REGULATORY REFORM IN THE BRAZILIAN RAILWAY SECTOR AND ITS POTENTIAL EFFECTS

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1. Introduction

Brazil is a very broad country with a history of lack of investments in infrastructure. The railroad system is no exception to this scenario.

After decades of emphasis in road transportation, in the 90s Brazil privatized the existing railway system under concession agreements that covered both infrastructure and services. The privatization process was successful in decreasing accident rates and improving freight capacity, but still there was no emphasis in the expansion of the system.

In 2013 the federal government launched a National Logistics Program, which, among other goals, aims at fostering investments to expand the network and promote intramodal competition. The basic changes involve (i) unbundling infrastructure and service provision; (ii) assigning to private parties the duties of construction and operation of new railways under concession agreements/public-private partnerships; (iii) introducing the figure of Independent Railway Operators, which shall compete for freight clients; and (iv) having the federal government, by means of a State-owned company, to purchase all transportation capacity from infrastructure concessionaires and reselling it in the market under public auctions.
This new framework has posed considerable legal and economics challenges, which, coupled with macroeconomic instability has prevented the project from being implemented in the last two years. In this paper we address some of these challenges.

For this purpose, we initially provide an overview of the railway sector under a comparative perspective. It then presents the available regulatory tools and arrangements to promote intramodal competition. Subsequently it outlines the privatization process and an analysis of the institutional model adopted in Brazil, and then shifts to assess the current goal of fostering intramodal competition by means of unbundling the system according to the National Logistics Integration Plan (PIL). At the end we discuss (i) whether it is likely that the new regulatory framework will succeed in its goal of enhancing investments to build up new railways and lower freight tariffs to customers; and (ii) the incentives of each group of stakeholders (infrastructure concessionaire; independent operators; clients and the government) in this new framework.

2. Overview of the sector and its role for country’s development

Railways are worldwide known as an efficient system to transport huge volumes of freight through long distances when compared to the road system. They are also recognized as bringing energy efficiency and environmental benefits to transportation (PASTORI, 2010, pp. 321 – 352). Yet, although Brazil is a vast country that trades huge volumes of commodities, railroads still play a small role in total freight transportation.

Even though an expressive part of the Brazilian production comes from the industrial sector, the national GDP has a great dependence on primary commodities (mineral and agricultural) and exportation. The table below presents the main products exported in 2014, which jointly represent 88.2% from total exportations:

<table>
<thead>
<tr>
<th>Products</th>
<th>Value</th>
<th>Δ % (2014/13)</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybeans and prods</td>
<td>31,408</td>
<td>1.4</td>
<td>14.0</td>
</tr>
<tr>
<td>Ores</td>
<td>28,402</td>
<td>-19.0</td>
<td>12.6</td>
</tr>
<tr>
<td>Oil and fuel</td>
<td>25,175</td>
<td>12.4</td>
<td>11.2</td>
</tr>
<tr>
<td>Transport material</td>
<td>20,374</td>
<td>-35.5</td>
<td>9.1</td>
</tr>
<tr>
<td>Meats</td>
<td>16,891</td>
<td>3.8</td>
<td>7.5</td>
</tr>
<tr>
<td>Chemicals</td>
<td>15,051</td>
<td>2.8</td>
<td>6.7</td>
</tr>
<tr>
<td>Metallurgic products</td>
<td>14,423</td>
<td>8.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Sugar &amp; ethanol</td>
<td>10,357</td>
<td>-24.5</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Among the ten major Brazilian exportation companies in 2014, most of them are commodities producers:

<table>
<thead>
<tr>
<th>Company</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vale S.A.</td>
<td>Mining</td>
</tr>
<tr>
<td>Petrobras</td>
<td>Oil &amp; Gas</td>
</tr>
<tr>
<td>Bunge</td>
<td>Grain</td>
</tr>
<tr>
<td>JBS</td>
<td>Meat</td>
</tr>
<tr>
<td>BRF</td>
<td>Processed Food</td>
</tr>
<tr>
<td>Cargill</td>
<td>Grain</td>
</tr>
<tr>
<td>Embraer</td>
<td>Aircraft</td>
</tr>
<tr>
<td>Louis Dreyfus</td>
<td>Agrobusiness</td>
</tr>
<tr>
<td>ADM do Brasil</td>
<td>Soy, Cocoa, Bottled Oils</td>
</tr>
<tr>
<td>Samarco</td>
<td>Mining</td>
</tr>
</tbody>
</table>

Source: MDIC, Brazilian Trade Balance Consolidated Data, 2014

China is the main destination of Brazilian exportations, with a share of 18%, followed by the United States (12%), Argentina (6.3%), Netherlands (5.8%), Japan (3.0%), Germany (2.9%), Chile (2.2%), India (2.1%), Venezuela (2.1%), and Italy (1.8%) (MDIC, 2014).

The data above evidence the Brazilian dependence on commodities’ exportation for the sustainability of the trade balance. Most of these commodities are produced in the inner areas of the country, so cargo needs to be transported through long distances in order to reach the ports located in the Atlantic Cost. Hence, freight services and infrastructure supply are important variables when it comes to assessing the country’s competitiveness in a global economy. And Brazil is not well positioned.

In 2014, the World Economic Forum presented the Global Competitiveness Report 2014 – 2015, where Brazil stands in the 57th position among the 144 countries considered. It was placed behind its BRICs’ partners, such as China, Russia and South Africa, only ahead of India (placed 71th) (WORLD ECONOMIC FORUM, 2014).
Moreover, Brazil fell one position in comparison with the Report of 2012. The main alleged reason was the difficulty to overcome the persistent weakness of transportation infrastructure, as well as a perceptible deterioration of functions performed by public institutions. Other pointed aspects were the weak macroeconomic performance in that year and the poor educational system, which obstacles the increase of specialized labor supply (WORLD ECONOMIC FORUM, 2014).

The World Bank also mentioned the decrease of Brazilian competitiveness in the Logistics Performance Index – LPI 2014, where Brazil stands on the 65th position among the 160 countries analyzed (WORLD BANK, 2014).¹ In 2012, Brazil was at the 45th position in a ranking of 155 countries (WORLD BANK, 2012), which evidences a deterioration of the sector in the country.

One of the aspects considered in the LPI is the quality of the infrastructure available for transportation and commerce. Available data show that when it comes to infrastructure in general, the decrease of Brazil was even worse: whereas in 2012 the country was in the 46th position, it dropped to the 54th in 2014. In addition, a Report provided in the end of 2013 by McKinsey & Company shows that the Brazilian general infrastructure stock is around 50% of the GDP, being 71% in the global average (MCKINSEY, 2013).

This data provides a picture of how important the debate over transportation infrastructure investment and regulation is for the Brazilian economic development. This is especially relevant regarding railroads due to the characteristics of exportation products and the size of the territory. However, to date the Brazilian railroad system is quite poor in terms of the length of the network and of transportation capacity. Especially in the second half of the last century, transportation public policies emphasized road transportation. Given that the economic literature provides that commodities are usually more efficiently transported by rails, Brazil nowadays faces a major challenge due to its unbalanced transportation infrastructure matrix.

