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PROJECT PERFORMANCE ASSESSMENT REPORT



SENEGAL

Urban Mobility Improvement Project

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PROJECT PERFORMANCE ASSESSMENT REPORT

SENEGAL

URBAN MOBILITY IMPROVEMENT PROJECT

(IDA-33540, IDA-3354AA)

September 30, 2016

*Financial, Private Sector, and Sustainable Development
Independent Evaluation Group*

Currency Equivalents (Annual Averages)

Currency Unit = CFA Franc

CFAF 1 = US\$ 0.0015

US\$ 1 = CFAF 650

Abbreviations and Acronyms

AFTU	Association de Financement des Transports Urbains
APL	Adaptable Program Loan
CETUD	Conseil Exécutif des Transports Urbains de Dakar
CFAF	CFA francs
EIRR	economic internal rate of return
GDP	gross domestic product
ICR	Implementation Completion and Results Report
IEG	Independent Evaluation Group
ISR	Implementation Status and Results Report
PPAR	Project Performance Assessment Report
PTB	Petit train de banlieue
STUMP	Senegal Transport and Urban Mobility Project
UMIP	Urban Mobility Improvement Project

Fiscal Year

Government: January 1 – December 31

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Principal Ratings

	ICR*	ICR Review*	PPAR
Outcome	Moderately unsatisfactory	Moderately unsatisfactory	Unsatisfactory
Risk to development outcome	Significant	Significant	High
Bank performance	Moderately unsatisfactory	Moderately unsatisfactory	Unsatisfactory
Borrower performance	Moderately unsatisfactory	Moderately unsatisfactory	Unsatisfactory

* The Implementation Completion and Results (ICR) report is a self-evaluation by the responsible World Bank global practice. The ICR Review is an intermediate Independent Evaluation Group product that seeks to independently validate the findings of the ICR.
Note: PPAR = Project Performance Assessment Report.

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IEG Mission: Improving World Bank Group development results through excellence in independent evaluation.

About this Report

The Independent Evaluation Group (IEG) assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the World Bank's self-evaluation process and to verify that the World Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses 20–25 percent of the World Bank's lending operations through fieldwork. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or World Bank management have requested assessments; and those that are likely to generate important lessons.

To prepare a Project Performance Assessment Report (PPAR), IEG staff examine project files and other documents, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, interview World Bank staff and other donor agency staff both at headquarters and in local offices as appropriate, and apply other evaluative methods as needed.

Each PPAR is subject to technical peer review, internal IEG panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible World Bank country management unit. The PPAR is also sent to the borrower for review. IEG incorporates both World Bank and borrower comments as appropriate, and the borrowers' comments are attached to the document that is sent to the World Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

About the IEG Rating System for Public Sector Evaluations

IEG's use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEG evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (additional information is available on the IEG website: <http://ieg.worldbankgroup.org>).

Outcome: The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. *Relevance* includes relevance of objectives and relevance of design. Relevance of objectives is the extent to which the project's objectives are consistent with the country's current development priorities and with current World Bank country and sectoral assistance strategies and corporate goals (expressed in poverty reduction strategy papers, Country Assistance Strategies, sector strategy papers, and operational policies). Relevance of design is the extent to which the project's design is consistent with the stated objectives. *Efficacy* is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. *Efficiency* is the extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared with alternatives. The efficiency dimension is not applied to development policy operations, which provide general budget support. *Possible ratings for Outcome:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). *Possible ratings for Risk to Development Outcome:* High, Significant, Moderate, Negligible to Low, and Not Evaluable.

Bank Performance: The extent to which services provided by the World Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan or credit closing, toward the achievement of development outcomes). The rating has two dimensions: quality at entry and quality of supervision. *Possible Ratings for Bank Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, and Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. *Possible ratings for Borrower Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, and Highly Unsatisfactory.

Preface

This is the Project Performance Assessment Report (PPAR) by the Independent Evaluation Group (IEG) of the World Bank Group on the Senegal Urban Mobility Improvement Project (IDA 33540, IDA 3354A). The project was the first of a two-phase Adaptable Program Loan, but the second Adaptable Program Loan did not proceed because the trigger conditions were not met. The International Development Association financed US\$75.71 million of the actual project cost of US\$156.92 million—with a cost overrun of 152 percent compared with the originally appraised cost of US\$103 million. The project was appraised on January 28, 2000; approved by the World Bank’s Board on May 25, 2000; declared effective with a one-year delay on May 14, 2001; and closed on September 30, 2008, after a delay of two years and nine months from the original closing date of December 31, 2005.

This report presents findings based on a review of the project’s Implementation Completion and Results Report dated March 27, 2009; project and legal documents; prior World Bank sector studies and reviews; records on file; and other relevant materials. An IEG mission visited Senegal in February 2016 and held discussions with the World Bank’s sector staff at the country office, government officials, urban transport operators, and other development agencies (see appendix C).

This project was selected for an in-depth PPAR for three main reasons: First, it is useful and necessary to understand the factors underlying the project’s performance to inform continuing efforts to address sustainably the persistent challenges facing Senegal’s urban transport sector. Second, the PPAR would serve as input to IEG’s major evaluation on urban transport, which relies on a geographically and operationally diverse set of project-level performance assessments and country case studies. Third, eight years after the project’s closing date, it is important to revalidate the effectiveness of the project’s interventions and assess the long-term sustainability of related outcomes.

The contributions of all stakeholders, including World Bank staff in Washington, DC, and Dakar, are gratefully acknowledged.

Following standard IEG procedures, the draft PPAR was shared with relevant government officials and agencies for review and their comments and are found in Appendix D.

Summary

Senegal’s transport sector is of high strategic importance to the Senegalese economy. As in many developing countries, however, the government has had difficulty meeting service demands, particularly those of the poor, who are most dependent on public provision of urban transport services. The dual challenges of providing adequate access to transport and reversing the growing crisis in urban mobility have increased due to the absence of integrated land use policies and the worsening of urban sprawl. Financing of transport infrastructure is overdependent on public funds—and those inadequate resources that do get allocated focus on construction while neglecting maintenance—and private financing remains limited. Meanwhile, the deterioration of road infrastructure due to the inadequate funding of road maintenance continues to be a serious concern.

Urban mobility in the greater Dakar area and in Senegal as a whole, remains a key challenge for the national and local governments. Dakar, which contributes about 60 percent to gross domestic product and is projected to reach 5 million residents by 2025, is on a peninsula; its relentless expansion can only go outward in a funnel shape toward satellite towns and suburbs that are 15 kilometers or more away from the employment locations concentrated at the city center. Consequently, the daily commute of massive numbers of commuters (many of whom are dependent on informal transport modes) has led to a significant increase in travel times, which have worsened as a result of poor traffic management, aging public transport vehicles, lack of intermodal coordination, inadequate regulations, and poor road conditions. Road safety has also deteriorated. About 2,500 traffic injuries occur annually due to inadequate separation of vehicular and pedestrian traffic. This urban mobility crisis that has been growing since the 1990s needs to be addressed urgently because of its direct links to the delivery of economic growth targets.

The Urban Mobility Improvement Project (UMIP) was approved on May 25, 2000, with this objective according to the Financing Agreement: “to improve the safety, efficiency, and the quality of the urban mobility in the metropolitan area of Dakar and road safety in Thiès and Kaolack.” The project sought to achieve its development outcomes through activities involving road rehabilitation and construction, railway upgrading, minibus replacement through an innovative funding and leasing scheme, air quality improvement, and institutional strengthening.

Ratings

The relevance of UMIP’s objectives was **substantial**. The goal of improving urban transport mobility was aligned with the World Bank’s Country Assistance Strategy at appraisal and remains consistent with pillars of the current strategy. The objectives were also consistent with the government’s Transport Sector Policy during the UMIP appraisal and implementation period and for the ongoing Senegal Transport and Urban Mobility Project.

The relevance of the project’s design was **modest**. The choice of the Adaptable Loan Program lending instrument was questionable, as it was predicated on the lack of

implementation readiness for some of the project's key components, which ultimately proved to be a key factor in incomplete components by project closing and in unsatisfactory project performance. The inadequately prepared project had a highly complex design that was assigned to a very weak implementing agency (the Conseil Exécutif des Transports Urbains de Dakar [Executive Council for Urban Transport in Dakar]; CETUD) that had just been created in 1997. The results framework was based on overoptimistic assumptions and the static definition of the performance indicators did not take into account parallel developments in the urban transport sector—notably, the continuing rapid growth of vehicular traffic, which had the effect of canceling out the project's benefits.

The achievement of the project's objectives of safety, efficiency, and quality of urban mobility was **substantial**, **modest**, and **modest**, respectively. Road safety improved and the minibus leasing component was successful, but the deterioration of the road network has accumulated rapidly due to the lack of road maintenance, scarcity of required funding, and continued use by overloaded trucks. Outcomes related to the railway upgrading were not achieved; suburban railway operations were in a worse state when the project closed. Environmental outcomes were only partially achieved.

The project's efficiency was **modest**. Cost overruns were high. The economic internal rate of return at completion was probably improperly calculated because it was based mainly on significant time and cost savings from traffic improvements, yet the Implementation Completion and Results Report states that the cost of congestion increased by 32 percent between 1998 and 2008, when the project closed. Procedural and procurement inefficiencies, government indecision, and the lack of counterpart funds led to major implementation delays. Institutional strengthening achievements were modest. CETUD remains insufficiently equipped for the sector planning, management, and regulatory tasks it is expected to perform. The government decided to reorganize CETUD in 2000, even before UMIP became effective in 2001; after much study, CETUD's restructuring was still being implemented in 2015—15 years after the initial decision.

Overall, the project's development outcome is rated **unsatisfactory**.

Risks to development outcome are **high**. The lack of road maintenance funds could only be expected to cancel out the project's achievements related to road rehabilitation and construction; however, renewed support is being provided under the ongoing Senegal Transport and Urban Mobility Project. The World Bank's performance is **unsatisfactory**. The project was neither adequately appraised nor ready for implementation when it was presented to the World Bank's Board of Executive Directors. Supervision was ineffective, despite some improvements after the midterm review. The borrower's performance is **unsatisfactory**. Many parts of the project were incomplete, despite three closing date extensions. The government's wavering commitment, ill-timed decisions, periodic inaction, and lack of counterpart funding all proved to be major shortcomings that severely weakened prospects for achieving the project objectives. CETUD, the project executing agency, was weak and still needs significant strengthening and resources before it can adequately deliver the important planning, management, and regulatory roles that it has been assigned.

