

The Dakar Bus Renewal Scheme, 2005-2008

Case Study Leaders in Urban Transport Planning (LUTP) Program

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In 2005 the World Bank provided a credit for USD 15.9 million (EUR 12 million or CFA franc 7.9 billion) to help renew Dakar's fleet of minibus taxis and strengthen the capacity of private minibus operators. The credit was intended to cover 75 percent of the cost of vehicle renewal, and the remaining 25 percent was to be financed by bus operators as part of their up-front payment. Though there were some initial delays, the program achieved improvement in the quality of bus operations in the city. The city authorities were considering expanding the program and were discussing the merits of building on success.

This case study provides background information for discussion on how capital improvements were organized and financed for the informal public transport sector in Dakar, Senegal. It provides multiple perspectives on the advantages and disadvantages of different approaches for reforming the informal public transport sector. As you read through the material, consider the following questions:

- What were the key problems in the bus sector pre-reform? Do you see any parallels with the conditions in your city/country?
- Was this program a success? Why or why not? For whom?
 - What worked well? What are the key conditions and actions needed for the success of a bus renewal program?
 - What objectives were not met? How might future reforms be better structured to meet these objectives? What additional stakeholders, if any, could be engaged to add value to future reforms?
- What makes it so difficult for the private sector to obtain bus financing?
- What would you advise the Minister to strengthen this program?

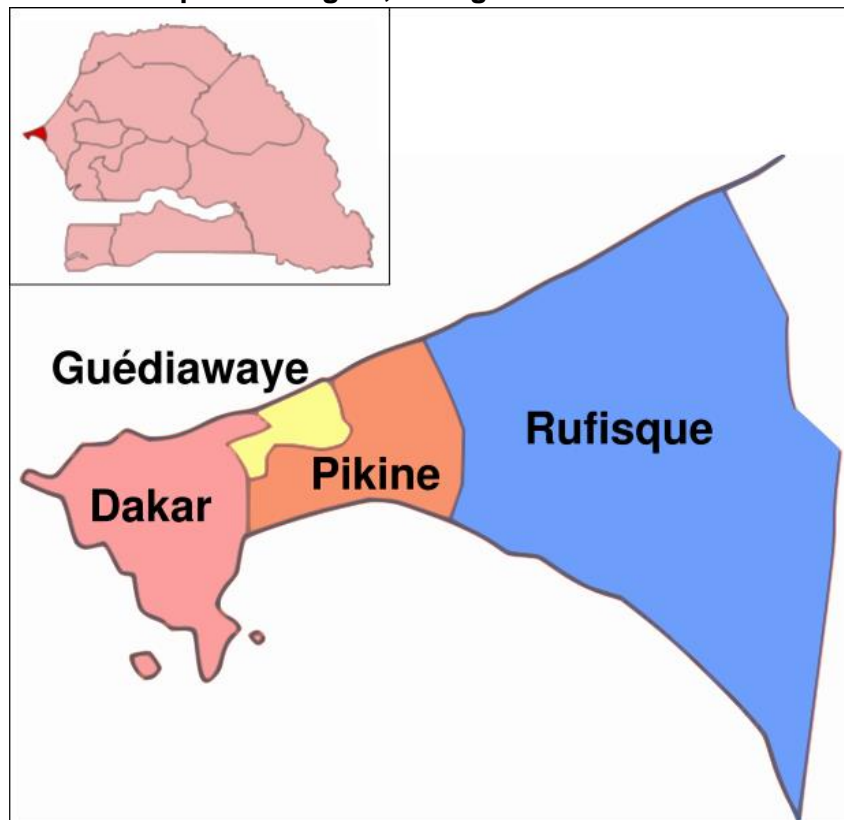
Background

Senegal is a Sahelian country with a national territory of 196,722 kilometers squared located in westernmost Africa. High rural poverty, limited access to basic infrastructure and services in rural areas, and a declining agricultural sector due to frequent droughts have fueled migration to urban areas. Senegal's economy grew by more than 6 percent per year between 2014 and 2018; however, the COVID-19 pandemic has significantly changed the country's economic outlook, setting back exports and critical service sectors such as tourism and transport. The country's informal workforce—which was estimated to contribute about 60 percent of GDP pre-pandemic—was particularly hard hit. Growth in Senegal's economy has remained concentrated in its urban area, bolstered by the construction and services sectors.