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¹ The ten countries with major performance, according to the LPI 2014, are: Germany, Netherlands, Belgium, England, Singapore, Sweden, Norway, Luxemburg, United States and Japan (WORLD BANK, 2014).
According to data provided by the National Agency of Land Transportation (ANTT), Brazil currently has a rail network of 33,342 km, which is very poor when compared to the area of the country, which is of 8,515,767,049 km² (IBGE, 2013). This leads to Brazil having a rail network density of only 3.9 m per km². It implies that Brazil has a lower rail network density than U.S., India, Argentina, Turkey, Mexico, China, and Russia, being all these countries comparable to Brazil in terms of territory. According to STATISTA (2015), in 2009 the twenty countries with the highest rail network density, including the European Union, were the following: (i) Germany (117.35 m per km²); (ii) Poland (71.36 m per km²); (iii) Japan, (69.95 m per km²); (iv) United Kingdom (67.54 m per km²); (v) Italy (65.47 m per km²); (vi) European Union (53.1 m per km²); (vii) France (45.4 m per km²); (viii) Ukraine (35.88 m per km²); (ix) Spain (30.25 m per km²); (x) Sweden (25.83 m per km²); (xi) United States (23.04 m per km²); (xii) India (23.04 m per km²); (xiii) South Africa (17.12 m per km²); (xiv) Argentina (11.3 m per km²); (xv) Turkey (11.1 m per km²); (xvi) Pakistan (9.79 m per km²); (xvii) Mexico (8.92 m per km²); (xviii) China (8.11 m per km²); (xix) Kazakhstan (5.53 m per km²); and (xx) Russia (5.1 m per km²). When we compare OECD data regarding investments in rail infrastructure systems by similar countries (in terms of size) to the
Brazilian figures disclosed by the Ministry of Transportation, we observe that the latter has invested quite little:

**Graphic 2 - Investments in rail infrastructure in US$ (billion)**

![Graph showing investments in rail infrastructure](image)

**Sources:** OECD Index\(^2\); (*) Brazilian Ministry of Transportation (RS)

\(^2\) Conversion by the current exchange rate on the last day of each reporting year, according to data provided by the Brazilian Central Bank\(^3\)

Compared with other countries with close territory dimensions, Brazil has also a poor performance when it comes to rail productivity.

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\(^2\) Available at: [http://stats.oecd.org/Index.aspx?&datasetcode=ITF_INV-MTN_DATA](http://stats.oecd.org/Index.aspx?&datasetcode=ITF_INV-MTN_DATA)

\(^3\) Available at: [http://www4.bcb.gov.br/pec/conversao/conversao.asp](http://www4.bcb.gov.br/pec/conversao/conversao.asp)
This brief overview allows us to have a picture of Brazilian railroads’ current situation and provides a sense of the great challenge it poses to Brazilian competitiveness and economic growth. The regulatory reform proposed by the Federal Government in 2013 seeks to face this challenge by means of introducing intramodal competition in the Brazilian railroad system, as a means.

3. Possibility of introducing intramodal competition in railroads

The rail system is a natural monopoly organized in a material and continual network. Sectors so structured are characterized by high fixed and sunk costs with large economies of scale and scope as well as net externalities. Such circumstances would, in principle, lead to a situation in which no competition would be experienced, i.e., rail transportation would be a total vertically integrated market.

However, regulatory measures such as unbundling infrastructure and services may allow for the introduction of competition in freight.\(^5\) There are usually three regulatory mechanisms associated with different degrees of intramodal competition:

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4 Available at: http://data.worldbank.org/indicator/IS.RRS.GOOG.MD.K6/countries/all?display=graph

5 We are focusing on freight services because, unlike US and Europe, in Brazil passengers’ rail transportation is very residual.
(i) Share of infrastructure among vertically-integrated concessionaires, which is subdivided in two regulatory arrangements: the mutual traffic and the open access; and

(ii) Separation of infrastructure operation and maintenance from service provision; therefore, fully unbundling the sector and entitling open access to transportation providers.

Sharing an essential facility means that those who do not hold it but comply with some technical requirements and pay a certain amount shall have the right to access the infrastructure. Based upon the idea that the rail is an essential facility, everyone should have the right to access it under reasonable terms. This actually led to the creation of the essential facilities doctrine, which advocates that it would be abuse of economic power, and therefore an antitrust violation, the act of the owner of an essential facility to deny access to third parties willing to comply with technical rules and to pay reasonable fee (or, at least, compensate costs). According to GAUTIER and MITRA (2008), “the term essential facility is used to describe a facility or infrastructure which is essential for reaching customers and/or enabling competitors to carry on their business and it is a facility that cannot be cheaply duplicated.” (p. 662).