Lessons

The following lessons are derived from the project's implementation experience (until the 2008 closing date) as well as IEG's 2016 assessment of the evidence and sustainability of outcomes. Thus, the lessons below all differ from those presented in the Implementation Completion and Results Report on UMIP (World Bank 2009a).

The establishment of an effective lead agency for urban transport planning and management requires strong and sustained support by the government and stakeholders. The assigned major roles and expectations of CETUD have not been matched by adequate financial and human resources or vested authority. In particular, it was not set up to oversee needed policy reforms. The government decided to restructure CETUD during its first year of implementing the complex UMIP, at a time when CETUD had only three technical staff and no management. Moreover, despite requirements by the law that established CETUD in 1997, transport operators are not paying CETUD fees and the government's funding is consistently inadequate, thus limiting CETUD's staff size and capacity to deliver on its mandate.

Land use and transport planning need to be coordinated at the metropolitan scale; spatial analysis needs to be mainstreamed into the design of urban transport projects. This lesson is especially important due to the peninsular form of Dakar. To be truly metropolitan in scope, project design needs to cover several jurisdictions. The rapid increase in the fleet of private vehicles was predictable—given the lack of incentives to reduce growth—and should have been incorporated in project design.

Rigorous monitoring and evaluation of actual performance compared with urban mobility indicators is critical for prioritizing policy and regulatory actions. Monitoring and evaluation under UMIP and other World Bank–financed transport projects has been weak. The collection and reporting of data on key performance indicators has been partial, and available data mostly focus on outputs rather than outcomes. Selected indicators are static; in UMIP, for example, the positive data on the replacement of old minibuses did not take into account the canceling effect of the rapid growth in overall vehicular traffic. Similarly, the air quality improvements attributable to the minibus replacement program are not known due to the lack of data on air quality trends for the greater Dakar area, taking into account vehicle inspection, gasoline replacement, and other parallel programs that affect air pollution.

Innovative leasing mechanisms can be effective in replacing aging public transport fleets, but their success depends on operator inputs at the design stage, technical assistance to professionalize operators and drivers, and restructuring of the network of informal transport operators. UMIP was successful in obtaining the commitment of informal minibus operators to join the bus replacement scheme, organize a mutual benefit association, set up a funding entity, and make regular payments. Strong and sustained technical assistance played a key role in developing new behaviors, such as timeliness, reliability, and fare stability, among operators. It was also critical to formalize bus operations, including the introduction of franchise agreements. However, challenges that remain to be addressed include (i) the failure to guarantee exclusive rights to a specified route (which CETUD is unable to enforce); (ii) competition for bus stations, which

undermines the franchise agreement; and (iii) continued rise in informal operators who do not follow the safety and operational standards of the new buses, thus compromising the latter's financial viability.

Adequate road maintenance is a key underlying factor in the achievement and sustainability of targeted outcomes for improving urban transport mobility and efficiency. Most likely, the rapidly accumulating costs of road degradation due to lack of maintenance have already canceled out the outcomes of UMIP. The design of urban transport projects needs to strongly factor continuous road maintenance into results frameworks, indicators, components, and costs. These were inadequate in UMIP's design, although road construction and rehabilitation accounted for 56 percent of the costs of a project that had four other components. The lack of counterpart funds—stemming from the fierce competition for public resources, procedural delays, slow disbursement from the finance ministry, and the political and logistical difficulties of collecting road user fees—has led to incomplete components at the time of project closing.

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1. Background and Context

Project Context

1.1 Senegal is a Sahelian country located in the most western part of Africa and having a national territory of 196,722 kilometers squared. Its economy is dominated by a few strategic sectors, although the agricultural sector is declining due to frequent droughts. High rural poverty and limited access to rural infrastructure and basic services have fueled migration to urban areas. Senegal's economy has started to recover from the economic slowdown of the past few years, with real gross domestic product (GDP) growth estimated to have accelerated to 6.5 percent in 2015. All the main sectors contributed positively to this. However, the growth has remained concentrated in the modern, largely urban, construction and services sectors. The capital city of Dakar occupies only 0.3 percent of the land area of Senegal but accounts for about one-fourth of its population and over 60 percent of the country's economic activity. The country's informal sector accounts for about 60 percent of GDP.

1.2 An estimated 3.13 million people¹—or 22 percent of Senegal's population of 14.3 million²—live in the Dakar metropolitan region. Dakar's population is growing at an annual average rate 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 service demands. It is faced with the dual challenges of increasing access to transport and reversing the crisis in urban mobility, which is made worse by the absence of integrated land use policies and growing urban sprawl. 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. Meanwhile, road infrastructure has been deteriorating since the 1990s, and the lack of road maintenance due to insufficient funding has become a serious concern.

Urban Mobility Issues in Dakar

1.3 **The worsening urban mobility crisis urgently needs to be addressed.** Urban mobility in the greater Dakar area, and in Senegal as a whole, remains a key challenge for the national and local governments. Dakar, which contributes about 60 percent to GDP and is projected to reach 5 million residents by 2025, is on a peninsula; its relentless expansion can only go outward in a funnel shape toward satellite towns and suburbs that are 15 kilometers or more away from the employment locations concentrated at the city center. In Dakar, over 75 percent of the daily person-trips are made by means of the public transport system (Kumar and Diou 2010). The continued growth in the number of commuters has led to a significant increase in travel times, which has been worsened by poor traffic management methods, aging public transport vehicles, lack of intermodal coordination, inadequate regulations to govern the provision of services, and poor road

¹ Senegal Population Census Data, 2013: <http://senegal.opendataforafrica.org/gkdvujc/senegal-census-data>.

² World Bank country office website: <http://www.worldbank.org/en/country/senegal/overview>.

conditions due to insufficient maintenance. Road safety has deteriorated as a result. About 2,500 traffic injuries occur annually due in part to inadequate separation of vehicular and pedestrian traffic. This urban mobility crisis has been growing since the 1990s; it is an urgent national priority because of its direct links to the delivery of economic growth targets.

1.4 Major issues affect all categories of public transport. The greater Dakar area currently provides five types of transport services:

- The formally structured bus company, Dakar Dem Dikk: The capital stock of Dakar Dem Dikk is shared between the Senegalese government (76.6 percent) and private Senegalese investors. Long perceived as having spotty service, lengthy intervals between buses, and frequent breakdowns, its small fleet of about 60 buses was supplemented (with bilateral assistance) by 409 additional large buses in fiscal year 2005/06. The government has had to subsidize Dakar Dem Dikk, but the transfers are made irregularly and the amounts are inadequate. Dakar Dem Dikk deploys fewer than 250 buses daily due to its rapidly aging fleet and lack of maintenance. The declining number of passengers has turned this predicament into a vicious circle.
- The light suburban railway line between Dakar and Rufisque, *Petit train de banlieue*³: The capacity of this system is still limited by unfinished works on a second track that was financed by the Urban Mobility Improvement Project (UMIP). UMIP provided support to address the illegal occupation (mainly by vendors) of the railway right-of-way, increase the number of railway carriages, and replace outdated infrastructure and equipment, including the badly deteriorated tracks and engines.
- Minibuses, or *car rapides*: These are owned by a large number of mostly small-scale private operators. The current fleet of about 3,000 vehicles provides approximately 80 percent of the public transport supply. UMIP's leasing scheme, which replaced 505 old minibuses with new, more efficient ones, is being scaled up. However, most of the remaining vehicles are about 30 years old and are generally in very poor condition. These minibuses are run by small cooperatives (*groupement d'interet economique*) under the supervision of their Association de Financement des Transports Urbains (Urban Transport Financing Group).
- Legally registered taxis: The number of taxis is, however, small compared with need, and their cost is unaffordable to the majority of commuting passengers.
- Informal transport vehicles, such as old minibuses and clandestine taxis (*taxis clandos*): These are private cars operated as a taxi service to earn the driver some money when the vehicle is not in use by the actual owner; they are unregistered and illegal.

1.5 Regulation of the informal sector is weak or absent. According to the project appraisal document of the Senegal Transport and Urban Mobility Project, the informal minibus and taxi sector is very lightly regulated. There are no formal routes, and official

³ Formerly "Petit train bleu."

fares are often ignored. Instead, fares are negotiated, usually to be lower than the official rates, and passengers often have to make two or three separate payments to complete a trip. There are no formal bus stops; passengers are picked up and dropped off on demand, which leads to unsafe maneuvers. Operators can cover their operating costs but not vehicle maintenance or renewal.

2. Objectives, Design, and Their Relevance

Objectives

2.1 According to the Development Credit Agreement, the development objectives of the Urban Mobility Improvement Project (UMIP) are “to contribute to the improvement of the safety, efficiency, and the quality of the urban mobility in the metropolitan area of Dakar and road safety in Thiès and Kaolack.”

2.2 It is useful at the outset to note that the Senegal Transport and Urban Mobility Project, an ongoing International Development Association–financed project, has similar objectives and components to UMIP: “(i) to improve effective road management and maintenance, both at the national level and in urban areas; and (ii) to improve public urban transport in the Greater Dakar Area.” Additional financing was approved in 2015 to scale up project activities, finance preparatory activities for a possible bus rapid transit project, and extend the closing date to December 31, 2017.

Relevance of Objectives

2.3 The relevance of the project’s objective was substantial at appraisal and remains substantial today. At appraisal, the project supported the following aspects of the World Bank’s 1998 Country Assistance Strategy: (i) to contribute to environmentally sustainable growth by alleviating the massive congestion in Dakar and by reducing the unacceptable level of air pollution caused by old and badly maintained vehicles; (ii) to pursue the poverty reduction and improve the living conditions of the urban poor by reducing the number of traffic accidents involving pedestrians; (iii) to support the strategy relating to private sector development; (iv) to contribute to the building of necessary urban transport infrastructure; and (v) to promote a regional approach to development, with Dakar serving as a pilot city for the Sub-Saharan Africa Transport Policy Program. At the time of its completion, the project’s objective remained relevant to two Country Assistance Strategy pillars for fiscal years 2007–11: (i) accelerated growth and wealth creation and (ii) rural and urban synergies. The low quality and high cost of transport services are key challenges to growth creation, while inefficient and poor management of the transport sector raises transaction costs and decreases competitiveness at the local and national levels.