The capital city of Dakar occupies only 0.3 percent of the land area of Senegal but accounts for over 60 percent of the country's economic activity. An estimated 3.13 million people—or 22 percent of Senegal's population of 14.3 million—live in the Dakar metropolitan region. Dakar's population is growing at an annual average rate of 3.6 percent, which is almost twice that of the national average of 2.2 percent per year. The transport sector is of key strategic importance to Senegal's economic growth, particularly for the poor, who depend most on public transport services. As in many developing countries, however, the government of Senegal has had difficulty meeting growing demand for mobility. It is faced with the dual challenges of increasing access to opportunities through transport while simultaneously addressing the negative externalities that come with greater urban travel. Financing of transport infrastructure is overdependent on public funds, the inadequate resources that do get allocated are not well prioritized, and private financing remains limited. Lack of road maintenance due to insufficient funding has become a serious concern.

The city was founded on a peninsula and, in the absence of integrated land use policies, has expanded outwards in a funnel shape (see Map 1). Many of the newer satellite towns and suburbs are 30 km or more from the city center, where most of the employment is located. There are two major satellite towns located to the east: Pikine-Guediawaye with a population of about 1,100,000 people and Rufisque with a population of 250,000 people (but growing rapidly). There is a very substantial demand for long distance commuting trips into the center and average journey to work distances are therefore much longer than usually found in cities of its size.

Map 1. Map of Dakar Metropolitan Region, Senegal



Source: Patricia Fidi, 2007, via Wikimedia Commons: <https://commons.wikimedia.org/wiki/File:Map-dakar.svg>

Institutional Context

In the early 1990s, responsibility for urban transport was scattered across multiple ministries and agencies within the national government of Senegal—primarily the Ministry of Infrastructure and Land Transport (*Ministère des Infrastructures et des Transports Terrestre*, MITTD)—and lack of coordination among various entities posed a challenge. In 1993, the government of Senegal set up a Public Transport Coordination Committee consisting of stakeholders from the national and local authorities and private transport operators and chaired by the Director for Road Transport and the Director for Technical Services of the Urban Authority of Dakar.

In March 1997, the MITTD and Ministry of Finance established a new urban transport coordination agency called the Dakar Urban Transport Executive Board (CETUD). CETUD was set up as a ‘public establishment with a professional character’ and was given, by law no. 97-01, responsibility for the planning and monitoring of urban transport policy in the Dakar metropolitan region. CETUD has a president with an administrative and executive role and a plenary assembly composed of 19 members representing urban transport professionals, national and local authorities, private companies, operators, and user associations. Its operations are financed through the *Fonds de Développement des Transports Urbains* (Urban Transport Development Fund). The state provides an annual sum of CFA franc 400 million (USD 890,000) and local authorities and

transport operators are supposed to match the state's contribution (though it is not clear whether they actually fully make these matching contribution). CETUD also acts as the conduit for international aid to the urban transport sector. Despite its name, CETUD has very few executive powers. While CETUD can make concession agreements with licensed operators to allocate routes, it does not have control over the issuing of licenses to operators. And while CETUD can propose the terms of a compensation agreement with the operators if the official fares do not cover costs, the implementation of any compensation payments would require the agreement of the Ministry of Finance.

The Ministry of Infrastructure and Transport (MITTD) remains the national authority responsible for urban transport in Senegal. MITTD defines the broad sector strategy and ensures its implementation by the various agencies, funds, and operators acting under its supervision. MITTD also issues licences to transport operators and is responsible for the quality of infrastructures and services.