Since the privatization program in the 90s, Brazilian sectorial regulation adopted the mutual traffic as the major mechanism to allow third-parties’ access to the railroads. Open access applies only as an exception.

Mutual traffic is characterized by the combined activity between distinct concessionaires. It is verified when one of them is interested in crossing the borders of its concession. In Brazil, the mutual traffic is performed through exchange of freight transportation between concessionaires, compensating mutual credits and debts originated from the operational resources share (CARVALHO DE OLIVEIRA, 2005, p. 228). It is, then, a “shared operation”.

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6 “Essential facilities doctrines vary significantly among legal regimes. They may vary according to the types of "facilities," ownership and market structures to which they may apply, and according to who makes the determination that a facility is "essential." (...) The leading U.S. essential facilities case is MCI Communications Corp. v. AT&T. (708 F.2d 1081, 1132 (7th Cir.), cert. denied, 464 U.S. 891 (1983)) The Seventh Circuit said that there were four elements necessary to establish liability under the essential facilities doctrine: 1) control of the essential facility by a monopolist; 2) a competitor's inability practically or reasonably to duplicate the essential facility; 3) the denial of the use of the facility to a competitor; 4) the feasibility of providing the facility. (708 F.2d at 1132-33)” (OECD, 1996, p. 7 – 8).
The open access right appears as an alternative to mutual traffic. GAUTIER and MITRA (2008) explain that “open access means that any competitor that meets some pre-specified requirements (for example, technical, safety or financial fitness requirements) can get access of the essential input on a non-discriminatory basis” (p. 663). The operation of the activity, in this case, is under the competitor’s control, which is the main difference between open access and mutual traffic.

However, both arrangements seem to have not been sufficient to provide intramodal competition in the Brazilian railway network. To overcome such difficulty, sectorial regulation may also promote some competition through unbundling the sector, meaning that infrastructure operation and maintenance shall be provided by a different party than the freight services providers. The new Brazilian framework is taking this path, but with some important peculiarities that pose additional challenges to the process.

Theoretically, unbundling schemes may be implemented under three different arrangements:

(i) **Accounting separation**: Adopting different accounts to different activities within one same company, in order to secure transparency, especially aiming at preventing cross-subsidies;

(ii) **Legal entity separation**: Different segments of the production chain cannot be provided by the same legal entity; and

(iii) **Corporate structure disintegration**: Prohibits an economic group (either through one or different companies) to perform different economic activities in the same sector.

4. **The two Brazilian Patterns of Railroads Privatization and Sectorial Regulation**

In Brazil, the State-investor model that had driven the expansion of public utility industries came to an end in the 80s as a consequence of a series of events, such as (i) the oil price chocks in the 70s and the 1982 Mexican default; (ii) the deterioration of economic situation of state-owned companies that were too leveraged to continue investing; (iii) the undervaluation of tariffs for inflation control purposes; as well as new priorities for public
spending established by the Federal Constitution of 1988 (WORLD BANK, 2007). Privatization was also strongly supported by the Washington Consensus\textsuperscript{7} in a context of collapse of the Latin America development model based on import substitution, strong presence of the State in the economy and fiscal debt.

To overcome this situation, the government should increase its incomes or decrease public expenditure. The idea defended by the Washington Consensus was the second one. In his paper, WILLIAMSON (1990) presented the three major expenditure categories on which this reasoning would apply: subsidies, education and health, and public investment. Indiscriminate public subsidies should be reduced, especially those to cover public enterprises deficit.

WILLIAMSON (1990) also observed that the main rationale for privatization was the belief that private industry would manage more efficiently than public enterprises, because in the first model the incentives to have a good performance affect more directly the manager. The author then elucidates that “this belief in the superior efficiency of the private sector has long been an article of faith in Washington (...) The IMF and the World Bank have duly encouraged privatization in Latin America and elsewhere since.”

