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Bus Rapid Transit

Transmilenio Bus Rapid Transit Project, Bogotá, Colombia

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On this page: *A case study on Transmilenio Bus Rapid Transit Project, Bogotá, Colombia. Find more at the Municipal Public-Private Partnership Framework - Project Summaries section for brief summaries of around 100 projects from around the world, examples of successes and challenges, as well as innovative ideas on solutions, or visit the Guidelines on Innovative Revenues for Infrastructure section.*

Project Summary:

Background

Colombia has been experiencing a dramatic population increase in its urban centers. Bogotá, the capital city, has absorbed a large portion of the people migrating to cities from the more rural areas. This population shift led to heavy congestion of roadways due to the increase in the use of private vehicles as well as the particular structure of bus transport operations in Bogotá. Specifically, under Colombian law, only bus companies can provide public transportation services, which means, in principle, that they should own the buses. In reality, however, the bus companies owned less than ten percent of the bus fleet. Their primary method of operating was to rent their routes to bus owners, who needed to be affiliated with a bus company according to the law, in return for a monthly fee plus an upfront, lump sum payment for the right to operate specific routes. As the bus companies were naturally incentivized to establish, and thereby lease, more routes and the local transportation authority lacked the capacity to evaluate the real need for them, the number of routes and buses increased exponentially. The resulting competition among bus operators, which derived their revenues from the actual fares collected, led to dangerous and notorious practices, including reckless driving and mistreatment of passengers.

In 1999, the city of Bogotá established TransMilenio S.A., with representation from several public agencies, to manage a Bus Rapid Transit (BRT) system in the city to alleviate these problems and provide the city with a better transportation system, one that aimed to be cost-effective and help reduce the level of air pollution in the city. The city had initially considered constructing a metro system to meet its public transit needs. During the planning phase, however, the city found that the capital investment needed for the metro would more than double that of the BRT and that the metro would cover only 8 percent of the city, as compared to the 85 percent offered by the BRT. Accordingly, the city elected to pursue the delivery of a high-quality BRT system instead.

Project Structure

TransMilenio S.A was given responsibility for designing, planning, and monitoring the BRT system in Bogotá, which operates under the same name as TransMilenio, as well as coordinating all of the other stakeholders involved in the BRT system's operation. TransMilenio S.A competitively tenders contracts for the provision of bus services to private sector operators, which must own their buses. Payment is linked to kilometers operated, instead of passenger serviced, which helps curtail the dangerous old practices of reckless driving and mistreatment of passengers.

The private sector operators are consortiums of traditional local transport companies and national and international investors, which own the buses and hire drivers and maintenance personnel. The private operators are also involved in the larger BRT system's operation and maintenance, as well as ticketing and fare collection. Without any operating subsidies from public authorities, the private operators recover their investments through the collection of fares paid by passengers. Accordingly, the private partners assume the demand risk, but also stand to retain the full the benefit if fare revenues are higher than expected.

TransMilenio operates as a PPP in which the public sector provides fixed capital investments, funded through fuel and other local taxes, while the private sector provides and operates the bus fleet and high-technology ticketing systems within an agreed upon framework. The system consists of a trunkand- feeder route grid with 9 core routes serving 114 stations, and buses with capacities of 160 or 270 passengers. The core routes (trunk lines) have four exclusive-use lanes (two in each direction) located in the center of the city's streets, while the feeders operate without exclusive lanes and assess no additional fare for their use.

In November 1999, Transmilenio S.A. began the bidding processes for trunk line operations by requesting proposals. All the commercial risks, including passenger demand, were assigned to the private operators. The bidding process proved to be a success as, in April 2000, four different companies were awarded concession contracts to provide and operate 470 new buses. At the same time, the tender for the concession for the fare collection system was ultimately won by a local company operating jointly with an experienced fare collection system provider. Separately, a Spanish technology group won the bid for operating the control center of the system, and the feeder service contracts were tendered as well.

Over a 24-month construction period, the new infrastructure for TransMilenio's first phase was completed under the direction and supervision of the local public works agency, Institute for Urban Development (IDU), and delivered by local companies under traditional public procurement contracts. The infrastructure consists of 38 km of trunk lines and seven feeder zones covering 100 km; 4 terminal stations, 4 intermediate integration stations; 53 stations; 17 pedestrian facilities, plazas and sidewalks; and facilities for parking and maintenance. The total investment for the Phase I infrastructure was USD 213 million, funded by a local fuel surcharge (46%), general local revenues especially from a capital reduction of the partially privatized power company (28%), a credit from the World Bank (6%), and grants from the National Government (20%). Infrastructure was completed through 58 construction contracts with national firms and 48 supervision contracts.

Lessons Learned

Today, Bogotá's TransMilenio is considered as one of the best practice cases in the world for PPP in BRT and the model has been adopted in more than 100 cities worldwide. With three phases in operation, it covers 114,4 km; has 9 terminals and 11 parking facilities; includes 143 regular stations and 12 service corridors; offers 22 bike-parking sites with 5,260 parking spaces; and also provides 5,017 external points to add credit to fare cards. In addition to operating buses, TransMilenio recently opened a 3.3 km gondola lift system (cable cars) connecting a specific area in the south of Bogotá with poorer neighborhoods on the Bogotá hills, which further connects these communities with the rest of TransMilenio system.

With the BRT development, reports have indicated that average travel time has decreased by 32 percent, property values along the main line have increased by 15-20 percent, tax revenues have increased, air quality has improved along the BRT routes, and road fatalities have decreased by 60 percent from 1,299 in 1996 to

551 in 2007.

Stakeholder engagement was key to delivering the TransMilenio project, but this also proved challenging due to the diversity of interests and skepticism of the parties directly involved. The expectations and distrust among the urban planning department, national regulators, local government officials, bus companies, bus owners, and bus drivers created tension over the project proposal. However, strong leadership by the mayor in charge of the initiative since the project's inception helped create strong interest in and support for the project. This included key knowledge exchange activities that sought lessons from other international examples of cities that had successfully implemented BRT systems; an objective timeline that helped generate political support from local officials; and most importantly close engagement with local bus operators in the project development process to avoid protests, create a fair pricing system, and connect underserved routes. In addition, operators under the old system were offered the opportunity to bid for operations under the new and improved system, which encouraged them to recognize and accept the opportunities and benefits of participating in the project. Of the 66 old operators, 62 were shareholders in the initial four firms awarded contracts to supply and operate the new buses.

These positive attributes notwithstanding, TransMilenio is currently subject to criticism domestically due to concerns over pricing. Since the PPP operates without subsidies from the government, the private operators depend on fares to maintain BRT operations and recover their investments. As a result, the fare (now fixed at approximately USD 1) has increased much faster than the income levels and may be unaffordable for low-income users (with average daily incomes of USD 3).[1]

Footnote 1: Case source(s): http://tcdc2.undp. org/GSSDAcademy/ SIE/Docs/ Vol15/10Colombia.pdf Accessed on July 3, 2019

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