2.4 At the time of appraisal, the project’s objective was relevant to the government’s Ninth Development Plan for Economic and Social Development (1996–2011) and its strategy as enunciated in its Urban Transport Policy Letter from September 1996. The project’s objective is also substantially relevant and central to the goals of the government’s two Letters of Transport Sector Policy for the 2010–15 period and the 2016–20 period (provisional) as well as the Policy Letter for Urban Mobility in Dakar

(2015–20). The latter is focused on five goals: (i) integrate land use and transport planning; (ii) create an efficient and integrated public transport network; (iii) improve traffic management to reduce congestion, enhance road safety, and improve air quality; (iv) establish a streamlined and efficient governance framework; and (v) increase growth, source diversification, and sustainability of financing for urban mobility.

2.5 The relevance of objectives is rated **substantial**.

Relevance of Design

2.6 The questionable choice of lending instrument was partly justified by the lack of readiness for implementing some components. The project was designed as the first of a two-phase Adaptable Program Loan (APL) because of the urgent need to address serious and mounting urban transport issues and the lack of implementation readiness for some components (see paragraph 3.7 for specific examples). The project included an innovative leasing scheme—the first ever in Sub-Saharan Africa—to replace the old, inefficient, and highly polluting minibuses used extensively for public transport. The design approach (of proceeding with more advanced components under APL1 while deferring the less-ready components to APL2) did not work. The main reason is the failure to consider proper sequencing in project design, that is, key activities related to strong institutional capacity and adequate incentive systems were actually prerequisites to the efficient implementation and scaling up of the physical infrastructure components. Thus, the second APL did not proceed because the trigger conditions were not met: (i) adequate financing for maintenance was not available and (ii) the role of the Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD) as a regulator had not been firmly defined or established.

2.7 The project's components are as follows:

- Component A: Road Rehabilitation, Road Safety, and Traffic Management Program (appraisal cost: US\$37.5 million; actual cost: US\$87.7 million). This component included (i) road rehabilitation and construction to improve safety; (ii) design and implementation of a road safety action plan for Dakar, Thiès, and Kaolack; (iii) preparation of traffic management strategies for Dakar; and (iv) technical assistance and advisory services.
- Component B: Pedestrian and Traffic Safety along the Suburban Railway Line (appraisal cost: US\$18.6 million; actual cost: US\$22.2 million). This component included (i) upgrading of the suburban railway infrastructure, including security works along main corridors, and (ii) technical and advisory services for concessioning suburban railway services.
- Component C: Minibus Leasing Scheme (appraisal cost: US\$21.9 million; actual cost: US\$24.6 million). This component included (i) implementing a leasing operation for renovation of minibuses and (ii) facilitating private operators' access to credit for fleet renewal.

- Component D: Urban Air Quality Management (appraisal cost: US\$7.5 million; actual cost: US\$9.1 million). This component included (i) construction of automobile emissions monitoring centers, (ii) establishment of an observatory to track urban pollution, (iii) support for introducing and supervising an urban air quality action plan, and (iv) public awareness campaigns.
- Component E: Capacity Building and Institutional Development (appraisal cost: US\$4.8 million; actual cost: US\$12.9 million). This component included (i) technical advisory services and training to strengthen capacities to deal with air pollution, road safety, intermodal policy and promotion of mass transport, urban planning, and tools and techniques for evaluating performance; (ii) studies for the second phase of the program; and (iii) institutional reforms and support to the executing agency, CETUD.

2.8 The project had a highly complex design, was inadequately prepared, and had a weak implementing agency. The project’s design seriously underestimated the institutional weaknesses of the main executing agency (CETUD) and associated implementing agencies and their ability to effectively implement the project. The project was also highly complex, involving too many diverse components that included both the road and railway subsectors. The appraisal of the government’s ownership of and commitment to the project was inadequate and in the end proved insufficient to achieve successful outcomes. Moreover, the choice of the APL instrument seemed to have confused an APL’s flexibility on up-front preconditions with a lack of project readiness for implementation. The choice of instrument did not address the project’s fundamental lack of preparedness, which all but ensured long implementation delays, cost overruns, and low or negligible achievement of many targeted outcomes. In hindsight, a well-prepared investment project focused on achievable outcomes, coupled with a parallel technical assistance project, might have had a better chance of achieving positive results. Interviewees have also indicated that the project’s design should have included a project steering committee equipped with a strong technical unit.

2.9 The results framework had overoptimistic assumptions. The results framework in the project appraisal document was detailed and, at face value, readily amenable to monitoring. Under certain conditions, the key performance indicators could be demonstrated to have causal links to the development objectives of improving urban mobility. However, when tested against the realities of urban transport in Dakar, many of the critical assumptions were overoptimistic and posed significant risks to implementation. For example, counterpart funds were assumed even though they—and road maintenance funds as a whole—have been difficult to obtain at the times and in the amounts needed (eventually, this proved to be a persistent implementation issue that caused major delays). The achievement of principal outcomes—safety, efficiency, and environmental quality—also assumed that the regulatory framework was already in place; however, a major key performance indicator is the prior strengthening of CETUD as a regulatory institution, which was known from the start to be a long-haul process. Finally, the design was made in a static environment, without taking the countervailing growth in traffic volumes into account (discussed in more detail below under “Efficacy” and “Monitoring and Evaluation”).

2.10 The relevance of project design is rated **modest**.

3. Implementation

Institutional Framework and Implementation Arrangements

3.1 The International Development Association financed US\$75.71 million of the actual project cost of US\$156.92 million—with a cost overrun of 152 percent compared with the originally appraised cost of US\$103 million. The project was appraised on January 28, 2000; approved by the World Bank’s Board of Executive Directors on May 25, 2000; and declared effective with a one-year delay on May 14, 2001. Without any change to the project objectives or components, the Development Credit Agreement was amended in October 2004 to allow Transrail, the newly privatized railway operator, to manage component B (see section 2.7), replacing the former publicly-owned national railway company, Société Nationale de Chemins de Fer du Sénégal (Senegal National Railroad Company). After three closing date extensions, the project was closed on September 30, 2008, with a total delay of two years and nine months from the original closing date of December 31, 2005. Given the fiscal position of Senegal, the World Bank decided not to grant the government’s request for another extension of the closing date.

3.2 There are several agencies involved in Senegal’s road transport sector, all of which were interviewed by the Independent Evaluation Group (IEG) mission. The principal one is the project’s implementing agency, the Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD), which is assessed separately below and in chapter 6 (in the “Implementing Agency Performance” section). Other major institutions include the Agence des Travaux et de Gestion des Routes (National Road Management Agency), which is in charge of maintenance works in Senegal and (together with CETUD) is also an implementing agency for the ongoing Senegal Transport and Urban Mobility Project (STUMP). The Fonds d’Entretien Routier Autonome (Autonomous Second-Generation Road Fund) was created in 2007 to secure and increase financing for routine maintenance of urban roads. Fonds d’Entretien Routier Autonome was to be funded directly by user fees mobilized from existing and additional taxes on gasoline distribution. The Direction des Routes (Directorate of Roads), which is located within the government’s Direction Générale des Infrastructures (Central Directorate for Infrastructure), is responsible for developing strategic planning of road network development and maintenance, promotion of axle load control, and the definition of adequate road technical standards. The Direction des Transports Routiers (Directorate of Road Transport) is responsible for overall transport sector regulation, registration and licensing of titles, and road safety. The ongoing STUMP includes technical assistance to further strengthen Direction des Transports Routiers’s capacity for road safety. Under the minibus leasing component of the Urban Mobility Improvement Project (UMIP), the Association de Financement des Transports Urbains (Urban Transport Financing Group) acquired vehicles that meet safety and emission standards with a view to leasing. The railway agencies include Transrail and Société Nationale de Chemins de Fer du Sénégal (see paragraph 3.1 above) and Petit train de banlieue, which is discussed in detail in section 4.

Implementation Experience

3.3 The project's implementation start-up was delayed due to its lack of readiness. IEG's review of the project documents showed three stages of implementation:

- From effectiveness in May 2001 to the midterm review in January 2004 (almost four years): Start-up was delayed because the following key aspects were not ready: (i) CETUD did not have management staff or capacity, which still needed to be created; (ii) other project agencies also needed to be staffed; (iii) the government had not yet approved the Nordic Development Fund agreement to finance the air quality components; and (iv) the detailed mechanisms for the minibus leasing scheme still needed to be designed. Disbursements were very low. Implementation Status and Results Report (ISR) ratings were unsatisfactory for both the development objective and implementation progress ratings.
- After the 2004 midterm review and up to early 2007: The pace of implementation improved significantly. Project results were achieved, including road works and rehabilitation, launching the air quality component, and mobilizing the minibus operators for the leasing scheme. The ISR's development objectives and implementation progress ratings were either moderately satisfactory or satisfactory.
- 2007 and 2008: Implementation was almost stopped due to the lack of counterpart funds. As a result, the remaining civil works, including the suburban railway line, were not completed. ISR ratings for both development objectives and implementation progress were moderately unsatisfactory.

Assessment of CETUD's Roles at the Project and Urban Transport Sector Levels

3.4 CETUD was not ready to implement the project and was further hobbled by restructuring by the government. When CETUD was designated as the executing agency for this complex, two-subsector, innovative project, it had just been formed (1997) and was thinly staffed. At Board approval in May 2000, CETUD had only three technical staff and no management layer—this was appointed two years later in 2002. In the same year (2000), the government decided to restructure CETUD when it had just started functioning (the reorganization is still being implemented 15 years later, in 2015). CETUD's accumulated delays were a major setback to the project's implementation and administrative efficiency.

3.5 CETUD's role has not been firmly established and the net benefits of its protracted restructuring remain unclear. CETUD has been described in UMIP documents (World Bank 2000, 2009a) as a regulatory and organizing authority for urban transport that is responsible for

- management of the public transport sector, including the preparation and implementation of measures based on demand management, efficient network design, priority measures for buses, and effective traffic engineering;
- supply and demand regulation in the greater Dakar area; and

- implementation of transport sector reforms.

