Infrastructure: Developing the Foundation for Growth

Overcoming the Challenge of Improving and Expanding Infrastructure Services in Brazil

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I. Key Sectoral Challenges

Infrastructure investments are low and getting lower

- Investments in infrastructure are declining over time;
- Investments in Brazil are among the lowest in middle-income countries;
- Quality of infrastructure is low: There is a need to invest better!
- The low level of investments in infrastructure are one of the main bottlenecks for doing business in Brazil.

Figure 1: Infrastructure Investments
(% of GDP)

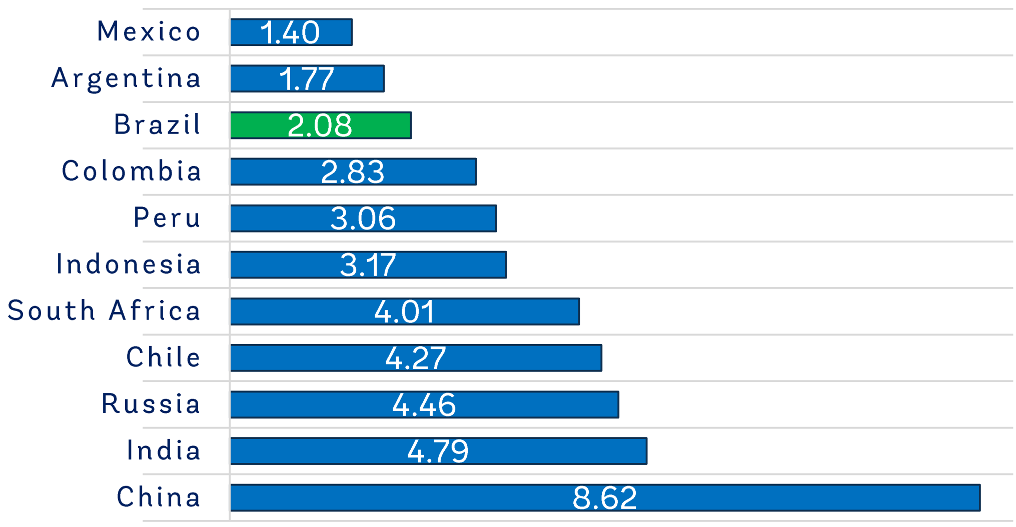
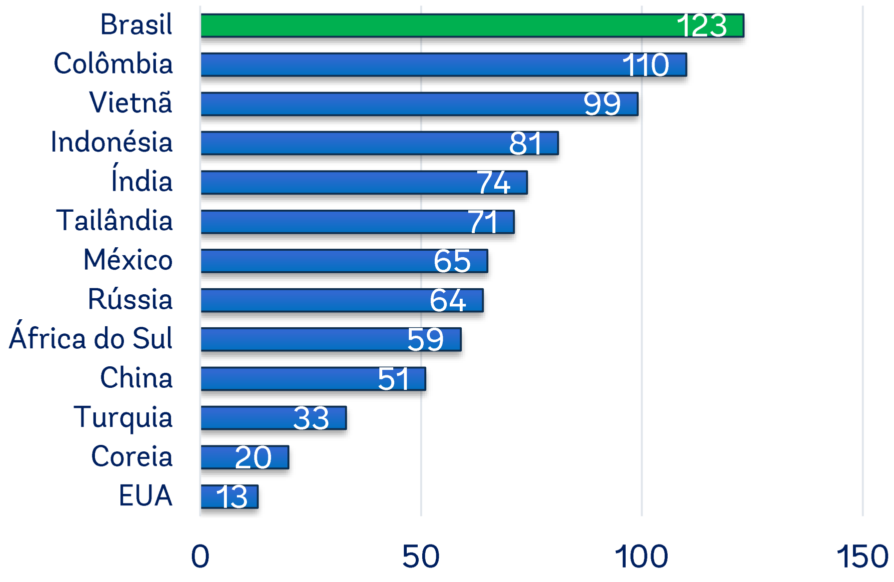


Figure 2: Quality of Infrastructure
(Ranking WEF)



I. Key Sectoral Challenges

Sector wide inefficiencies

- Besides increasing investment , Brazil need to reduce operational inefficiency and improve allocations of resources.
- Inefficiencies in the transport and water sectors amount to 2.1% of GDP annually
  - More efficient operation and allocations in the Transport Sector in Brazil could save 1.4% of GDP, which is 2.2 times the current annual investment
  - Reducing operational inefficiencies in the water sector, could save an additional 0.7% of the GDP. This is more than three times the level of investment in the sector.

