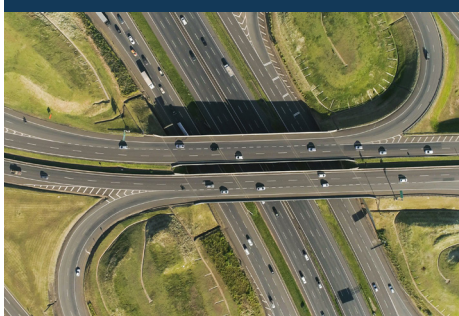


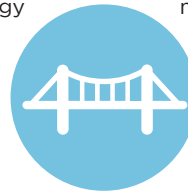
Building BIG: A Public-Private Perspective on Infrastructure Challenges and Opportunities in Brazil

- Infrastructure is key for competitiveness and development, yet in Brazil, logistics costs are more than double the OECD average.
- Brazil's most pressing infrastructure challenges are in transportation and water and sanitation.
- Investment is below required levels and private participation has markedly decreased since 2012.
- To take advantage of upcoming market opportunities, Brazil needs to improve infrastructure governance and project preparation.
- Given the changing role of the primary infrastructure financier (BNDES), mobilizing capital markets and institutional investors is critical.
- IDB Invest offers innovative financial instruments, such as full-wrap guarantees and infrastructure credit funds, to mitigate risks and attract capital market investment.



INFRASTRUCTURE IS KEY FOR DEVELOPMENT

Infrastructure investments in sectors such as transport, water and sanitation, energy, and telecommunications are key drivers of sustainable development, providing essential services that allow people and businesses to thrive and economies to grow. Similarly, as urbanization continues to increase in Latin American and Caribbean (LAC) countries such as Brazil, improving urban transport systems is critical, as they can help people access jobs, education, and health services, while also relieving congestion and reducing pollution.¹ Likewise, renewable energy investments can help diversify energy sources and reduce the impact of climate change. Research shows that each dollar invested in infrastructure can increase gross domestic product (GDP) by two to eight dollars.² Furthermore, quality infrastructure is directly linked with the attainment of the Sustainable Development Goals (SDGs).



BRAZIL'S INFRASTRUCTURE CHALLENGES

Brazil is one of the largest economies in the world and a major player in global trade and food production. However, the country's competitiveness is threatened by the quality of its infrastructure, which ranks 81st out of 137 economies³ and varies greatly across regions.

Transportation is one of Brazil's most pressing infrastructure challenges. Quality, capacity, and connectivity issues, coupled with a high dependence on roads, results in high logistics costs, estimated at around 15% of GDP, compared to 8-10% of GDP in OECD countries. Also, traffic congestion in urban

areas is reducing productivity and exacerbating pollution and road safety issues.⁴

Given Brazil's vast size and large population, another major challenge is water and sanitation. Although access to these services has increased, it remains lower than comparable countries. As far as energy, Brazil is LAC's largest primary energy consumer, accounting for over 40% of regional consumption. As demand for electricity continues to rise, so does the need for greater investment in this sector. Energy reliability is also a challenge, with electricity transmission and distribution losses more than double the OECD average.

Regarding health infrastructure, the country has 2.5 hospital beds per 1,000 inhabitants, nearly half of the OECD average, and faces issues with service quality. Similarly, there are severe shortcomings in public education infrastructure, including the lack of basic services.

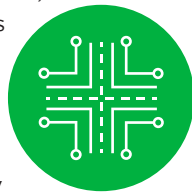
THE INVESTMENT LANDSCAPE

Low investment levels are largely to blame for the poor state of Brazil's infrastructure. Between 2008 and 2016, total investments averaged 2% of GDP⁵, less than half of levels in the 1980s. Current investment falls significantly short of the estimated US\$110 billion per year needed until 2040⁶ to meet the country's infrastructure investment needs. Despite the private sector accounting for around half of total infrastructure investment between 2008 and 2016, private finance has dropped markedly since 2012.

1. IDB Invest (2018). [Urban Transport Systems in Latin America and the Caribbean: Challenges and Lessons Learned](#).
2. Leduc, S. and Wilson, D. (2013). [Roads to prosperity or bridges to nowhere? Theory and evidence on the impact of public infrastructure investment](#). NBER Macroeconomics Annual 27(1): 89-142.
3. WEF (2018). [Global Competitiveness Report](#).
4. WRI Brasil Ross Center (2014). [Perdemos um mês por ano no trânsito](#).
5. [INFRALATAM database](#) (2019).
6. Global Infrastructure Hub (2019). [Global Infrastructure Outlook](#).