3.6 STUMP’s 2010 project appraisal document states a substantively similar role for CETUD. Its restructuring is intended “to prioritize the development, organization and regulation of the urban transport system . . .with enough capacities for preparing and enforcing policy reforms and developing proactive programming of investments proposal and anticipation capacities of an organizing authority . . .” (World Bank 2010). However, STUMP documents are unclear about the incremental benefits of the restructuring (that is, what exactly are the functional changes) and show internal inconsistencies:

- June 5, 2015 ISR: The ISR makes statements that contradict assertions made in the STUMP additional financing paper four months later. The ISR indicates that “CETUD is implementing its revised role, responsibility, and legal status . . . the new structure is under implementation . . . capacity building is under implementation” (World Bank 2015a)
- July 27, 2015: Just over a month later, CETUD’s Board of Directors defines and adopts an Urban Mobility Policy Letter and the Ministers of Transport and Finance approve it (that is, 15 years after CETUD was created).
- October 13, 2015: The STUMP additional financing paper states that CETUD “was successfully restructured” and refers to CETUD’s “proven capacity” as a STUMP implementing agency, without supportive evidence. Annex 6 of the document says that CETUD has “a good track record in implementation of projects funded by [the International Development Association]” (World Bank 2015a). This is despite the 2008 Implementation Completion and Results Report (ICR) for UMIP (World Bank 2009a), which says that CETUD is weak and provides an overall unsatisfactory performance assessment for CETUD.

3.7 **Evidence is lacking on the results and effectiveness of CETUD’s regulatory and sector management mandate.** There has been no independent analysis or evidence-based assessment of CETUD’s strengthened capacity and delivery of targeted results. IEG repeatedly requested concrete examples of regulatory and management actions taken by CETUD and the analytical studies that provide the underlying evidence and justification for those policy actions, but none were provided. CETUD’s capacity remains weak. Despite the provisions of the decree that created CETUD, only the government provides funding for its operations; the municipalities and transport operators have not contributed as stipulated in the decree. Moreover, CETUD is obliged by law to reflect the full urban transport development program in the government’s Fonds de Développement des Transports Urbains (Urban Transport Development Fund), even though it is known that the fund will not be provided with adequate financial resources. CETUD has also indicated that it has been discussing its sustainable financing with the Ministry of Finance—to no avail—thus, its staffing varies currently from 30 to 40 persons, although it has needed at least 60 staff since 2014.

FIDUCIARY MANAGEMENT

3.8 The ICR reported that the project complied with fiduciary requirements (World Bank 2009a). A six-month action plan was implemented to strengthen CETUD’s initially

weak financial management, procurement, and reporting capabilities. No irregularities were reported.

SAFEGUARDS COMPLIANCE

3.9 The project triggered operational policy (OP) /best practice (BP) 4.01, “Environmental Assessment,” OP/BP 4.12, “Involuntary Resettlement,” and OP/BP 4.11, “Physical Cultural Resources.” Despite the eight years that have lapsed since the project’s closing date, no new information was available to the IEG mission. The ICR reports that the project was in compliance with safeguard policies. The rehabilitation of the Rufisque railway station was carried out in accordance with OP/BP 4.11. The project was assigned environmental category B, requiring a partial assessment. Resettlement of 80 people from the railway’s right-of-way was reportedly made in accordance with the requirements of OP 4.12. At the Thiaroye section, however, resettlement had to be put on hold due to lack of counterpart funds, but this would be directly financed under a new project. At a meeting with IEG in 2009, the World Bank’s Task Team Leader for the ICR reconfirmed that no resettlement had taken place, in breach of World Bank guidelines.

4. Achievement of the Objectives

Objective 1: To contribute to the improvement of the safety of urban mobility in the metropolitan area of Dakar and road safety in Thiès and Kaolack.

Outputs

- About 27 kilometers of roads were upgraded, including resurfacing, installation, and repair of drains and widening of feeder roads.
- About 50 kilometers of sidewalks were repaired or constructed.
- Safety fences, footbridges, pedestrian crossings, speed bumps, median dividers, and other safety measures were installed, for example, at schools and hospitals and in community areas.
- Traffic lights and lighting were installed at major thoroughfares in Dakar.
- Safety awareness campaigns were held in schools and broadcasted by radio.
- Several terminals for buses and minibuses were upgraded and equipped with signs, and new stations were installed in the outlying suburbs.

Outcomes

- Injuries per 1,000 vehicles dropped from 61 (in 2000) to 23 (in 2008), and deaths per 1,000 vehicles dropped from 2.1 (in 2001) to 0.6 (in 2008), thus meeting the related project development objective indicator on reduced accidents per capita.
- Traffic management was improved by training, equipping, and deploying 362 agents throughout the Dakar metropolitan area.

4.1 Evidence is lacking on road safety improvements in Thiès and Kaolack.

Regarding the goal of improving road safety, the project included the preparation of a

road safety action plan, which was supposed to include (i) the management of junctions that have been identified as highly susceptible to traffic accidents; (ii) improvement of road infrastructure through the construction of pedestrian sidewalks and bridges over roads with heavy traffic, the installation of upright and surface signage, construction of road median dividers, better lighting and markings, installation of speed-reducing devices at busy locations such as schools and hospitals, and protection of nonmotorized traffic through the construction of paths separated from motorized traffic; and (iii) road safety awareness campaigns for operators, users, and traffic police. The Implementation Completion and Results Report (ICR) did not provide a detailed assessment of the project results in Thiès and Kaolack and only stated without accompanying evidence that safety improvements were partially achieved. Performance data were also unavailable from the project executing agency, Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD).

4.2 Recent quantitative data on road safety are unavailable. Quantitative data on the evolution of road safety since the late-2000s have been difficult to obtain, showing a serious weakness of monitoring and reporting on an important performance indicator. CETUD has not provided recent road safety data as requested, even though it was the Urban Mobility Improvement Project (UMIP) and Senegal Transport and Urban Mobility Project (STUMP) implementing agency and regulatory authority for urban transport in Dakar. A nongovernmental road safety organization (Nouvelle Prévention Routière du Senegal) was created as part of UMIP in 2002 and charged with developing safety activities to prevent car accidents; conducting training for drivers; and producing awareness-raising programs in Dakar, Thiès, and Kaolack—but it does not collect road safety data. The Agence des Travaux et de Gestion des Routes (National Road Management Agency) qualitatively indicated that the project has improved road safety through road barriers that channeled pedestrians to specific points where they could cross with reduced risks of being hit by vehicles. The STUMP project appraisal document (World Bank 2010) indicates that the project includes pilot road safety activities at an estimated cost of US\$0.6 million in International Development Association financing but did not provide details on those activities. Similarly, the additional financing paper (World Bank 2015a) did not provide the underlying road safety data, although road safety was factored in as a benefit in the economic internal rate of return calculation of the project.

4.3 Based on the positive outcomes (while taking into account the minimal information for Thiès and Kaolack and lack of recent data beyond the 2008 project closing date), the achievement of the project’s objective of improving the safety of urban mobility in the metropolitan area of Dakar is rated **substantial**.

Objective 2: To contribute to the improvement of the efficiency of urban mobility in the metropolitan area of Dakar.

4.4 Efficiency in this section refers to technical and operational efficiency; chapter 5 discusses separately the economic and implementation efficiency. Given their vastly differing characteristics, road and rail transport efficiency are presented separately; also, road transport efficiency is discussed at the project level and in the context of the overall sector level.

Road Transport

Outputs

- The minibus replacement leasing mechanism was designed and established.
- Minibus operators organized themselves in *groupement d'intérêt économique* (economic interest groups) and formed a savings association (Association de Financement des Transports Urbains [Urban Transport Financing Group]; AFTU) to handle lease and insurance payments.

Outcomes

- About 17 percent of the minibus fleet participated in the scheme. The replacement program has continued to expand after project closing (see paragraph 4.7).
- Project funds were used to finance the procurement of 505 minibuses. Operators decided to lease only new vehicles.
- The reimbursement rate was 100 percent at project closing.
- The level and quality of service improved, although this may be due to franchising and formalization of operations rather than to the bus renewal itself.
- Revenues of the owners of new minibuses have increased.
- Studies have been undertaken to analyze traffic flows, vehicle speed, public transport fares, speed of public transport and other vehicles on major roads, time lost in traffic, vehicular and pedestrian traffic trends, accident rates, and pollution effects.

Project-Level Assessment

4.5 The minibus leasing scheme led to a partial replacement of old buses, but its impact on the efficiency of overall urban mobility is unclear. As the first ever leasing scheme in Africa, the UMIP launched a minibus renewal program that resulted in 250 operators of old, polluting minibuses or car rapides replacing their vehicles with 505 safer and modern vehicles. AFTU was created on April 3, 2001. With UMIP financing, AFTU set up a minibus leasing scheme compliant with safety requirements and comfort of users. The financing conditions included a low interest rate and guarantee requirements that were much simpler than those of the formal banking system. Response by operators has been positive, and this leasing scheme is credited as having improved the level and quality of service in the city along project corridors. The improvement could be attributed to the formalization of the minibus sector, the introduction of a system for allocating routes, and improvements in fare collection, rather than to renewal of the bus fleet itself. Thus, although the new vehicles operate more efficiently in terms of savings in fuel and operational costs compared with the older ones, their contribution to more efficient urban mobility has not been established quantitatively.

4.6 Training and capacity building programs specifically designed for operators, drivers, and conductors have contributed to the success of the minibus renewal program but remain a challenge. The leasing framework has promoted operating through *groupement d'interet economiques* using more formalized operating conventions.

This has resulted in developing new behaviors focused on timeliness and reliability and, more generally, a progressive professionalization of the informal sector. However, experience from Dakar suggests that it is difficult to formalize and improve only part of the urban transport sector without integrating larger, citywide reforms that capture a large and growing informal sector. More professionalism and training is also required, particularly for the operators.

4.7 The successful pilot minibus replacement program, while not expected to result in an increase in transport supply, is expanding at present. The pilot renewal program requires that an old licensed vehicle be scrapped for each new vehicle that is introduced. The program's financing aspects showed positive results. The AFTU funding scheme was successful in incentivizing the operators. All planned buses have been put into operation, and reimbursements have been made regularly. By January 2010, the operators had reimbursed about 50 percent of the total leasing amount to AFTU. A second phase of the financing scheme for bus renewal is under way. As of 2015, 1,307 minibuses had been renewed. With concessional assistance from China, a further 407 vehicles are targeted for replacement. In 2016, CETUD reported that commercial banks have started indicating interest in providing financing, thus potentially introducing competition in the leasing system beyond just AFTU.