Overview of the Urban Transport System in Dakar pre-Reform

The Era of State-Run Public Transport Services

During the 1960s and 1970s, bus companies were nationalized in the process of decolonization. The formation of the state-run public transport company *Société de transport du Cap-Vert* (SOTRAC; Cape Verde Transport Company) ushered in a regulated regime of public transport. The national government provided financing for the capital costs of buses and infrastructure and funded operating deficits.

When it came to procurement of buses for the state-owned companies, results were often disappointing. Throughout the 1990s, buses failed to 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.

Fares were regulated by the national government and SOTRAC offered discounts to certain groups of travelers, such as schoolchildren, pensioners, the military, and the police. As operating costs grew, public subsidies did not grow commensurately, and operators were not able to make up the difference by increasing fares. During the Structural Readjustment Programs of the mid-1990s, the financing problems were compounded by the withdrawal of tax concessions (on import duties and value-added tax) that SOTRAC had previously enjoyed. Operating deficits meant that operators had difficulty securing the funding and financing needed to maintain and replace the its aging fleet. SOTRAC's financial position continued to deteriorate and the fleet declined from about

500 buses in 1987 to almost none by 1996. SOTRAC ceased operations in the late 1990s and was liquidated.

With encouragement from the government, a new private company, Dakar Dem Dik (DDD), took over the assets of SOTRAC and commenced operation in 2001 under a 15-year concession agreement. 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. The basis of DDD's concession is that it will continue to charge the same fares as its predecessor, SOTRAC. And despite the stat having agreed to make public service obligation payments to DDD, subsidies were not received in a timely basis, DDD faced severe cash flow problems, its financial situation remained precarious, and very few buses were available for operation daily. Over the following years 409 additional buses were procured with bilateral assistance.

As SOTRAC's state-run bus service/supply declined and its successor struggled to provide quality service in the face of growing demand for transport in the Dakar metropolitan region, privately owned microbus and minibus services—known locally as *cars rapides* and *Ndiaga Ndiaye*—as well as shared taxis known as *clandos* emerged to meet growing demand. Over this period, the number of minibuses operating underregulated public transport services in the Dakar region increased from only a few hundred to as many as 3,000. So that by the year 2000, most of the public transport supply in Dakar was composed of cars rapides and Ndiaga Ndiaye.

The Emergence and Importance of Informal Public Transport

As in other African cities, walking is the primary mode of transport in Dakar. Based on a household travel survey conducted in 2000, walking served almost 73 percent of door-to-door trips made by persons aged 14 years or older in the Dakar region; and this is likely an underestimate of walking share as trips made to and from public transport stops were not counted in the survey. Despite the high number of pedestrians in the region, walking environments remain poor. Lack of sidewalks and protected crossing, lack of street lighting, and other challenges contribute to safety and security concerns, especially among women.

Residents of the Dakar region are also highly dependent on public transport, which served 22.4 percent of trips made by persons aged 14 years or older in 2000. In Dakar, there were four types of public transport services available pre-reform:

1. 'Formal' bus services provided by Dakar Dem Dik (DDD), a private company successor to SOTRAC;
2. Rail services along a 27-km stretch between Dakar and its suburbs provided by the *Petit Train de Banlieue* (PTB, previously known as the *Petit Train Bleu*), a public limited company held by the State;
3. Legally registered taxis; and
4. The 'informal' public transport sector, consisting of microbus and minibus services (*cars rapides* or *Ndiaga Ndiaye*) and unlicensed shared taxi services known as *clandos*.

In 2000, only around 5.5 percent of weekday users of public transport trips used formal bus services operated by DDD and another 11.3 percent used license taxi services. As much as 83 percent of weekday users of public transport trips in the region relied on ‘informal’ public transport services—39.7 percent on cars rapides, 28.8 percent on Ndiaga Ndiaye, and 14.6 percent on clandos. Because users of informal public transport services tend to make more frequent trips, in 2000 cars rapides and Ndiaga Ndiaye were responsible for 54 percent and 38 percent of public transport demand on a per trip basis, respectively.

