles start service from the terminal only when full of passengers and often still change their route along the way); (2) predictability of users' fares (in the informal sector the driver or conductor may change fares arbitrarily based on demand); and (3) higher revenues for the owners of the new buses (in the informal sector almost 20 percent of the revenue was lost through unofficial payments).

Today, all planned buses have been put in operation, service quality has improved, and loans are being reimbursed on a regular basis (only one payment delay stretched beyond 30 days). By September 2009 operators

had reimbursed AFTU over 45 percent of the total leasing amount, or $7.0 million. One of the requirements of the renewal program was that an old licensed vehicle be scrapped for every new vehicle. As a result, the program has not resulted in an increase in transport supply.

A second phase of the bus renewal financial scheme is being considered, and the present financial scheme is expected to be rolled over based on a revolving financial mechanism. The impact of the existing program on owners and operators attitude is largely positive and could open the way for further formalization of the system.

To sustain benefits derived from the program public authorities will have to focus on the following:

- The operations appear to be technically sustainable, although financial sustainability has been achieved through provision of the substantial hidden subsidies described earlier It may be difficult to maintain these subsidies if the program is extended. For example, the government is already facing difficulties making payments for the last batch of scrapped vehicles. The operating costs of the program will also likely rise with an increase in fuel prices and other factor inputs. It may therefore be critical to adjust fares on a regular basis to ensure financial sustainability over the long run.

> "TATA buses are in a better shape that cars rapides, but their condition has deteriorated in the past few years. During the World Bank project, drivers were trained but as the project has closed, new owners are hiring their relatives without any training. These new buses will last only five years with untrained drivers" —EIG cooperative

- Although the new buses are in a better shape than the *car rapides*, their condition has deteriorated over the last few years, particularly their bodywork, lights, and windscreens. This deterioration may reflect the fact that the bus operators do not actually own the vehicles; they are owned collectively by the EIGs. Perhaps maintenance of the vehicles should be part of the franchise agreement. CETUD would monitor quality, and operators would receive penalties for noncompliance.

- The project design focused on renewing some buses and formalizing operations in a few select corridors without interfering with the operations in other corridors by other operators (including informal ones). However, the experience in Dakar suggests that it is difficult to formalize and improve part of the sector without applying the reforms to the large and growing informal sector and introducing citywide reforms. The public transport system in Dakar is facing two particular problems. First, the concession agreement guarantees the concessionaire an exclusive right to operate on the specified route. However, CETUD is unable to enforce the agreement terms and is faced with illegal competition from the informal operators. Second, new bus operators share bus stations and stops with the informal *cars rapides*, which introduces competition in the route that undermines the basic framework of the concession agreement. The informal operators are not obliged to maintain any safety standards or operations and often flout traffic rules by paying off the traffic police. Because of the fast-growing demand, the number of *cars rapides* will continue to increase substantially, compromising the operational and financial viability of the new buses. The priority in Dakar should now be to extend gradually the concession agreement principle to the other *car rapide* operators (with or without fleet renewal) and develop the professional skills needed to make an empirical assessment of transport demand and to design an appropriate route and fare structure in a comprehensive manner.
- Introduction of a good monitoring system is critical for the success of the program. In the Dakar bus renewal scheme, although the concession agreement requires production of business plans and annual accounts by the operators, such reports are not being prepared. The collection of basic statistical information on operation of the system is critical to evaluating its impact and providing a planning basis for reviewing the route plan, operational framework, and fare structure.

VI. Lessons learned from regional experiences

Most recent urban transport projects throughout the developing world have recognized the need for fleet renewal, but countries have taken two very different approaches to renewal.

The traditional approach, particularly where there is a public sector passenger service provider, has been to procure buses to support the state-owned companies. This procurement is sometimes linked to reforming transport regulation or restructuring the operator as part of the overall project concept. Subsidized financing by government for the procurement of buses for operation by state-owned public undertakings was the common practice up until late 1990s. But the results were often disappointing, and the buses did not last their economic life because (1) the public sector operator was not responsible for fleet replacement and was motivated by the short-term goal of profit maximization, which required operating the buses for long hours with little maintenance; (2) operational reforms were not introduced, and the fare structure was set below full cost recovery, resulting in the decline and eventual demise of the state-owned bus companies in most cities; (3) those procuring the rolling stock often did not follow competitive and transparent guidelines; and (4) rolling stock, suppliers were at times compensated by higher-than-market charges for maintenance and replacement parts. In addition, support for the public sector operator had the unintended consequence of discouraging the private sector to develop in an environment of unfair competition.