Sector-Level Assessment

4.8 Overall efficiency is decreasing sharply because traffic congestion continues to increase. The development objectives indicators related to efficiency were not achieved: (i) time lost in traffic increased 30 percent, compared with the targeted reduction of 5 percent; (ii) the market share of public transport declined by 13.5 percent, compared with the targeted increase of 5 percent; and (iii) the cost of externalities increased by 32 percent. As the STUMP project appraisal document indicates, "overall efficiency strongly decreased from 2000 to 2004, with increased traffic congestion and delays in investment . . . when UMIP closed in 2008, conditions were worse than in 2000" (World Bank 2010). The ICR indicated that time lost in congestion for 2000 (Board approval) and for 2008 (closing date) may not be comparable, since each set of figures was estimated using different parameters. The initial failures in reversing traffic congestion and increasing the share of public transport can be attributed to the rapid increase in overall vehicle traffic, which canceled out any small gains. This rapid growth has been continuing, as shown in table 4.1.

Table 4.1. Growth Trends in Selected Vehicle Categories, 2004–2014

<i>Vehicle category</i>	<i>Number of vehicles by year (in thousands)</i>						<i>Average annual growth (%)</i>
	<i>2004</i>	<i>2006</i>	<i>2008</i>	<i>2010</i>	<i>2012</i>	<i>2014</i>	
Buses	13.6	14.8	15.3	15.9	16.2	19.3	3.6
Delivery vans	23.6	27.9	32.3	39.9	46.4	49.9	7.8
Motorcycles	1.9	2.8	3.6	5.4	9.2	12.1	20.3
Trucks	6.4	7.8	8.9	10.5	13.5	15.7	9.4
Tractors	5.9	7.0	7.9	8.9	11.6	14.2	9.2
Private cars	163.2	178.9	196.1	211.5	233.6	268.9	5.1
Light scooters	4.3	6.4	8.8	13.4	19.9	25.5	19.5
Total vehicles	235.1	263.5	293.8	326.4	374.4	432.1	6.3

Source: Direction des Transports Routiers, Dakar, Senegal

Notes: For brevity, the rows exclude other specialized vehicle categories that number only in the hundreds. However, the last row includes these categories and is the total for all registered vehicles.

4.9 Efficiency gains have been canceled out by low levels of road maintenance.

The lack of road maintenance has detracted heavily from the achievement of transport sector efficiency in Senegal. The annual need for routine maintenance is estimated at 40 billion CFA francs (CFAF), excluding the necessary upgrading of about 200 billion CFAF (a separate estimate under the Second Transport Sector Program estimated a backlog of 260 billion CFAF for road rehabilitation). However, the resources allocated and available for road maintenance alone are less than required when compared with the minimum 40 billion CFAF required each year, as shown in table 4.2.

Table 4.2. Insufficient Resources for Road Maintenance, 2009–2014

<i>Budget source</i>	<i>Road maintenance budget by year (CFAF, billions)</i>					
	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
From the government budget						
Initial allocation	21	22.5	22.5	22.5	25	25
Final allocation	21	22.5	22.5	22.5	25	6.5 ^a
From the TSPP						
Estimated resources	16	22.5	40	40	43.35	46.8
Realized resources	11.08	12.24	24.5	24.5	25.2	26
Total available	32.08	34.74	47	47	50.2	32.5
Mobilized from the government budget	8.75	13	17	30.4 ^b	25	6.5
Mobilized from TSPP	11.08	12.24	21.8	21.93	25.67	27.2
Total mobilized	19.83	25.24	38.8	52.33	50.67	33.7

Source: World Bank 2015b.

Note: TSPP = Taxe Spéciale sur les Produits Pétroliers (Special Tax on Petroleum Products). a: From the initial allocation. 18.5 billion CFAF has been removed. b: The mobilized amount is higher than the allocation because additional budget not mobilized during previous years has been added.

Railway Transport

Outputs

- Several railway stations were upgraded, including the one at Rufisque, and signaling systems were rehabilitated.
- Two railroad feeder stations have been constructed and equipped with parking areas for taxis and overpasses for vehicles and pedestrians.
- The third track between Hann and Fass Mbao was partially constructed.
- A wall or fence has been constructed on both sides of the rails between Dakar and Rufisque (24 kilometers), representing only 70 percent of original targets.
- Only one of the four planned overpasses was built. Thirteen footbridges were also built.
- Only two of the most-trafficked railroad-level grade crossings were repaired.
- The freight terminal has been transferred and constructed at Bel-Air but cannot be used because access roads were not built.
- The Dakar train station has not been used for rail travel since June 2006. (It was to be converted into a cultural center, but the project never materialized).
- Studies for the concessions of the suburban railway line were conducted.
- Technical and engineering advisory services were provided.

(Unrealized) Outcomes

- Although construction of the third track between Hann and Fass Mbao was started, only 13 kilometers of the 35 kilometers targeted were completed due to lack of government counterpart funding. The section currently continues to be nonoperational.
- Given the incomplete construction of the wall or fence between Dakar and Rufisque, invasion and settlement of houses and commercial establishments on the railroad tracks was not prevented and has continued.
- Concessioning was postponed with the World Bank's agreement.
- The protracted restructuring of CETUD limited its efforts to facilitate the privatization of the national railway.

4.10 The railway component had negligible achievements, rail transport efficiency outcomes have not been realized, and project outputs have essentially been abandoned. Many rural-urban migrants start their economic base in Dakar within the informal sector by setting up shops along the railway or near the rail and bus stations. Vendors often shared the railway tracks and right-of-way with the trains. UMIP intended to upgrade the suburban railway infrastructure by increasing existing capacity, implementing major security works along the main transport corridors, and relocating the freight terminal outside downtown Dakar. The concessioning of the suburban railway services was also envisaged.

4.11 **Tariffs are inadequate and railway operations are below cost recovery levels.**

Petit train de banlieue (PTB) operates rail transport to Dakar suburbs and pays royalties to Transrail, the railways concessionaire that also operates the Dakar to Bamako, Mali, line. PTB's tariffs follow social pricing principles set by the government. Although PTB is supposed to receive compensation for costs that are not fully recovered through the prevailing tariffs, the government has only been disbursing about half of the required amounts since 2004.

4.12 **Inadequate counterpart funds and implementation stoppages have resulted in incomplete outputs at project closing.**

Due to the lack of counterpart funds, implementation was frozen after 2007, which prevented the completion of the remaining civil works and upgrading of the railway line. The closing of the right-of-way wall, the pedestrian and vehicular overpasses, and access roads to the freight and road or rail feeder stations still need to be completed to deliver the project's benefits, but it is unclear if resources will be made available given the country's strained fiscal situation. It was only in 2012 (four years after UMIP closed) that the overpasses and the removal of residences and commercial establishments on the railroad tracks were completed.

4.13 **PTB's operational performance has continued to worsen eight years after the project, and the alleged theft of its (International Development Association–**

financed) assets needs further investigation by competent government and World Bank authorities. The Independent Evaluation Group mission obtained the most recent information on PTB's performance, which has been deteriorating (see table 4.3 below). Eight years after UMIP closed, all indicators have worsened, despite the existence of the project. Except for some training and small studies, the ongoing STUMP does not have any physical component to address the serious situation of PTB (a "disaster" according to a key interviewee). The 13 kilometers of new track that were built under the project to ease congestion and improve efficiency have essentially been abandoned. It was reported to the Independent Evaluation Group mission that World Bank-funded assets from that section (for example, rail sections, traffic signals, cement markers) have been taken, allegedly by Transrail itself to transfer to its other railway installations. At the time of the Independent Evaluation Group mission, the status was that PTB had filed formal complaints to the government and Transrail has been informed of the aforementioned grievances.

Table 4.3. Summary of Petit Train Bleu's Performance, Eight Years after UMIP (2016)

<i>Performance criteria</i>	<i>Normal level</i>	
	<i>(1990s)</i>	<i>2016 level</i>
Round trips per day: Dakar–Rufisque	38 to 40	26
Capacity (passengers per day)	20,000	<15,000
Travel speed (kph)	45	22 to 27
Railway length that can sustain normal speeds (km)	30	16
Disrepaired sections with slow or stop-and-go operation (km)		14
Time gap between station departures (min.)	<15	30+

Source: PTB interview.

Note: kph = kilometers per hour.

4.14 For UMIP's road transport interventions, there were efficiency gains that resulted from the successful piloting of minibus leasing; however, urban transport efficiency in metropolitan Dakar decreased sharply as traffic congestion continued to increase. Most likely, those efficiency gains have been canceled out by inadequate road maintenance, for which funding remains highly uncertain. UMIP's railway transport component had negligible achievements: the efficiency outcomes were not achieved and project outputs have been abandoned. Overall, the achievement of the objective of improving the efficiency of urban mobility in metropolitan Dakar is rated **modest**.

Objective 3: To contribute to the improvement of the quality of urban mobility in the metropolitan area of Dakar.

4.15 For the purposes of conducting this assessment, the unspecified term "quality" as stated in the objective is defined to include both service quality and environmental quality.

Outputs

- The outputs from the minibus leasing scheme also count as outputs here, since service quality improvements were expected from the replacement of old minibuses.
- An urban mobility plan for the Dakar area was prepared.
- Action programs were conducted to create awareness of pollution from traffic, including from unleaded gas, and of the associated health issues.
- Consultations with road users and the transport industry were held.
- Unleaded gasoline was introduced.
- The air quality observatory was established at the Ministry of the Environment.

Outcomes

- The quality of service improved, although this may also be due to franchising and formalization of operations rather than the renewal of buses alone.
- The urban mobility plan is being used to monitor traffic flows and pollution.
- Air quality management capacity was strengthened.
- But air pollution levels actually increased.

4.16 **Service quality has improved (and continues to do so) with the introduction of franchise agreements and further formalization of bus operations.** The traditional practice has been for informal vehicles to wait to be filled with passengers before starting service from the terminal and to often change their route along the way. Fares may also be changed arbitrarily by the conductor or driver based on demand. Franchising and further sector formalization have led to faster and more reliable dispatch of vehicles at points of departure, more reliable itineraries along the bus route, and predictability of user fares. Moreover, revenues received by owners of the new buses have also increased, whereas in the informal sector, almost 20 percent of the revenue was lost through unofficial payments.

