DEBrief

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Investment in Transportation and Logistics Infrastructure in Panama and its Catalytic Effect on Attracting Private Capital

- Panama is a regional transport hub that stands out for its logistics capacity.
- The Panama Canal is the centerpiece of the country's economy, representing 20% of its GDP through both direct and indirect activities.
- The announcement of the canal expansion project, formalized through the national referendum in 2006, has had a ripple effect on attracting private investment and stimulating economic growth in the country.
- An IDB Invest study estimates that an increase in private investment in Panama of more than US$10 billion can be attributed to the canal expansion announcement.
- To consolidate its position as a value-added logistics services hub, Panama is taking steps towards enhancing its transport connectivity, modernizing its infrastructure, facilitating trade, and creating a regulatory framework conducive to increasing private sector investment.

PANAMA: THE REGION'S TRANSPORT HUB

Panama has solidified its position as a transport hub in Latin America and the Caribbean (LAC), with its interoceanic canal, port network, logistics zones, and air connectivity. This achievement is due to the country's concerted efforts to maximize its most important asset – the canal, which represents 20% of Panama's gross domestic product (GDP) through direct and indirect activities.[1]

Currently, Panama has the best logistics performance in the region. Globally, it ranks 38th of 160 economies in the Logistics Performance Index (2018), with a score of 3.28 out of 5, placing the country above the regional average of 2.69, but below the OECD average of 3.65.[2] The country also ranks first in LAC in terms of air and rail infrastructure quality.[3]

Transportation and logistics advances in Panama can largely be attributed to sustained public and private investment in infrastructure, averaging 5.3% of GDP between 2008 and 2015. In 2015, total infrastructure investment was 4.5% of GDP, 94% of which went to transportation.[4] Moreover, from 1990 to 2016 the private sector participated in five port projects, one rail and one road project with investments totaling US$1.6 billion.[5]

THE PRIMACY OF THE PANAMA CANAL

The Panama Canal is the centerpiece of the country's economy, transporting nearly 5% of global commercial cargo.[6] After the US$5.5 billion[7] expansion project was completed, traffic through the canal increased by 22% (in tons)[8] from 2016 to 2017. Panama has also significantly improved both its maritime connectivity[9] and port infrastructure quality, positioning the country in sixth place at the global level.[10]

The IDB Group has been a strategic partner throughout this transformational process, helping the government to develop a regulatory and institutional framework conducive to consolidating the country's logistics system. Likewise, IDB Invest, the private sector investment arm of the IDB Group, provided financing for the canal expansion with a US$400 million loan to the Panama Canal Authority.

THE EFFECTS OF THE CANAL EXPANSION ON CATALYZING PRIVATE INVESTMENT

In large infrastructure projects such as the canal expansion, changing expectations of growth among private investors can set off economy-wide effects even before work is completed.

An impact study carried out by IDB Invest assesses the effects on private investment and GDP growth in Panama that are attributable to the canal expansion, specifically from the date of the national referendum approving the project in 2006.

To quantify these impacts, the study compares the evolution of private investment

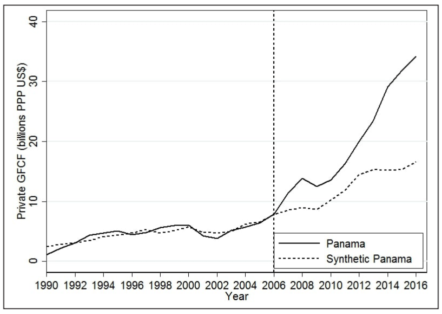
1. *Estrategia Logística Nacional* (2017).
2. World Bank (2018). Logistics Performance Index.
3. WEF (2018). World Competitiveness Report 2017-2018.
4. Infralatam database (2018).
5. PPI database (2018). Active projects.
6. IMF (2017), Panama's Growth Prospects: Determinants and Sectoral Perspectives. IMF Working Paper; IDB (2018), Evolución del sector logístico y apoyo del BID en Panamá.
7. Panama Canal Authority (2017). Completion Report.
8. Panama Canal Authority (2018).
9. Scoring 53.4/100 in 2016 vs. 45.6/100 in 2015 in the Liner Shipping Connectivity Index. World Bank (2018).
10. WEF (2018).

-- measured through gross fixed capital formation (GFCF) -- and GDP in Panama versus the trends observed in a counterfactual scenario called "synthetic control" (SC).[11] The SC is the weighted average of a set of countries that share similar characteristics with Panama (i.e., they are ports and/or financial centers) and exhibit comparable historical behavior in terms of private investment and economic growth before the expansion referendum. Therefore, any difference in the trends observed for Panama post-referendum with respect to the evolution that would have followed in the absence of the referendum, estimated by the counterfactual scenario, constitutes the measure of impact.

As shown in Figure 1, the results indicate that in the medium-term, between 2006 and 2011, there was an increase of US$9.9 billion in private investment that can be attributed to the formal announcement of the canal expansion (anticipation effect). This is 1.8 times the size of the total expansion project investment and, on average, 1.3 times the trend that would have been observed in private investment in Panama in the absence of the expansion referendum. Likewise, the impact on economic growth shows an increase of US$20.2 billion in GDP over the same period, which is 1.2 times the trend observed in the counterfactual scenario.