A more recent approach has focused on public-private partnership, with the public sector financing the enabling environment (including infrastructure development) and the private sector retaining all operational responsibilities, including rolling stock finance and management.

But even the private sector often needs an initial impetus through subsidized financing for fleet renovation, primarily because the existing private operators are often financially constrained and lack the market knowledge needed to invest in standard good-quality buses. Commercial banks are often reluctant to lend to operators until the business model for financing new buses is proven. The result is an increase in the number of old, small secondhand buses, which operators can finance from personal savings.

It is possible to identify some of the reasons why renewal has proved so difficult. These include inappropriate regulatory frameworks; lack of effective traffic management, which reduces bus productivity; the difficulty of providing security for the financing agency (whether public or private); and the problems that informal sector operators face in raising capital and in accessing maintenance and other technical services.

Based on the experience in Sub-Saharan Africa and South Asia, it is possible to identify some conditions and actions needed for the success of a bus renewal program. The key element of an action program is to define the role of the public and private sectors: the public sector provides the facilitating environment and common infrastructure facilities and the private sector provides the operating services and takes the commercial risk. The following sections describe the central lessons learned from bus finance schemes.

Lesson 1: Avoid requiring too large a deposit

At first sight this approach is counterintuitive because the deposit paid by the operator is perceived as providing the financier with the comfort and security needed in advancing the required sums. Indeed, lower deposits have been considered anathema by the finance industry, thereby resulting in many bus financing proposals being stillborn.

The fundamental problem with requiring a large deposit is that the informal sector operators simply do not have direct access to the necessary sums, nor do they have enough collateral to pledge as an alternative security. Where funds are available, it is more likely that the operator will enter the industry by purchasing a secondhand vehicle or a smaller vehicle instead of committing to a finance scheme that would erode his near-term operating cash flow.

When large deposits are still required by the financier, the operator will seek to circumvent the requirement in one of three ways that counteract the level of security actually being provided and the ultimate viability of the scheme:

- *The operator obtains the deposit through a separate unsecured, short-term loan*. Unsecured finance is generally more expensive than the asset-backed finance provided in the primary scheme, and so the operator will seek to pay the loan down as quickly as possible. Because these payments are being made in parallel with those for the primary finance, the operating cash flow generated by the bus will come under severe pressure.
- The logical response of the operator under these circumstances is to defer any *avoidable* expenditure (principally for preventive maintenance) and to make extra revenue trips. Avoiding expenditures acts to shorten the useful life of the bus, thereby increasing the rate of decline in its value, and so reduces the financier's margin of security. The extra trips also shorten the useful life of the bus and increase the risk of accidents, and so further erode the margin of security.

- *The operator seeks a gifted deposit*. The most common form of gifted deposit arises from collusion between the operator and the bus supplier in order to appear to meet the requirements of the financier. For example, the supplier will have a list price for a bus of, say, $120,000, which gives him a margin for negotiating the price down to the strike-price limit of $100,000. *However*, to secure the funding for the deal he will still report the list price for the transaction to the financier. When the financier agrees to advance, say, 80 percent, or $96,000, of the purchase price to the operator, a balance of only $4,000 is left to complete the deal. Clearly, the operator will find this amount much more affordable than the $20,000 deposit that should have been paid, but reduces the financier's real margin of security proportionately.

- *The operator negotiates a grace period*. Under this scenario the operator negotiates a period during *which* he would make neither capital nor interest payments to the financier, although the deferred obligation would normally be accrued and then added to the outstanding loan. Reasons given for the deferral might include the time taken to establish the business or other launch costs that also need to be funded. Although these reasons appear plausible, the reality is probably that unsecured finance is being paid down during this period (as discussed earlier). The net result is that, once again, the financier's margin of security is reduced.

