

The Development Impacts of Urban Transport Investments and the Role of Private Sector Innovation

- Sustainable mobility is a critical challenge facing Latin America and the Caribbean.
- While few studies have rigorously measured the impacts of urban transport investments, the available evidence shows important socio-economic and environmental effects.
- The private sector is introducing disruptive tech-driven business models that are shaping the future of urban transport worldwide.
- Ride-hailing services have become increasingly popular, igniting a heated debate on how they affect urban mobility.
- Multilateral development banks working with the private sector are well-positioned to support transport innovations, while also helping to build evidence about effective and impactful public transit systems.

URBAN TRANSPORT CHALLENGES AND THE ROLE OF THE PRIVATE SECTOR

Sustainable transport is a critical challenge facing Latin America and the Caribbean (LAC), and it underpins various Sustainable Development Goals (SDGs). With approximately 80% of the population living in cities, and a climbing motorization rate¹ that exceeds those in Africa, Asia, and the Middle East, the region suffers high levels of traffic congestion, accidents, and pollution. Travel times for public transit users from low-income peri-urban areas tend to be longer, further limiting their access to job opportunities. Therefore, making well-informed urban transport investment decisions that result in cleaner, safer, more accessible and reliable commutes is key.



The private sector has been playing an increasingly active role in urban transport development in LAC. It provides critical capital for large infrastructure investments through mechanisms such as public-private partnerships, and can also help improve the efficiency of transport services. Tech companies are also launching disruptive business models that are reshaping urban mobility.

MEASURING THE IMPACTS OF URBAN TRANSPORT INVESTMENTS

While transport investments are undoubtedly critical for urban development and sustainability, there is still limited causal evidence on the socioeconomic impacts they generate. The ability of

transportation agencies to evaluate the effectiveness of their projects has been hampered by costly data collection systems. Similarly, most evaluations in the sector have been based on ex-ante simulations of direct transport benefits, such as travel time savings or reductions in vehicle operating costs.

A recent study published by IDB Invest and the IDB reviews the available evidence quantifying the development impacts of urban transport interventions around the world, aiming to capture learning to inform future areas of analysis and investment.² For example, studies have shown that building metros and Bus Rapid Transit systems can have important effects on women's employment.³

Realized time savings can also translate into measurable welfare outcomes. For example, an evaluation of the cable car in La Paz, Bolivia shows that people devote more time to education or recreational activities thanks to travel time savings arising from the new system.⁴ Similarly, in Medellín, Colombia, homicide rates decreased in neighborhoods served by the cable car system.

There is also evidence demonstrating pollution and health effects. Studies have exploited the sharp increase in rail transit ridership after the opening of new metro systems in China and India to quantify reductions in air pollution and CO₂ emissions.⁵ An evaluation of the introduction

3 GOOD HEALTH AND WELL-BEING



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



11 SUSTAINABLE CITIES AND COMMUNITIES



SUSTAINABLE DEVELOPMENT GOALS

1. International Organization of Motor Vehicle Manufacturers [database](#).
2. IDB Invest (2018). Urban Transport Systems in Latin America and the Caribbean: Challenges and Lessons Learned.
3. IDB Invest (2018). [Connecting to Economic Opportunity? The Role of Public Transport in Promoting Women's Employment in Lima](#).
4. IDB Invest (2018). [Getting a Lift: The Impact of Aerial Cable Cars in La Paz, Bolivia](#).
5. Chen and Whalley (2012). [Green Infrastructure: The Effects of Urban Rail Transit on Air Quality](#). And Goel and Gupta (2015). [The Effect of Metro Expansions on Air Pollution in Delhi](#).

of electronic toll collection in the United States showed reduced prematurity and low birth weight among babies born to mothers living close to a toll plaza, relative to mothers living further away, which may be attributed to improved air quality.⁶

PRIVATE SECTOR SOLUTIONS RESHAPE URBAN TRANSPORT

Over the last decade, app-based ride-hailing companies, such as Uber, Lyft, and Cabify have become ubiquitous, igniting a heated debate on how they are reshaping urban transport.