Ndiaga Ndiaye, cars rapides and clandos serve different user markets and thus have different operating strategies. In general, Ndiaga Ndiaye operates on longer, “regional” routes, cars rapides on slower, more urban routes, and clandos on the shortest routes, essentially serving only local, neighborhood trips.

Image 1. A crowded car rapide and a licensed taxi drive along a street in Dakar, Senegal.



Source: Guillaume Colin and Pauline Penot, 2000, via Flickr CC BY-NC-ND 2.0.
<https://www.flickr.com/photos/guillaumecolin/4108101361/>

The exact number of *cars rapides* operating in Dakar is unknown, but is commonly believed to be between 2,500 and 3,000. Cars rapides seat between 23 and 32 passengers, depending on the specific vehicle. Most vehicles were imported second-hand commercial vans that were converted into makeshift minibuses for passenger use. The reason for converting vans rather than buying purpose-built minibuses was partly economic since import duties on commercial vehicles were significantly lower than on passenger vehicles. Commercial vehicles were also practical because spare parts were readily available and local mechanics were familiar with them. While maintaining

a standardised image (referred to as “habillage”), cars rapides and Ndiaga Ndiaye services were typically provided by many individual operators of one or a few vehicles.

Before the reform, the informal sector was very lightly regulated and cars rapides and Ndiaga Ndiaye operators defined their own routes. Operators would propose a route, get it approved by MITTD, who would subsequently deliver a licence valid for a year. The level of regulation was rather minimal, with no constraints on frequencies, number of vehicles or licenses per route, or defined service time. The operator, most often the owner, would pay a “revenue stamp” of CFA franc 15,000 and would need to show proof that the vehicle used was adequately insured and roadworthy (“carte grise”). However, lack of enforcement meant that many other operators would provide service without going through official licensing.

Ndiaga Ndiaye operated on a fill and go model, only departing ranks when they had reached a load determined by the driver. Barring exceptional cases, all passengers are seated during the trip. Drivers will seldom stop along the way. If they do stop, it will be only to drop off passengers close to a terminal rank. Once the vehicle has reached the terminal rank, it will once again queue-up, wait for passengers, and depart in the opposite direction.

Cars rapides also rely on a ‘fill-and-go’ operating model, but a more flexible one. Depending on the probability of finding passengers on the way, the driver can decide to depart with a half-full vehicle or, in some cases, an almost empty one. The driver will then opt for the most profitable itinerary between his departure and arrival points, considering expected ridership and commercial speed. There were no formal bus stops for cars rapides services other than the terminals; passengers are picked-up and dropped-off ‘on demand.’ This practice may be convenient for the passenger, but it often results in dangerous maneuvers by drivers and contributed to high numbers of road traffic incidents in the metropolitan region. Sometimes drivers would pick up passengers to the extent that they exceeded the vehicles’ capacity; seeing users dangerously standing on bumpers during peak-hours is quite common in Dakar. Passengers of cars rapides, particularly women, also reported issues of robbery and other violent crimes.

Pre-reform, the national government did set official fare stages, but these were often ignored. Fares, which were often negotiated on a trip-by-trip basis were often lower than the official rates, but drivers made their own decisions on stages and passengers making transfers often had to make two or three separate payments to complete a journey.

Pre-reform, farebox revenues from passengers were the sole source of income for the sector. Typically, users would pay fares to the driver or conductor. From those fares, the driver would pay for fuel, small repairs, fines, and unofficial payments. With the remaining amount, the driver would pay a weekly or monthly rent (also called “target”) to the owner of the vehicle. Owners and drivers were not bound by any formal or written contract and lack of transparency could lead to exploitation on both sides.

Pre-Reform Informal Public Transport Financial Footing: Constraints on Fleet Renewal

Informal public transit services operated on very small margins. Estimates of operating costs for cars rapides collected from operator interviews suggested that fuel constituted around 34 percent of total costs, staff and administration another 32 percent, and fines and unofficial payments as much as 17 percent (see Table 1). These operating costs make no allowance for the costs of capital (interest on capital invested and provision for vehicle renewal).