All three of these techniques can be observed in the Dakar finance scheme. The full deposit value has been obtained through the Mec-Trans mutual credit scheme, and a gifted deposit has also been made through the very generous scrapping allowance. And yet the operators have still managed to secure a grace period from the primary finance that has partially been used to build the security fund in AFTU.

Lesson 2: Avoid using vehicle as the primary security for finance

Most finance schemes are constructed to include continual periodic payments from the operator, thereby ensuring uniformity of affordability throughout the period of the loan. This practice tends to apply even in an inflationary environment, although the real value of the historic debt declines under these conditions and the nominal earnings tend to increase over time. Under these circumstances actual affordability in real terms improves over the period of the finance.

The impact of this model of finance is that the capital value outstanding on a loan does not decline in direct relation to the period over which payments have been made, but rather diminishes slowly in the initial period and then more rapidly over time thereafter. By contrast, the value of the asset declines relatively rapidly after it enters service but more gradually thereafter. The net outcome of these two impacts is that when a vehicle is procured wholly through debt the operator will experience negative equity for much of the finance term, reaching the maximum level midway through the repayment period.

Clearly, the financier would be badly exposed if the operator defaults at this time (repossession and resale would crystallize this loss), and so will act to prevent a default. The financier's two main options are to increase the deposit paid by the operator or to reduce the tenor (period) of the finance below the useful life of the asset. Both of these options would expose the operator to high payments.

Lesson 3: Avoid dependence on comprehensive insurance for asset security

Most finance schemes require the operator to take out comprehensive insurance coverage in order to reimburse the financier in the event of catastrophic loss, such as a major accident or perhaps a fire. However, even where coverage is available in the local market, it is often greatly overpriced and is therefore unaffordable in a competitive operating environment.

This unaffordability arises primarily because underwriting tends to be based on the long-distance or intercity markets in which operating speeds are much higher and thus any accidents tend to be much severer. In fact, it is extremely rare for an urban bus to experience damage for which the repair is uneconomical, and the high-value mechanical components are generally not affected at all. As such, the real level of financial risk is actually quite low.

It is preferable under these circumstances that the real function of insurance—to spread risk across a group—be recognized and priced accordingly. In this manner a collective of operators can mutually self-insure by creating a specific fund for this purpose to which all its members contribute and from which all have recourse as necessary. Payments into the fund would be set at a level adequate to cover the real level of risk, and the principle of mutuality would in any case act to reduce the risk. This approach has been adopted in Dakar, with AFTU managing such schemes on behalf of the EIG.

Lesson 4: Aim to increase operating productivity with the buses that are being financed

Repayments under any finance scheme increase the fixed costs of operators of new vehicles compared with the costs of the operators of secondhand vehicles, and this situation may not prove to be sustainable in a competitive environment. The viability of the scheme will depend on recovering these fixed costs from the greatest possible number of passengers or reducing the unit variable costs of operation. These effects are particularly important in the near term, when the real cost of traditional finance packages are at their highest.

The two most obvious ways of increasing productivity in urban passenger transport operations are to deploy larger buses and to ensure that these buses cover a greater number of kilometers daily than existing vehicles. Larger buses offer potential economies of scale in operation, not only in crew costs but also in fuel usage per passenger carried. Greater numbers of kilometers run reduce, for each place offered, the fixed costs such as for licenses, permits, and general overhead, as well as finance.

The first objective is relatively easy to achieve where the existing fleet is made up predominantly of minibuses and midibuses as in most of Sub-Saharan Africa, and a large conventional truck-based bus can still offer an acceptable level of service to most customers.

The second objective can be achieved by means of some supporting interventions in the operating environment. The preferred solution, now being implemented in Lagos, for example, is (1) to reform the regulatory framework in order to avoid wasteful competition, (2) to employ traffic systems management (TSM) measures on the corridors to be plied by the new vehicles, and (3) to provide a segregated lane for the new bus operations.