Table 1: Potential Efficiency Gains in the Transport Sector

	Potential Gains (%GDP)	Bottlenecks or What would it take to Unleash these Resources
Increasing use of Railways	**0.7**	• Regulatory issues • Long-term planning and proper budgeting • Effective PPPs or bolder role of the **public** sector
• *Mineral cargo*	*0.494*	
• *Agricultural bulk cargo*	*0.197*	
Solving Deficiencies in FHS	**0.7**	As one off investment: 0.89% GDP over 4 years (13.7 US$-billion) ➔ 0.2%GDP/year, a return of over 250%
• *Quality of Roads*	0.069	* 2.5 US$-billion over 4 years
• *Congestion*	0.227	* 6.5 US$-billion over 4 years
• *Congestion and Quality*	0.188	* 2.2 US$-billion over 4 years
• *Under-engineering*	0.215	* 2.6 US$-billion over 4 years
Adding up:	**1.4**	This is 2.2 times current spending in the sector

Table 2: Potential Efficiency Gains in the Water Sector

Category	Potential Gains (%GDP)	Bottlenecks and What would it take to unleash these resources
Collection inefficiency (unpaid bills)	0.36%	Governance, increasing metering coverage and changing collection policies
Technical losses (unaccounted for water)	0.31%	Targeting investments for maintenance and replacement of assets
Under-pricing	0.07%	Regulations and targeted subsidies
Adding up	0.7%	This is 3 times current spending in the sector

Quality of investment in infrastructure is low and declining

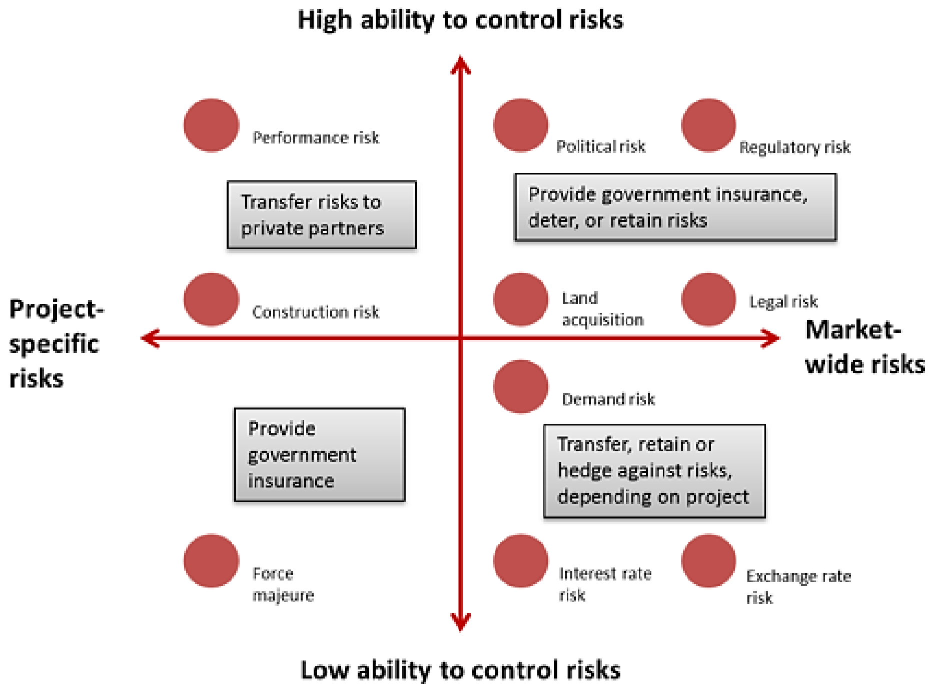
- To expand and improve the **quality of infrastructure services** in Brazil, the government needs to spend much more efficiently and leverage more private finance;
- Lack of **long-term planning** and a robust pipeline of projects based on clear priorities reduces predictability and attractiveness of investments;
- The poor quality of **technical designs** and the lack of detailed risk assessment results in delays, increased costs and disruptions;
- High degree of **political interference** in prioritization of projects, contract negotiations and regulatory oversight brings uncertainties to the market;
- **PPP Contracts** often lack clear definition of roles and responsibilities, performance requirements and financial equilibrium and renegotiation clauses, etc.;
- It is necessary to change the current focus on **debt financing** by public banks towards project finance based on innovative instruments to crowd-in private sector finance.