4.17 **Outputs (hence, outcomes) for the air quality component were seriously delayed and scaled down due to the government’s inaction on issuing its own legal opinion.** The project’s air quality activities—financed by the Nordic Development Fund—was seriously delayed. The Nordic Development Fund agreement was signed in December 2002, but the Senegalese government took more than a year to produce its own legal opinion (in January 2004) to enable the effectiveness of this agreement and the launching the activities. Further major delays also occurred. Securing the sites for the automobile monitoring centers took until 2008, which was the year of the closing date, after extensions of almost three years. The procurement of equipment for the air quality laboratory, which was initially restricted to Nordic countries, took almost two years to complete. These accumulated delays resulted in a scaling down of the proposed activities given the very short time left for implementation: (i) one monitoring station was included instead of the original three; and (ii) all five air quality measuring stations were dropped, with only the central laboratory being maintained.

4.18 **Actions taken on environmental quality need further strengthening and better monitoring.** The development objectives indicator on reduced levels of air pollution was not achieved; instead of decreasing, overall pollution levels attributable to the transport sector actually increased. This is partly because the definition of the indicator did not take into account the large increase overall in vehicle-kilometers and traffic in Dakar. The goal of reducing pollution from the mines and cement factory by using new and sealed Transrail freight cars was not achieved, as leaks and dust continue to be released. On the positive side, the project has supported initial steps to better manage air quality by establishing and staffing an air quality laboratory and deploying a mobile vehicle to conduct measurements. Unleaded gasoline was also introduced with assistance from the World Bank’s Clean Air Initiative. Overall, the air quality management system needs further development and staff training. More specifically, monitoring and reporting needs to be improved; the ICR, for example, reports the elimination of lead pollution but had no data on specific measurements and whether the use of unleaded gasoline has been widespread.

4.19 Improved service quality was achieved within the pilot minibus leasing component; however, this seems to be more of a result of the franchising and sector formalization activities than the bus renewal pilot program itself. Reduced air pollution levels were not achieved. The achievement of the objective of improving the quality of urban mobility in the metropolitan Dakar area is rated **modest**.

5. Efficiency

Economic Efficiency

5.1 **Project costs were significantly higher than originally estimated.** Large cost overruns have resulted in actual costs that were 53 percent higher than appraisal estimates. The government of Senegal financed these additional costs, leading to an increase in counterpart funds from the US\$3.6 million estimated at appraisal to US\$58.8 million at project completion. In the final two years of implementation, most of

the additional funding came from the Islamic Development Bank as financial assistance to the government.

5.2 The project's economic efficiency was improperly calculated and is likely much lower than reported. Compared with the economic internal rate of return (EIRR) of 37 percent for road rehabilitation activities that was estimated at appraisal, the Implementation Completion and Results Report (ICR) indicates an updated EIRR of 67 percent, which overstates the project's economic worth. Facts in the field contradict such a high EIRR, which is dependent on high net benefit streams due to significant time and cost savings from traffic. However, the ICR itself reported worsening traffic conditions, which is directly associated with longer periods stuck in traffic and increased operating costs. The ICR indicates that the cost of congestion in Dakar increased by about 32 percent between 1998 and 2008. The high EIRR of 67 percent was based on very limited segments of road improvements made directly by the project,⁴ which is only a partial component of the project's ambitious objective of addressing urban mobility improvements throughout the Dakar metropolitan area. The Independent Evaluation Group mission made efforts to collect data that would permit a recalculation of the EIRR, but sector data were generally unavailable, and separating out the project's own physical contribution would not have been possible given the new investments in urban mobility and transport that have occurred during the last decade since the project closed. Moreover, the net present value of the costs incurred through deaths, injuries, and damage to vehicles was estimated at appraisal but was not reestimated at completion for inclusion in the ICR, which only indicated (without citing a source) that costs from injuries and deaths were estimated to have decreased by about 27 percent between 1997 and 2007. There were also no calculations specific to the railway investments, but it can be assumed credibly that the incomplete train infrastructure works, system operation at only at only one-quarter of its capacity, and the reported thefts of railway assets in recent years, have seriously undermined efficiency.

Administrative and Implementation Efficiency

5.3 The project's design, which depended on the very weak Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD) for project execution, led to major implementation delays. The World Bank and the government agreed to assign CETUD as the project executing agency despite the absence of project management capacity. CETUD only had a secretariat with three technical staff when it was made responsible for implementing the Urban Mobility Improvement Project (UMIP). The decision to restructure CETUD before it could even start laying the groundwork for the project delayed the recruitment of technical and financial staff, which in turn delayed the start-up of the road works until the end of 2003. Although the World Bank had already agreed to the selection of the Agence Autonome des Travaux Routiers (Autonomous Road Works Agency) and Agence pour l'Exécution de Travaux d'Intérêt Public (Public Works Executing Agency) to oversee procurement of works and goods under the road component, three and a half years lapsed after Board

⁴ Based on an interview with the ICR's Task Team Leader that was conducted by the Independent Evaluation Group evaluator who prepared Independent Evaluation Group's Implementation Completion and Results Report Review dated August 14, 2009.

approval before the work program became operational. With all the accumulated delays, CETUD's planned role in facilitating efforts to privatize the national railway and the Dakar bus company (SOTRAC) was diluted and rendered ineffective, and simultaneously delayed the upgrades to the suburban railway line.

5.4 Although eventually successful, the minibus leasing component was also marred by delays, partly due to weak project design. In addition to serious delays in the air quality component (see paragraph 4.19), the minibus renewal component was also delayed. The meetings to mobilize the minibus operators started in 1999, and their registration into *groupement d'intérêt économiques* (economic interest groups) started early on in the project. However, completion of this process was delayed significantly. Although the informal nature of the minibus operation and the operators' lack of collateral was well known, actions were not taken to address their inability to provide the initial deposits or the unwillingness of commercial banks to lend funds directly to these operators. The ensuing delays held up procurement of minibuses because those deposits were required to confirm the commitment of the operators and make them part of the financial mechanism that guarantees against defaulting on their repayments. The leasing mechanism finally took off in November 2003—more than three years after approval from the Board of Executive Directors—when the first contract for new minibuses was signed. The leasing mechanism eventually operated smoothly after May 2005 when the *groupement d'intérêt économiques* created their own microfinance institution, Association de Financement des Transports Urbains (Urban Transport Financing Group).

5.5 The project's efficiency is rated **modest** due to the large cost overruns, the long implementation delays, the major institutional weaknesses, and the lack of credible calculations of project economic worth at completion. Major delays accumulated due to the lengthy restructuring of CETUD, the protracted works on the urban railway line, the severely delayed procurement for the air quality component and its downsizing, and the slow delivery of vehicles under the minibus leasing component. Implementation was very slow until the midterm review in January 2004, after which disbursements and implementation started improving.

6. Ratings

Outcome

6.1 Overall project outcome is rated **unsatisfactory**. Although the relevance of the development objective was **substantial**, the relevance of the project's design was **modest**. Achievement of the project's road safety, efficiency, and quality objectives for the metropolitan Dakar area was **substantial**, **modest**, and **modest**, respectively. Road safety improved and the minibus leasing component was successful, but the deterioration of the road network has accumulated rapidly due to the lack of road maintenance, the scarcity of required funding, and continued use by overloaded trucks. Outcomes related to the railway upgrading were not achieved; suburban railway operations were in a worse state when the project closed. Environmental outcomes were only partially achieved. Project efficiency was **modest**.

Risk to Development Outcome

6.2 Efforts to promote traffic safety are continuing. Under the ongoing Senegal Transport and Urban Mobility Project (STUMP), the European Union is assisting in the preparation of a national road safety policy in Senegal, with the intention of contributing to the partial implementation of the priority action plan that was expected to result from that road safety policy study. It was intended that STUMP's activities would serve as back-up to the European Union interventions. During the Independent Evaluation Group (IEG) mission, the Agence des Travaux et de Gestion des Routes (National Road Management Agency) indicated that the road safety measures implemented under Urban Mobility Improvement Project (UMIP) continue to be replicated in new urban transport projects being implemented in Dakar.

6.3 With the exception of the minibus leasing scheme, there are serious risks that the project's results will not be sustainable. A Fonds de Développement des Transports Urbains (Urban Transport Development Fund) was originally set up under the project to provide counterpart funds and finance infrastructure maintenance. However, this did not become available as planned. Starting in 2007 and during 2008, the Senegalese government was unable to provide counterpart funds, and most municipalities and operators also failed to make their committed contributions to the transportation development fund. This put the already delayed and incomplete outcomes at significant risk. During the Implementation Completion and Results Report mission in 2009, it was observed that “the urban infrastructure constructed and or rehabilitated is showing early signs of degradation in some locations for lack of maintenance. Lack of repair and maintenance of roads, traffic lights, and protective barriers at pedestrian crossings are lessening the recent gains in mobility and safety” (World Bank 2009a, 11). The highest risk comes from inadequate road maintenance. In 2014, for example, 26 billion CFA francs were actually mobilized, compared to the estimated 47 billion CFA francs targeted from the Taxe Spéciale sur les Produits Pétroliers (Special Tax on Petroleum Products) for road maintenance funds for that year. Moreover, absorption capacity was weak, resulting in the treasury's decision of taking back the funds allocated for road maintenance. Updated information obtained from Fonds d'Entretien Routier Autonome by the IEG mission indicates that—with respect to the World Bank conditionality under the ongoing STUMP to obtain 90 percent of road maintenance funding from the Taxe Spéciale sur les Produits Pétroliers, the actual share achieved from at the end of 2015 was only 48 percent.

6.4 Rapid deterioration of paved roads due to overloaded trucks is another major risk. According to World Bank documents, truck overload is also a major issue that has reduced the useful lifetime of paved roads from 15 years to about 5 years due to constant use. Road damage from overloaded trucks was estimated at about 34 billion CFA francs in 2005; this has most likely increased significantly, given that in 2013 it was estimated that 80 percent of trucks in Senegal are overloaded. Senegal has adopted a regulation of the West African Economic and Monetary Union concerning axle load control (Règlement 14), which states that overloaded trucks should pay substantial fines and unload their freight overload. However, given institutional weaknesses, this regulation has never been fully reinforced.