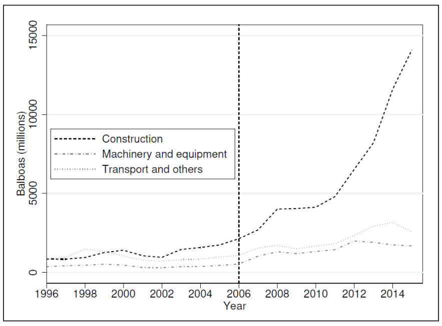
Looking at a longer timeframe, from 2006 to 2016, the results demonstrate a total increase in private investment of US$46.6 billion (8.5 times greater than the total expansion project investment and 1.5 times the counterfactual scenario). The impact on overall economic growth shows an accumulated increase of US$87 billion over the same period (1.4 times the trend that would have been observed without the referendum). These results represent the maximum possible impact value since the ability to attribute effects decreases as we get further from the referendum date and other relevant events occur in the country.[12]

Figure 1. Increase in Private Investment after the Panama Canal Expansion Referendum (Purchasing Power Parity – PPP US$)



In addition, the study looks at the evolution of different aspects of private investment in Panama from 1996 to 2014 (Figure 2). The data illustrate that expansion has mainly been driven by investments in the construction sector, both residential and non-residential.
These results reflect the growth model of a country with an economy dominated by the services sector (nearly 80% of GDP). They also signal the need for Panama City to adapt its infrastructure in response to the larger flow of goods that is expected from the canal expansion.

Figure 2. Composition of Private Investment



In terms of GDP growth, the study's results are similar to the original projections made in the country prior to the launch of the expansion project. However, the initial projections underestimated the effect on attracting private investment and, above all, the anticipation effects that the formal canal expansion announcement could generate.

Therefore, the study highlights the importance of quantifying private sector catalyzation effects in the context of large infrastructure investments and the role of the private sector in driving economic activity in Panama.

FUTURE PERSPECTIVES AND KEY AREAS FOR IMPROVEMENT

The future looks positive in terms of the growth prospects of Panamanian ports. Average TEU (twenty-foot equivalent

11. Abadie, Diamond, and Hainmueller (2010).
12. For example, relevant investments made after 2011 include: the construction of the metro and a new terminal at Tocumen airport, as well as the Cobre Panama copper mining project. However, it is difficult to determine if these investments would have taken place without the canal expansion announcement and if their announcement helped

unit) growth for the ports of Colón and Balboa is projected to be 4.6% from 2018 to 2022.[13] Complementing the canal, major projects are being evaluated such as the 450km Panama-Chiriquí railway with an estimated cost of US$5 billion.[14] The ongoing expansion of Tocumen International Airport, which will double its passenger capacity by 2022[15], will also improve the country's positioning as an air cargo hub.[16]

Panama is also progressing with other road and mobility infrastructure projects, including the completion of several highway widening projects, line two of the metro, and most recently, the construction of the fourth bridge over the canal, among other strategic efforts.

Despite these advances, key steps remain for Panama to consolidate itself as a value-added logistics services hub.[17] In line with international best practices[18], there are three main areas of improvement for the country:

1. **Enhancing connectivity**. There is still room to improve both inter- and multi-modal transport connectivity.[19] Specifically, Panama's secondary road infrastructure is lagging behind, as are connections between these roads and the Pan-American highway, links that are fundamental to boost agricultural development. Investment in railroads is also still limited.[20]

2. **World class infrastructure and trade facilitation.** The country should focus efforts on improving customs processes and updating infrastructure. For example, the incorporation of technologies for cargo tracking, automation of customs processes, and the provision of new services will be critical for the country's medium-term positioning in this space and will foster the development of associated industries.

3. **Greater private sector participation.** Panama still lacks an overarching Public-Private Partnership (PPP) law or associated institutional framework. The law governing concessions was established in 1988.[21] According to the Infrascope index (2017), a benchmarking tool that assesses the enabling environment for implementing PPP projects, Panama ranks 15 out of 19 countries in the region. Consolidating an institutional framework and developing robust regulations, as well as increasing local capacity for project identification and structuring, are key to increasing PPP effectiveness.[22]

Panama is taking steps in the right direction by consolidating the Logistics Cabinet within the Presidencia de la República, developing the National Cargo Logistics Plan, and most recently, the National Logistics Strategy to 2030.[23]

In a context of greater regional integration and given the significant catalytic effects that large infrastructure investments can have, the projects currently underway in Panama have tremendous potential to generate further multiplier effects on the economy, private investment, and development both in the country and the region at large. ■

to attract more private investment.
13. BMI Research (2018).
14. La Prensa (2018). Gobierno crea comisión de alto nivel para proyecto del tren a Chiriquí.
15. Aeropuerto Internacional Tocumen (2018)
16. BMI Research (2018).
17. IDB (2018).
18. Lam and Ramakrushnan (2017) in IMF (2017).
19. BMI Research (2018).
20. Idem.
21. OECD (2017).
22. Idem.
23. Presidencia de Panamá - Gabinete logístico (2017).

Additional Information

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This brief summarizes the findings of the study by Maria Laura Lanzalot, Alessandro Maffioli, Rodolfo Stucchi and Patricia Yañez-Pagans (2018), "Infrastructure Investments and Private Sector Catalyzation: The Case of the Panama Canal Expansion", which is part of IDB Invest's Development through the Private Sector Series.

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