There are a number of related factors hindering private investment in infrastructure. Although Brazil has been the largest market for public-private partnerships (PPPs) in LAC for the past two decades, governance of PPPs and concessions is complex, and they are not designed within a systematic planning exercise. Additionally, the public sector has limited capacity to structure projects with private participation, especially in non-traditional sectors such as water, health, and education. This results in poorly designed projects with cumbersome approval processes and environmental licensing requirements, creating major bottlenecks. Likewise, regulatory uncertainty is an ongoing concern for investors.



Financing from traditional sources is increasingly hard to get. The Brazilian Development Bank (BNDES), which has been the main provider of long-term infrastructure finance, is replacing its highly subsidized interest rate (known as TJLP) with a market-based long-term interest rate. This shift will intensify the need to attract financing from capital markets, pension funds, and commercial banks. At the same time, banks' long-term financing capacity may be impacted by international banking regulations that limit exposure in sectors such as infrastructure.

While Brazil has been making progress in attracting private investment by issuing infrastructure debentures, these have mostly attracted individual rather than institutional investors. Finally, currency risks pose an ongoing challenge.

OPPORTUNITIES AHEAD

The Brazilian infrastructure market will generate immense opportunities for equity and debt investors, construction companies, and financial markets. To take full advantage of these opportunities, the country should continue building institutional capacity for identifying, prioritizing, structuring, implementing, and monitoring PPP projects and concessions. Additionally, streamlined processes and transparency will be key for developing successful infrastructure projects.

It is also important to continue building on recent successes in the design of future projects. For example, improved risk identification and allocation within projects helped attract solid international investors to recent competitive airport tenders. Similarly, offering indexed revenues to US dollars in recent airport and road concessions helped reduce currency risk and attract investors.



IDB INVEST'S ROLE

Given the magnitude of Brazil's investment needs, increasing long-term financial flows from capital markets, development finance institutions, commercial banks, and institutional investors, both nationally and internationally, is critical. As a recent study⁷ shows, multilateral development banks have proven to be instrumental in mobilizing private sector financing, which is also key for achieving the SDGs.

Similarly, stimulating infrastructure investments through PPPs is an important part of this equation. For example, in 2019 IDB Invest approved financing for a water and sanitation PPP in Northeastern Brazil aiming to improve wastewater infrastructure in 15 municipalities in the metropolitan region of Recife, a project that also includes financing from local development banks.⁸

IDB Invest is also working to stimulate capital markets and mobilize resources from institutional investors through innovative risk mitigation instruments. For example, Total Credit Guarantees provided by IDB Invest in 2018 have been instrumental in meeting the financing needs of the Santa Vitoria do Palmar wind farm⁹ and the Pirapora solar project¹⁰ by covering full debt payment to the bondholders until maturity. The guarantees, in the amounts of R\$130 million and R\$315 million respectively, helped ensure the subscription of the bonds at a competitive price and term (in fact, both bond issuances were oversubscribed), as well as the AAA local credit rating for Santa Vitoria do Palmar and the A+ global rating for Pirapora.

Finally, Credit Funds can mobilize investors looking to support projects based on specific criteria. IDB Invest's new Credit Fund for Infrastructure in Brazil will do this by ensuring that investments comply with the IDB Group's social and environmental safeguards and corporate governance and integrity standards. With this value added, IDB Invest seeks to help build trust and mobilize long-term financing for robust and sustainable infrastructure projects in Brazil. ■

Additional information

DEBrief Preparation: Paula Castillo, Felipe Ezquerra

This DEBrief summarizes the findings of the publication by Paula Castillo and Felipe Ezquerra (2019), [Building BIG: Brazil's Challenges and Opportunities in Infrastructure – A Public-Private Perspective](#).

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The views expressed here are those of the authors and do not necessarily reflect the views of the IDB Group, its respective Boards of Directors, or the countries they represent.

7. IDB Invest (2019). [Mobilization Effects of Multilateral Development Banks](#).

8. See the [project profile](#) for more information.

9. See the [project profile](#) for more information.

10. See the [project profile](#) for more information.