6.5 Risks to the project's mostly partial or negligible outputs are **high**.

Bank Performance

QUALITY AT ENTRY

6.6 **The project was not appraised adequately and was not ready for implementation when it was presented to the Board of Executive Directors.** IEG's assessment found that, at entry, implementation readiness was of unsatisfactory quality. Several key aspects—notably procurement, the sustainable financing of road maintenance, and detailed mechanisms for the minibus leasing scheme—were not sufficiently prepared, which quickly and directly led to many delays. There were also significant shortcomings in the World Bank's institutional appraisal of Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD), which vastly overstated its capacity to manage a complex, large, and multi-subsector urban transport operation. Critical consultative processes were also weak; for example, despite minibus leasing being a major project component, the minibus operators were not fully convinced and were not ready to participate in the leasing scheme. Moreover, interviewees have indicated that although the focus on physical transport infrastructure was understandable, the World Bank could also have paid more attention to improving donor coordination, enhancing the efficiency of intermodal transport, and coordinating the transport agencies within the government.

6.7 The World Bank's quality at entry is rated **unsatisfactory**.

QUALITY OF SUPERVISION

6.8 **Initial supervision missions were ineffective; despite improvements after the midterm review, many parts of the project were incomplete, even with three years of closing date extensions.** The initial set of supervision missions made little effort to start implementation, which compounded the issues related to CETUD's weaknesses as an implementing agency and the lack of counterpart funding. The World Bank missions were ineffective in addressing CETUD's clearly inadequate capacity for project execution, fiduciary management, and sector coordination (this is a consequence of poor quality at entry, since CETUD was designated as project executing agency despite its weaknesses). Moreover, the missions were unable to help the minibus operators find effective ways to comply with the conditions of the proposed leasing scheme (again a reflection of poor quality assurance evaluations). Discussions to restructure the project started within a year of effectiveness due to the government's concerns about CETUD's complex restructuring, the financing of the new bus company Dakar Dem Dikk, and the mounting difficulties with getting any project component started. However, although there was a clear need, no restructuring was done, hence no agreements were reached with the government on remedial measures. The original World Bank Task Team Leader was not available for an IEG interview, thus the reasons for the World Bank's lack of proactivity remain unclear. A new Task Team Leader was appointed in November 2003, and a satisfactory midterm review was conducted in January 2004. (Interviewees suggested that the Task Team Leader should be located in Dakar instead of Ouagadougou, which slowed down the World Bank's response time, particularly with

respect to “no objections” for procurement actions.) The road-related components finally got started, and the World Bank’s supervision team addressed some of the lingering issues with the minibus leasing scheme, the air quality component, and CETUD’s weak capacity. Fiduciary management capacity and safeguards compliance apparently improved with the addition of safeguards specialists, although resettlement was incomplete and supported under another project. Supervision was rated satisfactory from 2004 until the project’s closing in 2008, which was not warranted given the serious weaknesses in monitoring and evaluation.

6.9 The quality of the World Bank’s supervision is rated **moderately unsatisfactory**.

6.10 Overall, in line with the harmonized IEG-Operations Policy and Country Services guidelines, the World Bank’s performance is rated **unsatisfactory**.

Borrower Performance

GOVERNMENT PERFORMANCE

6.11 **The government’s lack of timely action and the lack of counterpart funding proved to be major shortcomings that severely weakened prospects for achieving successful outcomes.** The government was strategically committed to addressing the urban mobility crisis in Dakar, mainly by financing road infrastructure works. However, the appointment of a new government following the 2000 general elections, coupled with changes in transport and institutional policies, were at the root of implementation delays. Even knowing that CETUD had seriously inadequate capacity to implement a large and complex project, the government decided in 2000—before the project even became effective—to restructure CETUD. As a result, CETUD underwent too many structural and staffing changes early in the process, which delayed the recruitment of its project and fiduciary management staff and postponed the start-up of implementation. In addition, the government did not act until almost project closing on the legal opinion that would activate the Nordic Development Fund agreement that provided financing for the urban air quality component, thus seriously delaying that component. During the project’s last two years and as a result of the global financial crisis, the government lacked counterpart funding, which was addressed through financial assistance by the Islamic Development Bank. Despite this support, many of the works and programs were incomplete or considerably downsized at project closing.

6.12 Government performance is rated **unsatisfactory**.

IMPLEMENTING AGENCY PERFORMANCE

6.13 **CETUD has been and remains a weak agency that needs significant strengthening.** CETUD’s capacity should have been equipped adequately before the government and the World Bank agreed to give it the responsibility for implementing the large and complex UMIP. Early in the project period, the new government’s insistence on restructuring CETUD and the ensuing delays in staff recruitment were beyond CETUD’s control. However, although CETUD’s management was subsequently appointed, it was slow to address its weak fiduciary capacity and establish the core planning and

coordinating functions that were urgently needed. According to the Implementation Completion and Results Report, procurement, financial management, and reporting remained weak until well into 2004 (the original closing date). After the midterm review in 2004, management aspects did improve, and CETUD's organizational structure was adjusted so that staff could focus more on urban mobility issues and core functions. Although CETUD performed adequately for the urban infrastructure upgrading work, the minibus leasing scheme, and the support for the creation of traffic police, it has been largely ineffective—as overall project implementing agency—in assisting with (i) efforts to privatize the former bus company, SOTRAC, (ii) ensuring adequate and sustainable road maintenance, and (iii) addressing the large number of issues on upgrading and integrating the suburban railway line, made more difficult by the poor performance of Transrail, which ran into serious financial difficulties and the loss of its best engineers and core expertise during the latter years of UMIP's implementation.

6.14 A review of CETUD needs to be conducted to assess more cost-effective ways to fulfill the more limited Project Implementing Unit-type functions that it has performed to date. Under World Bank-financed projects, CETUD's roles more closely match a Project Implementing Unit for World Bank- and donor-financed projects rather than the designated “urban transport regulatory authority.” Those Project Implementing Unit-type tasks include the following according to the STUMP project appraisal document: (i) prepare and validate proposed annual work plans and updated procurement plans; (ii) ensure overall implementation and coordination, including monitoring, reporting, and evaluation, and report to the International Development Association at least every quarter; (iii) liaise with International Development Association and development partners on issues linked to component activities; and (iv) maintain fiduciary responsibility for the activities that it implements. Despite repeated requests, CETUD has not been able to provide performance data that it was supposed to be collecting under UMIP and the ongoing STUMP, under the categories of access, quality of service, safety, and environmental quality. Specific examples of regulatory and executive actions that were informed by World Bank-financed studies were also not provided. Although CETUD has demonstrated the ability at the project level to administer and convene multiparty consultations related to large studies, there is no available evidence that it has independently acted in the areas of sectorwide regulation and policy execution. Given the accumulated costs of almost two decades of institutional strengthening support, CETUD's effectiveness and continued financing need serious review to enable CETUD to really assume the major responsibilities of an urban transport regulatory and organizing authority; the issues of providing adequate staffing, resources, and legitimizing authority also need to be addressed.

6.15 Implementing agency performance is rated **moderately unsatisfactory**.

6.16 Overall, in line with IEG-Operations Policy and Country Services guidelines, borrower performance is rated **unsatisfactory**.

Monitoring and Evaluation

6.17 Design. The principal outcomes of safety, efficiency, and environmental quality were to be measured by the following indicators: (i) increased commercial speed of

public transport; (ii) reduction of time lost in traffic; (iii) increase in the number of passengers using public transport; (iv) decrease in pollutant emissions; (v) reduction in accidents; (vi) improvements in the sector's financial capacity; and (vii) decrease in costs of externalities. These proved to be unrealistically outside the project's reach and difficult to measure. For instance, the expectation that replacing a small part of the old minibus fleet and the railway's rolling stock would reduce pollutant emissions by 1 percent for the greater Dakar area was unrealistic. Similarly, given the rapid increase in the total number of vehicles, it was very difficult to measure the project's contributions toward the above indicators. Meeting the complex project's challenging monitoring and evaluation requirements was doomed from the start because the various transport agencies are fractured and do not have coordinated or connected databases.

6.18 Implementation. The indicators were not updated during the midterm review, despite the knowledge that the indicator targets were designed based on a static environment that did not take into account rapid increases in overall vehicular traffic, which in turn made the original targets unachievable. As the project executing agency, CETUD was responsible for monitoring and evaluation but was unable to provide any monitoring data even after repeated requests.

6.19 Utilization. Given the lack of a baseline methodology, and thus the absence of baseline data, measurement of performance that could be attributed to the project was not possible. As a result, the Implementation Completion and Results Report indicated that "these issues prevented the use of indicators for project management and operational purposes" (World Bank 2009a). Given CETUD's inability to provide data, IEG requested the data available under the ongoing World Bank-financed STUMP, which would measure similar indicators of safety, efficiency, and environmental quality. However, there were also no data available from the ongoing project.

6.20 CETUD's performance for monitoring and evaluation implementation and utilization has been weak. Despite repeated requests, CETUD and World Bank staff were unable to provide current data on indicators that were supposed to have been monitored under UMIP. The age of that project, which closed in 2008, is not a valid reason for the lack of information because the ongoing STUMP was supposed to have been monitoring nearly the same indicators since the follow-on project had the same components of road rehabilitation, leasing for minibus replacement, and technical assistance for CETUD. CETUD is also the implementing agency for STUMP. The Agence des Travaux et de Gestion des Routes provided data collection templates, but the raw data were incomplete and had not yet been analyzed at the sector level, even though STUMP, which was approved in June 2010, had an original closing date of September 2014. Given the lack of monitoring and evaluation results, it is unclear how (if at all) sector performance data over time have helped shape urban transport management policies. More generally, the lack of performance data makes it difficult to properly assess the effectiveness of donor assistance for Senegal's urban transport sector.

6.21 Greater rigor in data collection and disclosure are needed. Monitoring and evaluation are essential for the government and donors to evaluate performance improvements and remaining challenges and to formulate policies and assistance accordingly. This need is emphasized in Kumar and Diou (2010): "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” (45). Within the World Bank, data series on urban transport sector performance can be derived from its four successive projects: the Transport Sector Adjustment Program (closed 2000), the Second Transport Sector Program (closed 2007), UMIP (closed 2008), and STUMP (ongoing since its 2000 approval, closing 2019). The key indicators from those projects are shown in appendix B.

6.22 Monitoring and evaluation for the project is rated **negligible**. The apparent lack of urban transport performance data under World Bank projects raises issues of World Bank accountability and transparency and prevents the urgently needed development of a credible baseline and continuously updated database to serve as the basis for planning, policy formulation, regulation, and management of urban transport in Dakar and Senegal as a whole.