II. Policy Recommendations

Building a long-term pipeline for planning and structuring

- Reduce use of expressions of interest (PMI)
  - Biased, asymmetry of information, overall perception
- Strengthen strategic planning capacity within the federal government
  - Strategic and sector specific plans (PPA)
  - Ministry of Planning, EPL, MME, MCities
- Provide support to project preparation and structuring
  - Led by PPI with development banks (BNDES, Caixa, BB)
  - Operationalize project structuring facilities (subnational)
- Identify critical risks and mitigation measures:
  - Detailed engineering designs
  - Estimated costs and cash flows
  - Environmental impacts and risks
  - Potential land acquisition and resettlement
  - Licensing and permit requirements
- Allocate risks to different actors

Proper risk transfers in public private partnerships



Source: Akash Deep, Harvard Kennedy School; adapted from Miller et al (2001).

II. Policy Recommendations

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Strengthen regulatory framework for more transparency and predictability

- Reduce political interference in the process.
- Adopt more transparent and standardized procedures and contracts clauses (PPI)
- Strengthen regulatory agencies (PL 6621/16)
  - Have more technical independence; and
  - Consolidate Transport and WWS.
- Clear revenue structures and price adjustments:
  - Tariffs, tolls, subsidies, etc.
  - Guarantees and back-stop options
- Strengthen contractual arrangements
  - More focus on service delivery
  - Performance indicators
  - Payments based on results
  - Financial equilibrium and renegotiation clauses
  - Termination and step-in-rights clauses

Leveraging private finance for innovative finance mechanisms

- Budget constraints and limited capital of public banks, will require more private investments in infrastructure and service delivery.
- Move from concessional financing (TJLP) to market based rates (TLP) is very positive development.
- Public banks should become catalysts of (private) investments
  - Financial structuring based on project risks and cash flows
  - Performance based on leveraging of private finance
  - Risk sharing with private investors
- Introduce innovative instruments to leverage private financing:
  - Guarantees, Mini-perms, Mezannine financing, etc.
- Increase attractiveness of infrastructure bonds and other long-term debt instruments for large institutional investors.
- Strengthen banking regulatory framework to develop a more competitive market, less dominated by a small group of banks.
- Impose effective Chinese walls between different business areas, particularly banks with its subsidiaries

III. Main Messages

- Develop the capacity of federal and subnational governments for strategic planning involving all stakeholders.

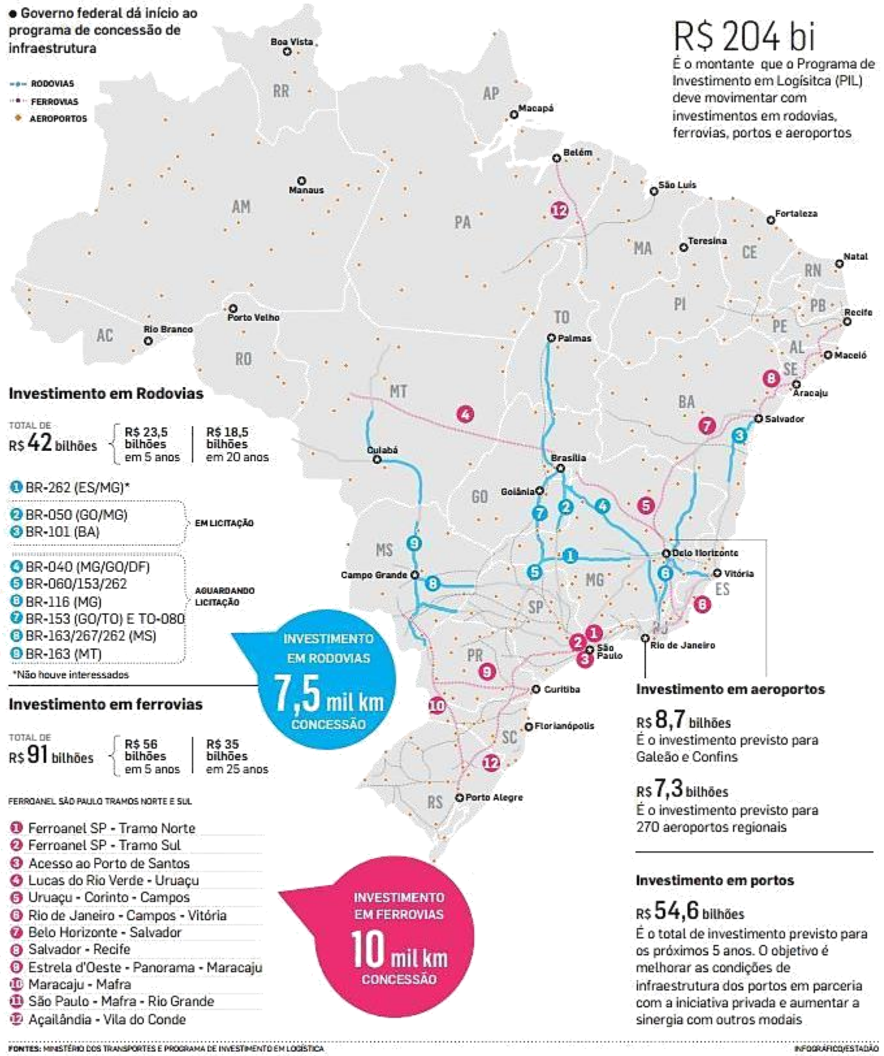
- Ensure that economic, social and environmental criteria are applied in identifying, evaluating and prioritizing investments.