Because the productivity of any one vehicle in the chaotic and competitive informal public transport market is low, the high fixed costs resulting from committing to vehicle finance more than outweigh any saving in the variable costs of repairs and fuel consumption offered by a new vehicle. This could raise the average costs of operations and debt repayment above what can be recovered from passengers at the current level of fares allowed by the government.

Table 1. Operators' reported cost structure before the reform, *cars rapides* minibuses

Item	Annual cost (million CFA franc)	Percentage
Fuel	3.4	34
Staff and administrative	3.2	32
Fines and penalties	1.7	17
Other materials (tires, spare parts, lubricant)	0.9	9
Maintenance and repairs	0.8	8
Total direct operating costs	10.0	100

Source: IBIS Transport Consultants 2008.

Private minibus operators in the region were financially constrained and lacked the market knowledge needed to invest in standard, good-quality buses. This contributed to the poor quality of the vehicle fleet. Most of the vehicles were more than 25 years old (some as old as 40 years) and were generally in poor condition, causing serious issues with local air pollution and safety.

Operators typically lacked the collateral required to securitize financing for fleet acquisition. Lack of collateral combined with the fact that operators often do not have experience in providing credible business plans meant that commercial banks were reluctant to lend to operators.¹ Financial institutions responded by securing any loan against the value of the vehicle and charging an interest-rate premium in recognition of the risk being taken. Unfortunately, both of these responses increase the likelihood of the operator failing to service the loan, though the impact of the former is less obvious than the latter.

¹ Both of these aspects are in contrast to the formal transport sector that tends to have property assets in its depots, and a trading history on which to base its forward plans.

Securing a loan against the value of a vehicle was problematic because: (1) the residual value of a vehicle—whether measured in a second-hand market or by its net earning potential—does not depreciate at a constant rate over its useful life, but instead declines faster during earlier years of the loan and (2) the outstanding balance on a loan based on equal monthly payments over its duration (as is standard practice) declines at a much slower rate during those early years of the loan period. The financier needs to keep the outstanding balance on the loan below the residual value of the vehicle to retain security and therefore demands a significant deposit at the beginning of the loan—25 percent for a bank to 40 percent for an individual financier is typical—and then only offering short-term finance (usually 3 years, or 4 years at most). Both these restrictions are particularly damaging to the financing of larger buses, having both higher prices and longer lives than minibuses.

These factors combine to severely constrain the ability of an operator to cover repayments in the early months of the financial commitment, especially with moderate inflation and additional foreign exchange risks. Further, the net cashflow from operations is almost certainly not enough to pay for full preventative maintenance of the vehicle—typically seen as an avoidable cost (and loss of earnings) in the short term. Without proper preventative maintenance, there is a real likelihood that the residual value of the vehicle will fall even faster than the financial institution expects, and that repossession may then not recover the full loan balance. This results in an even higher risk premium being charged, furthering the challenge faced by informal public transport operators in trying to secure financing for fleet renewal.

The fragmented ownership and operating structure of the informal public transport sector further compounded problems in accessing financing. In most cases the purchaser is an individual (whether an owner-driver or a non-trade investor), and as such their ability to meet loan commitments is highly vulnerable to any non-availability of the vehicle (whether from an accident, or technical problems). In most cases, the operator will not have any other vehicles earning a positive cashflow with which to support the payments on the new acquisition. Moreover, as an individual, they are more vulnerable to abuse of authority by the regulatory agencies and extortion from criminal elements. All of these factors work to make a loan default even more likely.

Design of the Bus Renewal Scheme

In 2005, the World Bank approved a loan of USD 15.9 million (roughly CFA franc 8 billion) to finance the renewal of the mini buses (or car rapides) operated by the informal private sector. The proposal included a component for the formalization (or professionalization) of the sector, through introducing a formal system of route allocation and an official fare structure, together with technical assistance and training for operators and drivers. To access the scheme, minibuses operators would need to form legally-recognized groups under a system of route allocation and an official fare structure.