The first of these measures, typically through the introduction of controlled competition for the right to provide specified services on designated routes, has the potential to raise operating productivity over the whole urban pas-

senger transport network. The effectiveness of the second measure may depend on the funding available for any potential TSM schemes, but this funding can often be secured as a specific component of an urban transport project. Many corridors respond well to relatively minor traffic engineering measures, such as provision of turning lanes at critical junctions, and investments can readily be prioritized to maximize the impact of such measures. Where traffic volumes justify it, the third measure could be implemented with the introduction of segregated bus running lanes and of bus rapid transit (BRT).

These principles have been recognized in Dakar, but only to a limited extent. The new Tata buses have a higher passenger capacity than most of the *cars rapides* they have replaced, but not sufficiently so that over the balance of the fleet their economies of operation have been transformed. Furthermore, they have mostly been deployed on routes (lines) that facilitate higher operating speeds and thus a greater number of kilometers run per day than the network as a whole. However, analysis of the limited operating data available suggests that the end result is still a relatively low average of some 140 kilometers per day, compared with over 200 kilometers per day in Lagos.

What has proven to be particularly significant in the Dakar case, however, has been the major increase in revenue productivity arising from the new ticketing system. Because a greater proportion of the takings are now available to the operator, he is better positioned to meet the repayment obligations of the finance scheme.

Lesson 5: Aim to ensure contractual arrangements for bus maintenance within the scheme

As noted earlier, there is a considerable risk that an operator will defer any avoidable operating expenditure in order to maximize his near-term cash flow, and preventive maintenance of his vehicle is the most likely candidate. In a bus finance scheme the risk in this behavior is that the value of the asset will drop below its predicted level, its operational availability and thus its earning power will be reduced, and its useful life will be shortened—all effects that act to reduce the security of the financier.

Because both an effective regulatory enforcement mechanism for vehicle condition and a legal obligation to maintain a passenger-carrying vehicle are lacking throughout Sub-Saharan Africa, a mechanism is needed to counter this incentive to neglect maintenance. This problem is exacerbated by the general absence of a preventive maintenance culture within countries and the skills and facilities required for this purpose.

The preferred solution is to make commitment to preventive maintenance an integral component of the finance agreement and to require that an external contractor be used for this purpose unless other arrangements prove to meet a satisfactory standard. It is also possible that vehicle maintenance could be covered in a financial lease package, with the financier accepting the responsibility for ensuring that the vehicle is available in operable condition.

The two main problems with contract maintenance from the operator's perspective are that such services may be available only when the operator is providing transport services (typically during the working day) and that the operator has little control over the costs incurred. Both of these effects can be observed in Dakar. This situation again argues for a finance contract in which the costs can be defined at the start of the term and there is an incentive to maximize operational availability through the provision of nighttime maintenance, for example.

Lesson 6: Aim to maximize affordability of the finance package throughout its useful life

The easiest means of reducing the periodic repayments made under a bus finance scheme is to extend its tenor to match as closely as possible the useful life of the asset and thus to spread the capital repayments over the longest possible period. However, as noted earlier, such an arrangement is practicable only when effective mechanisms are in place to secure the maintenance of the bus and the scheme carries no foreign exchange exposure.

An alternative approach to extending the effective period for capital recovery within a finance scheme is for the scheme to be split into two or more periods with potentially different characteristics that might then appeal to different operator segments. Thus, for example, an operator seeking a high customer image but not wishing to make a major maintenance commitment might lease a vehicle for three years and then return it to the financier for a preset consideration at the end of that term. In turn, the bus could then be leased to another operator seeking the lower finance costs of a secondhand vehicle but prepared to accept the lower reliability and higher maintenance commitments arising. This life cycle pattern is common in developed countries and is characteristic of an operating lease, but it does require a liquid secondhand market to set the midlife price and so may not be appropriate in much of Sub-Saharan Africa.

Lesson 7: Aim to maximize financier security and comfort when facing negative equity

As noted earlier in lessons 1 and 2, it is not practicable to provide total security for the bus financier by ensuring that he retains positive equity in the vehicle throughout the tenor of the loan. In these circumstances alternative arrangements must be put in place to provide the financier with the greatest possible comfort and thus minimize the risk premium that will have to be charged. A range of measures can be identified for this purpose, but not all will be applicable in each scheme.