7. Lessons

7.1 The following lessons are derived from the project’s implementation experience (until the 2008 closing date) as well as the 2016 assessment by the Independent Evaluation Group (IEG) of the sustainability of outcomes. Thus, the lessons below all differ from those presented in the Implementation and Completion Results Report on the Urban Mobility Improvement Project (UMIP; World Bank 2009a).

The establishment of an effective lead agency for urban transport planning and management requires strong and sustained support by the government and stakeholders. The assigned major roles and expectations of Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD) have not been matched by adequate financial and human resources or vested authority. In particular, it was not set up to oversee needed policy reforms. The government decided on CETUD’s reorganization during its first year of implementing the complex UMIP, at a time when it had only three technical staff and no management. Moreover, despite requirements by the law that established CETUD in 1997, transport operators are not paying CETUD’s fees and the government’s funding is consistently inadequate, thus limiting CETUD’s staff and capacity to deliver on its mandate.

Land use and transport planning need to be coordinated at the metropolitan scale; spatial analysis needs to be mainstreamed into the design of urban transport projects. This lesson is especially important due to the peninsular form of Dakar. To be truly metropolitan in scope, project design needs to cover several jurisdictions. The rapid increase in the fleet of private vehicles was predictable—given the lack of incentives to reduce growth—and should have been incorporated in project design.

Rigorous monitoring and evaluation of actual performance compared with urban mobility indicators is critical for prioritizing policy and regulatory actions. Monitoring and evaluation under UMIP and other World Bank–financed

transport projects has been weak. The collection and reporting of data on key performance indicators has been partial, and available data mostly focus on outputs rather than outcomes. Selected indicators are static; in UMIP, for example, the positive data on the replacement of old minibuses did not take into account the canceling effect of the rapid growth in overall vehicular traffic. Similarly, the air quality improvements attributable to the minibus replacement program are not known due to the lack of data on air quality trends for the greater Dakar area, taking into account vehicle inspection, gasoline replacement, and other parallel programs that affect air pollution.

Innovative leasing mechanisms can be effective in replacing aging public transport fleets but their success depends on operator inputs at the design stage, technical assistance to professionalize operators and drivers, and restructuring of the network of informal transport operators. UMIP was successful in obtaining the commitment of informal minibus operators to join the bus replacement scheme, organize a mutual benefit association, set up a funding entity, and make regular payments. Strong and sustained technical assistance played a key role in developing new behaviors, such as timeliness, reliability, and fare stability, among operators. It was also critical to formalize bus operations and introduce franchise agreements. However, challenges that remain to be addressed include (i) the failure to guarantee exclusive rights to a specified route (which CETUD is unable to enforce); (ii) competition for bus stations, which undermines the franchise agreement; and (iii) continued rise in informal operators who do not follow the safety and operational standards of the new buses, thus compromising the latter's financial viability.

Adequate road maintenance is a key underlying factor in the achievement and sustainability of targeted outcomes for improving urban transport mobility and efficiency. Most likely, the rapidly accumulating costs of road degradation due to lack of maintenance have already canceled out the (modest or negligible) outcomes of UMIP. The design of urban transport projects need to strongly factor continuous road maintenance in their results frameworks, indicators, components, and costs. These were inadequate in UMIP's design, although road construction and rehabilitation accounted for 56 percent of the costs of a project that had four other components. The lack of counterpart funds—stemming from the fierce competition for public resources, procedural delays, slow disbursement from the finance ministry, and the political and logistical difficulties of collecting road user fees—has led to incomplete components at the time of project closing.

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Appendix A. Basic Data Sheet

URBAN MOBILITY IMPROVEMENT PROJECT (IDA 33540, IDA 3354A)

Key Project Data

Source	Appraisal estimate (US\$, million)	Actual or current estimate (US\$, million)	Actual as percent of appraisal estimate (percent)
Total project costs	103	156.92	152
Loan amount	70	75.71	108
Nordic Development Fund	7.6	8.91	117
French Development Agency	17.3	13.52	78
Unidentified foreign sources	4.5	0.0	0
Government of Senegal	3.6	58.78	1,630

Estimated and Actual Disbursements

	<i>FY01</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>	<i>FY06</i>	<i>FY07</i>	<i>FY08</i>	<i>FY09</i>
Appraisal estimate (US\$, million)	7.0	17.5	24.5	17.5	3.5	n.a.	n.a.	n.a.	n.a.
Actual (US\$, million)		21.8	0.13	1.91	14.36	19.4	19.98	10.91	4.41
Actual as percent of appraisal (percent)		124	0.5	11	410	n.a.	n.a.	n.a.	n.a.

Note: FY = fiscal year.

Project Dates

<i>Stage</i>	Original	Actual
Concept review	--	02/02/1999
Appraisal	--	01/28/2000
Board approval	--	05/25/2000
Effectiveness	--	05/14/2001
Midterm Review	--	01/29/2004
Closing date	12/31/2005	09/30/2008

Staff Time and Cost

<i>Staff time and cost (World Bank budget only)</i>		
<i>Stage of project cycle</i>	<i>Staff weeks (no.)</i>	<i>Cost, including travel and consultant costs (US\$, thousands)</i>
Lending		
FY99	--	76.10
FY00	52	175.56
Total	52	251.66
Supervision/ICR		
FY99	n.a.	0.00
FY00	n.a.	0.00
FY01	19	71.22
FY02	21	154.76
FY03	25	129.26
FY04	33	133.88
FY05	20	82.89
FY06	16	97.40
FY07	12	89.13
FY08	10	58.09
FY09	1	0.00
Total	157	816.63

Note: FY = fiscal year; ICR = Implementation Completion and Results Report.

Follow-on operations

<i>Operation</i>	<i>Credit no.</i>	<i>Amount (US\$, million)</i>	<i>Board date</i>
Transport and Urban Mobility Project	IDA 47370	71.9	06/01/2010

Task Team Members

<i>Name</i>	<i>Title</i>	<i>Unit</i>	<i>Responsibility/specialty</i>
Lending			
Patrick Bultynck	Urban Transport Specialist	AFTU2	Task Team Leader
Claude Sorel	Private Sector Development Specialist	AFTPS	PSD aspects
Pedro Geraldes	Principal Transport Economist	AFTT2	Road components
Paul Kriss	Economist	AFTIE	Project economics
Karim-Jacques Budin	Principal Railways Specialist	TWUTD	Railways component
Yves Prevost	Senior Environmental Specialist	AFTE1	Air quality component
Supervision/ICR			
Christian Diou	Senior municipal engineer	AFTU2	Task Team Leader
Brahim Ould Abdelwedoud	Municipal engineer	AFTU2	Road component
Karim-Jacques Budin	Senior railway consultant	MNSSD	Petit train de banlieue component
Bourama Diaite	Senior procurement specialist	AFTPC	Procurement
Saidou Diop	Financial management specialist	AFTFM	Financial management
Yvette Laure Djachechi	Senior social development specialist	AFTCS	Safeguards
Osva Rocha Andrade	Financial management specialist	AFTFM	Financial management
Romao	Financial management specialist	AFTFM	Financial management
Fily Sissoko	Senior financial management specialist	LCSFM	Financial management
Claude P. Sorel	Consultant	AFTU2	Leasing component

Note: AFTU = Association de Financement des Transports Urbains (Urban Transport Financing Group); AFTFM = Africa Region Financial Management Unit; AFTPC = Africa Region Procurement Cluster; LCSFM = Latin America and the Caribbean Financial Management Unit; MNSSD = Middle East and North Africa Sustainable Development Sector Department.

Appendix B. Key Indicators to Monitor Progress in Urban Mobility

Core results to measure

- Access
- Quality of service
- Level of road and passenger safety
- Environmental quality

General conditions for the Dakar metropolitan region

- Average traffic speed (travel times between certain routes at peak and low periods)
- Traffic volumes and costs (average costs per passenger-kilometer of public transport; percentage of urban population served by public transport within a specific radius around bus stop)
- Improved access to remote or enclaved urban areas

Performance of public transport

- Relative speeds of buses and minibuses (travel times between specific routes at peak and low periods, taking into account reserved lanes and other traffic priority measures)
- Number of vehicles and ridership rates per mode of public transport
- User satisfaction with public transport

Safety and environmental quality

- Air quality (gaseous and particulate emissions at a specific sites and average traffic conditions)
- Continued expansion of the vehicle emission control program
- Implementation of an Urban Air Quality Management Strategy
- Road safety (reduction of traffic accidents, especially those involving pedestrians)

Other urban sector performance data

- Cost of externalities from traffic and pollution (as a percent of gross domestic product)
- Regulatory measures for traffic management and control
- Design and implementation of plans for improving urban mobility, road safety, and air quality
- Number of minibuses older than 15 years and their replacement rate
- Strengthening of the leasing and financing entities for a sustained minibus replacement program
- Professionalization and technical support for private minibus operators
- Clarification of CETUD's role and provision of adequate support
- Land use planning, integrating road network expansion, and transport policies
- Implementation of an intermodal policy for public transport

Source: IEG; World Bank. 2000. "Project Appraisal Document: Senegal Urban Mobility Improvement Project." Report No. 230345-SE, World Bank, Washington, DC.

Note: CETUD = Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar).

Appendix C. List of Persons Met

Dakar

Conseil Exécutif des Transports Urbains de Dakar (Executive Council for Urban Transport in Dakar; CETUD)

Amadou Saidou Ba, President

Alioune Thiam, Managing Director

Abdoulaye Sy, Director for Studies and Strategy

Oumar Diallo, Head of Capacity Building Division

Abdou Diouf, Head of the Division of Urban Travel Observatory

Cheikhou Oumar Gaye, Director of Operations

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El Hadji Seck Wade, Director of Road Transport

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Wade Mohamed El Abass, Senior Transport Engineer

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Fatouma Toure Ibrahima, PPIAF

Appendix D. Borrower Comments

From: seck issakha [<mailto:issakha02seck@yahoo.fr>]

Sent: Monday, September 26, 2016 4:42 AM

To: Midori Makino <mmakino@worldbank.org>

Subject: PATMUR

Bonjour,

Le service du Ministère de l'Economie, des Finances et du Plan en charge du suivi de ce dossier n'a pas d'observations particulières sur le document communiqué par la Banque Mondiale. Cordialement.

The Ministry of Economy, Finance and Planning's responsible unit has no further comments on the document shared by the World Bank.