Operator Groups

To participate in the renewal scheme, operators (vehicle owners) were required to join, or form, an operator group known as a *groupement d'intérêts économiques* (Economic Interest Group; EIG). The EIGs were collectively responsible for loan repayments. Only existing operators with a valid license (carte grise) were permitted to join. For every new bus put into service, an existing bus had to be taken out and scrapped.

The *Association de financement des professionnels du transport urbain de Dakar* (AFTU) was formed to 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. 14 GIEs were formed with the members of 9 GIEs participating in the renewal program.

Vehicle Specifications and Tender

One of the key objectives of the program was to reduce pollution by offering incentives for operators to scrap old minibuses and replace with newer, more fuel efficient, and less polluting vehicles on a one-to-one basis. For every new bus put into service, an existing bus had to be taken out and scrapped.

While the option of using reconditioned second-hand vehicles was considered, it was not embraced by either the operators or the government. The option would have created a very important and cumbersome issue of vehicle quality control.

Vehicle specifications were developed by the national government of Senegal, who then released a competitive tender for bus procurement in September 2003. A condition of the tender was that after-sales service for the vehicles had to be available in Senegal. Another condition was that the warranty cover 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 CFA franc 22 million (or USD 50,000) per unit, including taxes—about half the price quoted by the nearest competitor. The vehicles were to be partially assembled by a newly formed local company, SENBUS, with government support at a local factory.

Financial Conditions

With support from the World Bank loan, the national government of Senegal would cover 75 percent of the cost of vehicle renewal. Operators, who could still be private individuals owning one or a few vehicles, were required to contribute the remaining 25 percent of the price of the vehicle. Because individual vehicle owners often had limited access to capital, buses were offered on financing lease with the loans designed to be paid off in five to six years.

While the program did not initially impose a solvability guarantee for the operators, AFTU set up a common guarantee fund (*Fonds de caution mutuelle*; FCM) that could be used to cover defaults.

A portion of each operator's vehicle loan repayment was dedicated to this fund. In addition, the vehicles had to be insured for third-party, fire, and theft (though not damage).

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 was tackled in two phases. In the *first phase*, AFTU was provided a loan for the first tranche of 105 buses by the *Société générale de banques du Sénégal* (SGBS), a commercial bank; the loan was partly guaranteed from a blocked account containing CFA franc 180 million from the proceeds from scrapping the cars (*primes à la casse*), which were funds borrowed from a state development bank. This arrangement was generally considered unsatisfactory because it appeared to expose the government to undue risk. Therefore, in the *second phase* a mutual fund—*Mutuelle d'épargne et de crédit des transporteurs de la région de Dakar* (Mec-Trans)—was set up for the operators participating in the scheme. This fund, which operates as a kind of friendly society or savings and loan, 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 Economique*, a state-owned development bank, to fund the operators' deposits. The security for the loan is in part from the guarantee funds (*fonds de caution mutuelle*) and in part from a blocked account for the *primes* for the second and third tranches of scrapped vehicles.

Financing Structure

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.

AFTU is registered for the VAT, and so 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 VAT 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.

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.

Concession Agreement

To further leverage the renewal scheme for formalization of operations, CETUD identified 18 routes for contracting. To participate in the program an EIG had to agree to operate the routes in

accordance with a concession agreement that specified the number of buses to be used and the fares to be charged. 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 agreement with the EIGs on these matters, and the relevant annexes to the concession agreement were never prepared.

Technical Assistance

Technical assistance was provided to operator organizations to strengthen their capacity to comply with the concession agreements. AFTU was supported by a local accounting and financial management firm to manage the project. Furthermore, CETUD initially conducted operator and crew member training, and the project loan financed technical support for the EIGs in operational control and monitoring. After March 2008, AFTU and EIGs were required to fund necessary technical support services on their own, which would impact operator membership fees and ultimately result in staff reductions.

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 the 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 LoC could be issued.

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.

