

Overcoming Brazil's Transport and Logistic Gap

Increasing investments and remedying inefficiencies



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I. Key Sectoral Challenges

Investment in transport infrastructure in Brazil is low and inefficient

- Brazil does not invest enough in transport infrastructure: only 0.6% of GDP in 2017, down from 1.5% during the 2000s and below China’s 7%, India’s 4% and 3% in Russia and Chile.
- Public spending in transport infrastructure is not efficient either.
 - Spending is artificially inflated by high constructions costs, complex labor regulations and high taxes, and is designed to market niches of local construction companies.
- As a result of this inefficiency, there has been a limited expansion of road and rail infrastructure.

Figure 1: Road Density by Squared Area

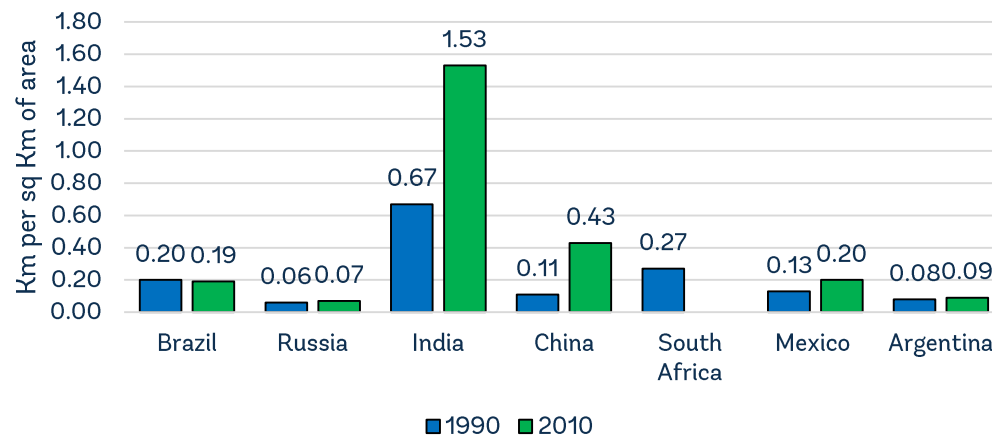
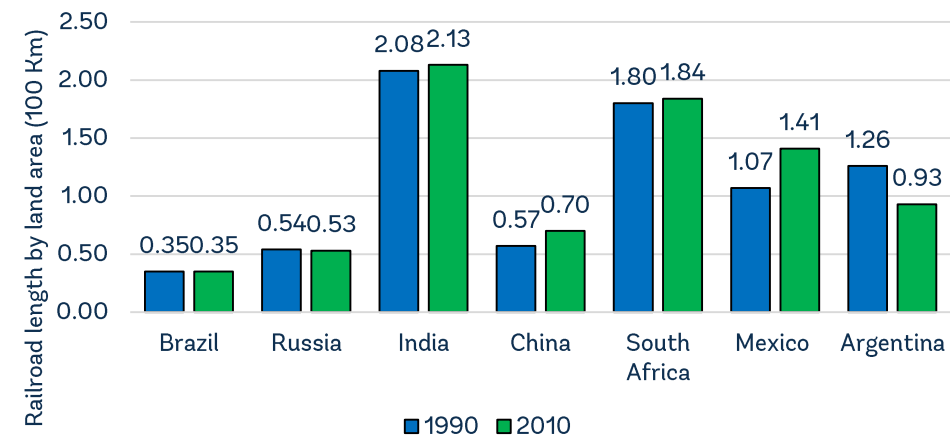


Figure 2: Railroad Infrastructure



I. Key Sectoral Challenges

Overreliance on road transportation and high logistics costs limit efficiency

- **Overdependence on road transportation costs Brazil 0.7% of GDP annually.**
 - In Brazil, about 2/3 of all cargo is transported on trucks, compared to 21% in China and 39% in India. This modal mix skewed towards roads limits transport and logistics efficiency:
 - Brazil could save 0.7% of GDP annually by shifting freight from road to rail and waterborne transport, through lower costs,
- **Railroad networks are structurally fragmented, serving regional monopolies with limited third party access. Overreliance on roads could be decreased with the expansion and integration of railroad networks.**
- **Waterborne transport, especially domestic short-sea shipping for transport freight, is well below its potential—particularly for a country with 70% of its population within 200 km from the shore line.**
- **In addition, a modal mix skewed towards overreliance of roads creates significant environmental and road safety costs.**
 - A In 2015, around 45,000 people died in car crashes—equivalent to one Boeing 747 crashing weekly.
 - Also, there was 107.7 Mt of CO₂ emitted from transport.