The most obvious form of security would be for the scheme sponsor, whether a (local) government or a development partner, to provide the financier with a partial risk guarantee in order to mitigate elements of the risk he is accepting through the scheme. However, such a guarantee may encourage the type of behavior that would then result in exercise of the guarantee, in effect creating moral hazard.

Another area of security for the financier relates to his legal rights in repossessing the vehicle in the event of payment default, and the speed and effectiveness with which such rights can be exercised. In some jurisdictions repossession has proved particularly problematic for finance leases and similar schemes in which most of the rights and obligations of ownership are transferred to the operator at the start of the finance term and thus repossession can be contested. This situation may be exacerbated in areas in which the judicial process is open to delay and corruption, particularly in the lower courts. At times, such a situation has even resulted in the operator absconding with the vehicle.

An alternative approach to providing financier security is through the transport operation for which the vehicle is being procured rather than through the asset itself. The existence of some kind of formal operating right over an extended period provides a degree of security for future cash flow over the finance period.

This approach argues for the introduction of controlled competition for the right to provide specified services within the network. These services would be covered by route service contracts or franchises as deemed appropriate for local operating conditions. The period over which such an agreement would be entered could then match the tenor of the finance, or at the least the period within which negative equity persisted.

One option is for a financier to exercise a lien over the operating cash flow generated by a operation, thereby ensuring that he ranks first among its creditors. In the newly commissioned bus rapid transit scheme in Lagos, for example, the commercial bank manages the collection of daily earnings and deducts the bank's charges (for bus procurement) before passing the balance through to the operator. In the event of any default in such an arrangement, repossession can be undertaken promptly, before a significant deficit arises.

Another effective means of mitigating the risk of repayment default by an individual operator is to work through a collective, such as a cooperative society or the EIG in Dakar, and require that this entity accept the obligation on behalf of its members. Such an arrangement is necessary in any event for the operators to enter into legally binding commitments with the contracting authority for the network, and also builds on the concept of mutual self-insurance.

Lesson 8: Involve the chosen vehicle supplier in the operation of the finance scheme

The vehicle supplier has a vested interest in the success of the finance scheme; it will enable him to develop his market presence and secure downstream business through supplying spare parts and other technical support. He will act to ensure that all parties in the scheme are fully motivated and will promote the resolution of issues between them as they arise.

At the base level, the bus supplier may be able to provide or facilitate some of the scheme finance. Suppliers normally have access to export credit schemes sponsored by their governments, and any favorable terms within these schemes can be passed through to their customers. It is also quite possible that the country of origin of the vehicles may be a development partner of the customer country and that some element of tied aid can be used to support the bus finance package.

At the operational level, the bus supplier could facilitate the establishment of a contract maintenance capability in the customer country, possibly basing the capability on an established vehicle distributor that has already developed a technical support facility. The availability of trained technicians and the special tools and equipment needed for the overhaul of major aggregates are beyond the resources of most transport operators, and so such a capability is a necessary element in securing the planned economic life of the buses. The distributor will also be able to procure and store the necessary spare parts for the maintenance and repair of the fleet, removing this burden from the operator.

Finally, the bus supplier may act as the direct coordinator of the bus finance scheme by establishing a bus operating-lease company in partnership with local financial institutions. The supplier has both the technical knowledge and product experience in similar markets needed to price the lease contract and then to manage its delivery within that budget. The integration of finance with the vehicle supply package greatly increases its attraction to customers and acts to develop market share.

Appendix

Concession agreement

The concession agreement consists of two documents. The convention sets out the general terms, and the contractual obligations provides a more detailed description of the obligations of the operator. All the lines have basically the same agreement; the specific requirements for each line are given in the annexes to the contractual obligations.

The sections that follow summarize the contents of the two documents.