Impact of the Bus Renewal Scheme

The concession agreement specifies the contractual obligations. The day-to-day operations are monitored by line managers and bus departures are controlled by dispatchers. Initially, the line managers and supporting monitoring staff were paid by CETUD as technical assistance to the EIG, funded from the project loan. However, from 2008, 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 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). The net revenues are then paid to the operators. For passengers, services issued a ticket for each journey, with color coding to indicate how many stages the passenger has paid for.

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 17 percent of the revenue was lost through unofficial payments).

Operating Costs

The operating cost structure shown in Table 2 (averaged over all operators) is based on interviews with the operators. Under the scheme, revenues received by the owners have increased. Unofficial payments, which accounted for nearly 17 percent of the costs of the old *cars rapides*, have been eliminated.

Table 2. Operators' reported cost structure after the reform.

Item	Annual cost (million CFA franc)	Percentage	
		Including capital repayments	Excluding capital repayments
Fuel	8.4	41.2	60.4
Crew	2.9	14.2	20.9
Tires	1.0	4.9	7.2
Maintenance	1.6	7.8	11.5
Total direct operating costs	13.9	68.1	
Capital repayments	6.5	31.9	
Total annual costs	20.4		
Reported revenue	21.6		
Net profit (excluding overhead)	1.2		

Source: IBIS Transport Consultants 2008.

However, the operating costs overall are significantly higher for the new vehicles after capital payments are included. 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 CFA franc 2.46 million (USD 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 subsidies if the program is extended. Second, the terms of the IDA credit are significantly easier than could be obtained commercially. 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.

Service Quality and Concession Agreements

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 having to negotiate fares for each trip. 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 that they scrupulously observe the terms of the *cahier des charges* and that, in particular, they keep carefully to the timetable and do not wait for buses to fill up before leaving the terminal. While passengers initially noted improvement in operating discipline, some believe that driver discipline is slipping. There is anecdotal evidence of a slow 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.

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. Competition with the “old” minibuses is still not under control. The number of new minibuses at 505 represents only about 20 percent of the entire minibus fleet. Reaching a critical mass is needed to increase the impact of the program.

The concession agreement was initially intended to include specifications for the level of service to be provided and the frequency of service. However, 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. Yet, no monitoring is under way.

Many efficiency gains achieved from public transport sector reform have likely been canceled out by low levels of road maintenance in Senegal. The annual need for routine maintenance is

estimated at CFA francs 40 billion, excluding the necessary upgrading of about CFA francs 200 billion. However, resources allocated and available for road maintenance alone are much less than the required minimum.

Discussion Questions

Putting yourself in the shoes of a policymaker in Dakar learning from the experience of this initial bus renewal scheme and looking to expand it, consider the following questions:

- What were the key problems in the bus sector pre-reform? Do you see any parallels with the conditions in your city/country?
- Was this program a success? Why or why not? For whom?
 - What worked well? What are the key conditions and actions needed for the success of a bus renewal program?
 - What objectives were not met? How might future reforms be better structured to meet these objectives? What additional stakeholders, if any, could be engaged to add value to future reforms?
- What makes it so difficult for the private sector to obtain bus financing?
- What would you advise the Minister to strengthen this program?

References

This case study summarizes material that also appear in the following publications:

- [1] IBIS Transport Consultants. 2008, June. *Dakar Bus Financing Study* [unpublished draft report]
- [2] Kumar, Ajay, and Christian Diou. 2010. *The Dakar Bus Renewal Scheme: Before and After*. Sub-Saharan Africa Transport Policy Program discussion paper no. 11. World Bank, Washington, DC. <https://openknowledge.worldbank.org/handle/10986/17806>
- [3] Transitec Ingénieurs-Conseils. 2021, October. *The Minibus Renewal and Professionalisation Process: A Combined Approach to Modernise Paratransit Services in Dakar, Senegal*. Study of Informal Passenger Transport Reforms in Sub-Saharan Africa. Agence Française de Développement (AFD), Paris, France. [unpublished draft report]

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