Overreliance on road transportation and high logistics costs limit efficiency

- **The costs associated with the skewed modal mix are exacerbated by the inefficiency of the trucking sector in Brazil:**
 - Trucking services are provided by a fleet of 2.3 million vehicles, about half of which (55%) is owned by established transport companies and the other half (45%) by individual self-employed haulers:
 - While half the sector is concentrated and relatively efficient, the other half is atomized, poorly organized, and much less efficient (no economies of scale associated with large loads).
 - Individual haulers tend to own older and smaller vehicles, due to financial constraints to buy and maintain larger and newer trucks. Average age of vehicles of owner-operators is 19 years, of cooperative vehicles 14 years, while for vehicles of carrier companies it is only 9 years.
 - Old fleets and low maintenance also result in higher operating costs because of higher fuel consumption and frequent breakdowns.
 - **Higher operating costs of the Brazilian trucking sector compared to peers are mostly driven by high fuel consumption, the old age of the fleet, and low maintenance.**
 - **Not accounting for maintenance and depreciation, fuel expenses represent the largest share of operating costs (>40%). For comparison, in the US fuel amounts to about 36% of total operating costs, and between 20-30% in Europe. However it is much higher in China at 60%.**

Overreliance on road transportation and high logistics costs limit efficiency

- **Poor road conditions are the other important driver of high operating costs in Brazil, costing a further 0.7% of GDP.**
 - Only 12% of roads are paved and only 40% of the highway network is in good condition. It is estimated that a further 0.7% of GDP is lost due to bad road quality, under-engineering of the network and congested roads, which result in waste of time and higher vehicle operating cost.
- **The overreliance on road transportation combined with the inefficiencies in the trucking industry and the poor quality of the roads network result in high transport and logistics costs in Brazil, hampering the country's competitiveness.**
 - By solving operational inefficiencies in the federal highway system and allocative inefficiencies in the transport modal-mix matrix, Brazil could potentially save 1.4% of GDP which is 2.2. times the current annual spending in the transport sector.
 - Logistics costs about 12% of Brazil's GDP, compared to 8-10% in the U.S. or OECD countries.
 - In 2016, the Logistics Performance Index, a benchmarking tool that assists countries in analyzing their performance on trade logistics, placed Brazil 55th out of 160th, which is below economies like China, India or South Africa.

I. Key Sectoral Challenges

Public governance in the transport sector is institutionally fragmented

- Institutional fragmentation creates overlaps, ambiguities, and competing responsibilities across bodies in the sector: This reduces the potential benefits that could be received from transport infrastructure investment and policies.
 - Only at the federal level, there are five ministries (Transport, Partnerships and investment, Cities, Justice, and Health) and five agencies that have a certain degree of autonomy (DNIT, ANTT, ANTAQ, ANAC, VALEC) directly involved in transport governance.
 - There is also an increasing role of the TCU (external audit chamber) and MPF (public prosecutor's office) in transport governance.
- The results of institutional fragmentation are: (i) Deficient planning; (ii) Regulatory uncertainties; and (iii) Inability to fully address critical cross-sectoral policies.

I. Key Sectoral Challenges

Despite improvements, planning is still insufficient

- **Long-term transport and logistics planning is deficient.**
 - Brazil has had many operational programs in the last decade, such as PAC, PAC2, and PIL.
 - Sector plans have been mostly aspirational and there is little continuity across governments.
 - The quality of projects included in sector plans is often poor, or insufficiently appraised, creating risks of delays, cost-overruns and poor viability during implementation.
- **Transport and logistics planning lacks a multimodal champion.**
 - There is no leading coordination body that unifies the efforts of the transport entities — the inter-ministerial coordination council (CONIT) has rarely met.
 - EPL has been empowered recently to improve sector planning and project preparation, but requires increased capacity.
 - End-users, such as the ministries responsible for commerce and industry as well as agriculture, are little involved in the transport and logistics planning process.
- **There is a lack of a cross-jurisdictional approach.**
 - Since each of the 3 levels of government is responsible for planning within their own jurisdiction, planning is not efficiently integrated, and often there are conflicting investments or policies.
 - Recent MoU between EPL and a few states is a positive step forward.

I. Key Sectoral Challenges

Regulatory uncertainties increase inefficiency

- **Regulatory powers are fragmented among agencies that are not actually independent and resilient.**
 - Fragmentation creates confusion as to responsibilities, undermining the independence and effectiveness of the regulatory bodies.
 - Additionally, regulatory agencies are not self-funded and have limited annual budgets.
- **Regulatory inconsistencies and uncertainties increase risk perceptions, undermining the economic viability of many projects and discouraging risk-taking by private investors.**
 - For example, access pricing in regional railroad monopolies remains unresolved at significant economic costs.
- **In some cases, there is over-regulation, pressuring agencies to implement economic measures that are unnecessary and inefficient to the delivery of transport services.**
 - E.g. recent adoption of minimum prices (“tabela de frete”) for transport services.
- **Regulatory uncertainty is increased through the growing involvement of control institutions in the upstream concession and licensing process**
 - While generally welcome, role of TCU and MPF has in some cases created excessive risk aversion, and caused substantial delays – shift away from compliance to value for money is slow

I. Key Sectoral Challenges

Critical cross-sectoral policies are ill-addressed

- **There is no overall policy on road safety.**
 - There are many individual actions undertaken by line ministries and agencies, but no overall vision.
 - Road safety remains poorly funded as a result.
- **There is a lack of a result-driven strategy to decarbonize the transport sector.**
 - There is not a clear roadmap, including monitoring indicators, to decarbonize the transport sector.
 - Instead, there are several unconnected initiatives. Some, like the REFROTA program that aimed to modernize bus fleets, need to be redesigned to achieve intended impact.
- **Water transport faces risk of discretionary interventions benefiting other water users.**
 - For example, the Tietê river was closed to navigation during two years because of drought, prioritizing power generation. There was no prior discussion with the other users of the waterway regarding the measures implemented .
 - Better coordination, and ideally more rigorous economic assessment of trade-offs is needed to lower risk for all water users.