- Strengthen the role of PPI to develop and coordinate a pipeline of bankable projects based on transparent selection criteria.

- Improve PPP contracts and move focus from short-term infrastructure investments to long-term service delivery.

- Consolidate regulatory agencies and ensure their political and technical Independence.

- Strengthen the role of public banks in supporting project structuring, managing construction risks and develop innovative financial instruments to share risks and crowd-in private finance.



● Governo federal dá início ao programa de concessão de infraestrutura
RODOVIAS
FERROVIAS
AEROPORTOS
R$ 204 bi
É o montante que o Programa de Investimento em Logísitca (PIL) deve movimentar com investimentos em rodovias, ferrovias, portos e aeroportos
Boa Vista
Macapá
Belém
Manaus
São Luís
Fortaleza
Teresina
Natal
Recife
Maceió
Aracaju
Salvador
Porto Velho
Rio Branco
Palmas
Cuiabá
Brasília
Goiânia
Belo Horizonte
Vitória
Campo Grande
Rio de Janeiro
São Paulo
Curitiba
Florianópolis
Porto Alegre
RR
AP
AM
PA
MA
CE
RN
PB
PE
AL
SE
PI
AC
RO
TO
MT
BA
GO
MS
MG
ES
SP
RJ
PR
SC
RS
Investimento em Rodovias
TOTAL DE R$ 42 bilhões
R$ 23,5 bilhões em 5 anos
R$ 18,5 bilhões em 20 anos
1 BR-262 (ES/MG)*
2 BR-050 (GO/MG)
3 BR-101 (BA)
EM LICITAÇÃO
4 BR-040 (MG/GO/DF)
5 BR-060/153/262
6 BR-116 (MG)
7 BR-153 (GO/TO) E TO-080
8 BR-163/267/262 (MS)
9 BR-163 (MT)
AGUARDANDO LICITAÇÃO
*Não houve interessados
INVESTIMENTO EM RODOVIAS
7,5 mil km
CONCESSÃO
Investimento em ferrovias
TOTAL DE R$ 91 bilhões
R$ 56 bilhões em 5 anos
R$ 35 bilhões em 25 anos
FERROANEL SÃO PAULO TRAMOS NORTE E SUL
1 Ferroanel SP - Tramo Norte
2 Ferroanel SP - Tramo Sul
3 Acesso ao Porto de Santos
4 Lucas do Rio Verde - Uruaçu
5 Uruaçu - Corinto - Campos
6 Rio de Janeiro - Campos - Vitória
7 Belo Horizonte - Salvador
8 Salvador - Recife
9 Estrela d'Oeste - Panorama - Maracaju
10 Maracaju - Mafra
11 São Paulo - Mafra - Rio Grande
12 Açailândia - Vila do Conde
INVESTIMENTO EM FERROVIAS
10 mil km
CONCESSÃO
Investimento em aeroportos
R$ 8,7 bilhões
É o investimento previsto para Galeão e Confins
R$ 7,3 bilhões
É o investimento previsto para 270 aeroportos regionais
Investimento em portos
R$ 54,6 bilhões
É o total de investimento previsto para os próximos 5 anos. O objetivo é melhorar as condições de infraestrutura dos portos em parceria com a iniciativa privada e aumentar a sinergia com outros modais
FONTES: MINISTÉRIO DOS TRANSPORTES E PROGRAMA DE INVESTIMENTO EM LOGÍSTICA
INFOGRÁFICO/ESTADÃO

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