Convention

Preamble

The preamble provides the policy background and defines the concessioning authority as the state of Senegal, and CETUD as its representative. It lists the responsibilities of CETUD, notably:

- Specification of routes and the numbers of vehicles to operate on them
- Drawing up of cahiers des charges
- Right to make proposals for setting of fare (tariff) levels to the competent authority (the Ministry of Finance)
- Identification of Public Service Obligations (PSO) and the corresponding compensation payments.
- Determining qualifications for operators
- Carrying out studies, providing training and public information

- Coordination between modes (including the division of revenues where joint ticketing is used)
- Preparing and supporting action programs and investments to improve traffic flow and safety
- Actions to improve the quality of the vehicle fleet, and to reduce air and noise pollution

General principles

1. Object of the Concession

The concessionaire is permitted to operate the specified line with a minibus of less than 50 seats.

2. Area of the Concession

Defined as the region of Dakar

3. Duration

Five years renewable

4. Role of the concessioning authority

The Concessioning authority is responsible for the definition of transport policy, financing investments and payment of compensation for PSO; also to facilitate traffic flow

5. Role of CETUD

CETUD is the representative of the state of Senegal in matters relating to the Concession

6. Services to be provided

The services are defined as a route, stops, operating hours, range and frequency of services and the commercial kilometrage to be offered. The details of the services are to be specified in the contractual obligations specified in the relevant annex of the concession agreement.

7. Exclusivity

The concessionaire is protected from competition from other minibus operations on the specified route.

8. Management

The operator is given managerial autonomy. In the event that the concessionaire encounters serious problems in providing the service, consultations can be held with CETUD and the agreement may be modified.

9. Transfer of rights

The concessionaire cannot transfer the rights to the concession to any other operator except by agreement with CETUD.

Organization of operations

10. Responsibilities of the Concessionaire

The concessionaire is required to provide the agreed services. Tickets must be issued, and the concessionaire has the right to the revenue. The concessionaire is also responsible for all matters of publicity and public information linked to the service.

11. Equipment

The concessionaire is required to use a minibus in accordance with the technical specifications given in the contractual obligations.

12. Service quality

The concessionaire is required to provide a service during the specified hours, guarantee continuity of service, maintain the fleet in good order and ensure the proper treatment of passengers, including the provision of information about the services.

13. Assistance from public authorities

The Government undertakes to assist the concessionaire to meet the obligations of the concession, notably with respect to protection from competition.

14. Road system and traffic flow

The state undertakes to maintain the road system, bus stops and bus stations, and to take actions to facilitate traffic flow.

15. Responsibilities and Insurance

The concessionaire is responsible for all/any damages to people, the environment or property that arise from the operations and is required to carry appropriate insurance.

16. Services outside the Concession

The concessionaire is not permitted to use the vehicles specified in the concession agreement on other services.

17. Information, Planning & Control

The concessionaire is required to provide a business plan every 6 months, and an annual report of activities. The format of these reports is to be specified in the contractual obligations.[12] CETUD is given the right to inspect and monitor the concessionaires operations to ensure that the agreement is being respected.

Financial System

18. Contribution to the Urban Transport Development Fund (FDTU)

The concessionaire is required to contribute to the FDTU, the amount being determined by the law setting up the FDTU.

19. Revenues

The concessionaire is given the rights to all revenues arising from carrying passengers, advertising, insurance payments and fines levied on passengers who infringe regulations.

20. Fare levels

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[12] In the current version of the contractual obligations, there is no mention of these reports.

Fares are to be specified in the contractual obligations. Fares are to be reviewed after a transition period of 2 years. If the concessioning authority decides to maintain fares at a level that does not allow the concessionaire to recover costs, the concessioning authority is required to pay compensation as provided for in the contractual obligations.

21. Financial compensation

In the event that the concessioning authority does not permit a justified fare increase, financial compensation shall be paid in accordance with the terms set out in the contractual obligations.

22. Taxation

The concessionaire is responsible for paying all taxes levied on the concession.

23. Management information

The concessionaire is required to keep accounts in accordance with national regulations. At the end of the financial year, the concessionaire will provide to CETUD, the profit and loss statement, the balance sheet, and a report of activities, as defined in the contractual obligations.

Annulment and forfeiture

24. Nationalization

If the concessionaire is unable to provide the services specified in the concession agreement, the concessioning authority has the right to take over the concessionaire assets and operations.