II. Policy Recommendations

There are three main areas for reform to overcome the logistics gap

- Strengthening planning: institutionalization of the National Logistics plan.
- Improving regulatory frameworks, in particular in the rail sector and for multimodal operators; and
- Integrating transport institutions and improving efficiency, in particular strengthening the role of *Empresa de Planejamento e Logística* (EPL), revisiting the governance of transport's regulating agencies (ANTT, ANTAQ, ANAC), and instituting a Road Safety Agency.

II. Policy Recommendations

Strengthening planning

- **Institutionalizing the National Logistic Plan**
 - Make the National Logistics Plan a State plan, not a government plan. It should serve as the basis for investment decision.
- **Reinstating CONIT as a leading coordination body**
 - Set-up the EPL as its “brain” and include the Executive Secretary to support analytically the decision-making process;
 - Revise its governance and include end-users representatives, typically representatives of the Ministry of Development, Industry, and Commerce (MDIC), and the Ministry of Agriculture; and
 - Organize meetings twice a year to monitor the progress of the National Logistics Plan.
- **Creating corridor logistics observatories**
 - Create a platform for public and private discussion and coordination;
 - Monitor corridor performance; and
 - Propose investments and operational modality enhancements.
- **Strengthen the economic appraisal of transport infrastructure in corridors of development and make it part of the investment decision-making process.**

II. Policy Recommendations

Improving regulatory frameworks

- **Adopting strong regulatory measures for rail open-access**
 - Go beyond the ongoing *Contratos Operacionais Específicos* practice; and
 - Set-up mandatory open-access requirements in concession contracts, allowing access to other rail operators with reasonable prices and train-path quality.
- **Incentivizing the road transport industry professionalization**
 - Consolidate self-employed haulers into cooperatives for further efficiency; and
 - Partner with capacity building entities linked to the major professional organizations.
 - Avoid interventions that distort and delay market consolidation.
- **Reviewing the multimodal transport operator regulation**
 - Use new technologies, especially to improve tracking and better match supply and demand; and
 - Fix several well-known regulations and bureaucratic hurdles that hampers transport multimodality.
- **Adapting the regulatory framework for domestic short-sea shipping in order to balance the transport matrix, provide more opportunities for domestic short-sea shipping for freight transport.**
 - There are several well-known regulations and bureaucratic hurdles already identified, including various non-transport entities, particularly the Receita Federal.

II. Policy Recommendations

Integrating transport institutions and improving efficiency

- Consolidating the *Empresa de Planejamento e Logística* within the Ministry of Transport, Ports, and Civil Aviation and assign it as the federal entity responsible for the multimodal, long-term planning and coordination of all transport sub-sectors.
 - Aim for it to become the national center of excellence in long-term planning, project structuring, and transport policy analytics.
- Increasing transparency and confidence, and reducing risk perception that hinders participation of the private sector in the transport sector. This could be achieved by reviewing the governance of transportation regulatory agencies (ANTT, ANAC, and ANTAQ) to:
 - Reduce political interference;
 - Identify independent funding mechanisms, and
 - Define clear responsibilities among regulatory agencies and ministries.
- Addressing road safety issues by creating an interministerial committee or a federal road safety agency for the development of road safety policies, coordination between stakeholders at national and subnational levels, and monitoring of outcomes.
 - This committee would be a “Champion” for road safety, following the Brasilia Declaration of November 2015.

- **The transport and logistics sector faces critical challenges:**
 - Public spending as a share of GDP in infrastructure projects is low—about 0.6% of GDP.
 - Brazil’s transport infrastructure investment is not efficient due to high construction costs.
 - Overreliance on road transport leads to logistics inefficiencies, with logistics costs amounting to 12% of Brazil’s GDP.
 - Public governance in the transport sector is institutionally fragmented. There are no less than 10 entities involved with transportation at the federal level.
 - Regulatory uncertainties severely hinder the transport sector delivery, both on infrastructure and services.
 - Critical cross-sectoral policies are ill-addressed, in particular regarding road safety, decarbonization and waterborne transport.
- **Key policy recommendations to overcome Brazil’s logistics gap include:**
 - Strengthening planning: institutionalization of the National Logistics plan,
 - Improving regulatory frameworks, in particular in the rail sector and for multimodal operators; and
 - Integrating transport institutions and improving efficiency, in particular strengthening the role of EPL, revisiting the governance of transport’s regulating agencies (ANTT, ANTAQ, ANAC), and instituting a Road Safety Agency..



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