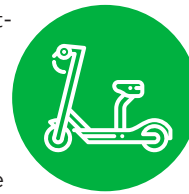
Ride-hailing is an attractive model for various reasons. To start, it allows users to replace capital expenditures (cars) with operational expenditures (rides). A car represents a significant cash outlay for most people, and is an asset used only 5% of the time on average.⁷ Ride-sharing platforms also contribute to flexible job creation, particularly during economic crises, and promote safety by storing ride data. Cities can charge fees or enact taxes on rides, and use the revenue to improve overall urban mobility.⁸

On the other hand, these digital platforms have been criticized for proliferating the “gig economy”, characterized by temporary jobs without benefits or protections. Moreover, there is an open discussion on whether these services are displacing other modes of transportation. A study⁹ comparing ride-sharing and traditional taxis in San Francisco



finds that ride-sharing companies meet a latent demand for urban travel, appealing to generally younger, well-educated users seeking fast, on-demand service, while avoiding inconveniences of driving such as parking.

Another big issue is the potential effect of ride-sharing on traffic congestion. Interestingly, a causal study¹⁰ looking at the entry of Uber into the United States market shows that it significantly decreases traffic congestion time, congestion costs, and fuel consumption. The authors argue that ride-sharing companies have the potential to reduce car ownership, shift the traffic mode from single occupancy to ride-sharing, and delay travel plans during peak hours. More evidence is needed on this front.



OTHER INNOVATIONS IN URBAN TRANSPORT

Ride-sharing is just one of many urban transport innovations emerging in LAC. Other examples are e-scooter companies for shorter trips, such as MOVO, available in Mexico, Chile, Peru, and Colombia. Also, cities such as Bogotá, Colombia have introduced electronic transit cards, allowing the city to address affordability constraints for the poorest residents through targeted fare subsidies.¹¹ These digital payments may also facilitate financial inclusion. “Last-mile” trucking, which includes delivery to the final recipient, is also undergoing a digital transformation, and logistics platforms are adapting to local needs, such as Cargo X in Brazil, Avancargo in Chile, and Lifit in several LAC countries.¹²

LOOKING FORWARD

As ride-hailing consolidates in the region, IDB Invest is playing an active role in forging best practices in this industry. In 2018, IDB Invest provided financing to Cabify-

Maxi Mobility to support its growth plan in the region. A key element of this project is to understand how these companies can better serve communities with limited access to public transportation. More broadly, supporting these types of business models offers opportunities for improving women’s employment and incentivizing sustainable mobility through the adoption of electric vehicles.

As the region’s cities continue to grow, multilateral development banks working with the private sector have an important role to play in supporting both critical infrastructure needs and mobility innovations. This also means filling knowledge gaps on the development impact of transport investments in order to inform future projects. To this end, the IDB Group will continue to incorporate new sources of data from apps, digital sensors, and satellites, among other technologies, to enhance evaluation opportunities in the transport sector.¹³ ■

Additional Information

DEBrief preparation: Guillermo Mulville, Norah Sullivan, Patricia Yañez-Pagans.

This brief summarizes the findings of the study by Yañez-Pagans et al. (2018), [Urban Transport Systems in Latin America and the Caribbean: Lessons and Challenges](#), which is part of IDB Invest’s Development through the Private Sector Series.

For more information on our work with ride-hailing companies contact: wmulville@iadb.org

For more information on IDB Invest DEBriefs and evaluations contact: patriciayava@iadb.org

Photography: Shutterstock
Design: Mario Segovia Guzman

6. Currie and Walker (2011). [Traffic Congestion and Infant Health: Evidence from E-ZPass](#).
7. Fortune (2016). [Today’s Cars are Parked 95% of the Time](#).
8. World Resources Institute (2018). [Cities Are Taxing Ride-Hailing Services Like Uber and Lyft. Is This a Good Thing?](#)
9. Rayle et al. (2014). [App-Based, On-Demand Ride Services: Comparing Taxi and Ridesourcing Trips and User Characteristics in San Francisco](#).
10. Li et al. (2017). [An Empirical Analysis of On-demand Ride Sharing and Traffic Congestion](#).
11. Urban Institute (2018). [Digital payments in transportation can help developing cities drive economic growth](#).
12. IDB Invest (2019). [Four urgent digital improvements for freight transport in our region](#).
13. IDB Invest (2019). [Here’s one example of how Big Data helps transportation in our region](#).