25. Annulment of the concession

The concession may be annulled in the event of a breach of the terms of the concession, or if the terms cannot be met, or by agreement.

26. Forfeiture

If the concessionaire ceases to provide or abandons the services, the concessioning authority may take over the services without compensating the concessionaire.

Expiry and renewal

27. Renewal

The concession agreement may be renewed after 5 years by agreement.

28. Extension

The agreement may be extended by 6 months, by agreement.

29. **Expiry**

At the end of the (5 year) term, the concession may be terminated, and the concession transferred to another operator. Any equipment transferred is to be compensated at market prices.

30. Domicile

Address of concessionaire

31. Registration *fees*

All stamp duties and registration fees are to be paid by the concessionaire.

32. Litigation

In the event of disagreements that cannot be amicably resolved, disputes will be referred to the Arbitration Centre of the Dakar Chamber of Commerce (*Centre d'Arbitrage, de Médiation et de Conciliation de la Chambre de Commerce de Dakar*).

Contractual obligations

The contractual obligations have substantial overlaps with the Convention. Only clauses that specify significant additional requirements are listed below.

3. Exclusivity

The concessionaire is given a monopoly on the provision of services using minibuses with less than 50 seats. It goes on to require a maximum capacity of 50 passengers, 2 lateral doors (with 6 year transition period for vehicles with rear doors). The requirement that all passengers should be seated has been removed.

5. Responsibilities to passengers

The concessionaire is obliged to ensure a good quality of service with respect to following the specified routes, the hours of service, regularity, only stopping at formal bus stops, ticketing.

The level of service is intended to be specified in Annex 3, but has never been agreed with the operators.

6. Conditions of passenger transport

The concessionaire is required to ensure the cleanliness, comfort, regularity and safety of the service. The carriage of animals and cargo is forbidden.

7. Public Information

a. CETUD is required to maintain the bus stops
b. Fares and routes are to be displayed on the buses and at bus stops.

8. Ticketing

Fare levels are defined in Annex 1. Tickets are to be issued to all passengers. The concessionaire has the right to check tickets, and impose fines. The level of fines has to be notified to CETUD and agreed with the Minister for Surface Transport.

9 Advertizing

Advertizing is permitted within and outside the vehicle provided it does not obscure fare and route information.

10. Traffic laws and regulations

The concessionaire undertakes to follow the Highway Code, and all relevant legislation.

11. Infractions

The concessioning authority undertakes to all necessary action to ensure that the concessionaire is not exposed to competition on the concessioned route, and to do everything possible to ensure a smooth flow of traffic.

12. Safety equipment

The concessionaire is required to provide fire extinguishers, and to ensure that the crew knows how to use them.

13. Safety

The bus crews are required to have an annual medical exam, and to wear a uniform.

14. Strikes

The concessionaire is required to advise CETUD as quickly as possible in the event of a strike.

15. Fare levels

The initial fare levels are shown in Annex 1. The concessionaire may propose changes, and CETUD is required to submit their opinion on the proposal to the concessioning authority, which has to respond within 30 days. Failure to respond will be considered to constitute approval.

16. Financial compensation

If an application for a fare increase is refused, the concessionaire is entitled to compensation, based on the difference between the actual and the break-even fares[13] multiplied by the number of passengers carried.

17. Monitoring

CETUD will put in place a monitoring system to check that the concessionaire is following the terms of the concession agreement.

18. Procedures for monitoring

A Technical Committee will be set up, to meet quarterly, to consider information provided by the concessionaire on unfair competition and obstacles to the smooth operations (circulation) of the minibuses. A Monitoring Commission will be set up to adjudicate any disputes arising in the Technical Committee.

Annex 1: Routes

Annex 1 specifies the route to be followed and the number of vehicles to be used (not included).

Annex 2: Fares

Annex 2 specifies the stages and fares applicable to all routes that have been concessioned (not included).

Annex 3: Services to be provided

This annex has not been agreed, and is missing from all the *cahiers des charges (not included)*.

Annex 4: Frequencies and travel times

This annex has not been agreed.

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[13] The procedure for calculating the break-even fare is not specified.