Brazil was not an exception of these efforts. In the late 1990s the country experienced a privatization program under which the existing railways were divided in six different geographic areas, plus the railway of São Paulo state. The exploitation of both infrastructure and services were transferred to private companies under concession contracts of 30 years preceded of public procurement processes. Actually the winner of each public procurement process would sign two contracts; a public service concession agreement and an asset-lease agreement to exploit the infrastructure.

The process of privatization began in 1992, with the inclusion of the Federal Railway Network (RFFSA) in the Brazil’s National Privatization Program (PND), but the first concession was transferred to the private sector only in 1996 and the last one in 1998.

\textsuperscript{7} In 1990, the economist John Williamson edited a book named \textit{Latin American Adjustment: how much has happened?}. In its second chapter \textit{What Washington means by public reform}, Williamson summarized the main ideas supported by the Washington Consensus for the Latin American countries, which were: (i) fiscal discipline; (ii) a redirection of public expenditure priorities toward fields offering both high economic returns and the potential to improve income distribution, such as primary health care, primary education, and infrastructure; (iii) tax reform (to lower marginal rates and broaden the tax base); (iv) interest rate liberalization; (v) a competitive exchange rate; (vi) trade liberalization; (vii) liberalization of FDI inflows; (viii) privatization; (ix) deregulation (in the sense of abolishing barriers to entry and exit markets); and (x) secure property rights. (WILLIAMSON, 1990)
Specifically for the sector restructuration, the World Bank provided Brazil a loan in the amount of US$ 350 million (exchange rate effective November 20, 2002). In the Report n. 25241, it was set that the original goal of the privatization project was the reduction of freight transportation costs in the main Brazilian corridors, by privatization of federal rails, which included: (i) improvement of railroads performance, giving the operation to the private initiative and restructuring the estate owned enterprise finances; (ii) increase in railways’ productivity; and (iii) promotion of competition through a regulatory reform in order to reach a major presence of the modal in the Brazilian cargo transportation matrix, as well as reducing tariffs (WORLD BANK, 2003).

According to VENCOVSKY (2005), all the consortiums that owned concession under the public procurement processes launched by the federal government experienced the presence of a commodity (agricultural or mineral) producer. This means that the Brazilian railroads were privatized mainly to their clients. The auctions were won by those that presented the highest amounts to the government, not the lowest tariffs.

Nevertheless, after almost two decades there is great evidence that privatization succeeded in increasing productivity and significantly reducing accidents, as it is shown in the graphics below.

**Graphic 4 - Brazilian Railroad Productivity**

![Graphic 4 - Brazilian Railroad Productivity](source)

**Source:** National Terrestrial Transportation Agency; TF National Association
Nonetheless, there was little increase in the network in terms of building new railroads as well as in intramodal competition, due to the vertically integrated model adopted in the 1990s and the adoption of mutual traffic as the general rule (instead of open access). According to CASTRO (2000), railroads are more profitable operating long distances freight, especially above 1,000km; at this point rail costs are half of highways. However, the Brazilian market share over 800km is nearly nonexistent. For a comparative perspective, see the figure below.
5. Competition in the railroad sector

Introducing competition in the railroad sector is not easy due to the natural monopoly restriction regarding the infrastructure. When analyzing cases involving railroads, most of the time the Brazilian competition authority consider each railway to be a different geographic market that can hardly be contested. Only in some very particular circumstances has the administrative court admitted that the dominant position held by a railway could be contested by other railway under a logistic rail-port exportation corridor, or by road freight services (Sampaio, 2012).

Sector regulation, on its side, states that mutual traffic is the general rule, not open access. According to the Rail Network Declaration of 2015 available by the National Agency of Land Transportation (ANTT), which presents the operational data of 2013, just three out of the ten railroad concessionaires increased the shares of other railroads locomotives circulation within their rails when compared to the preceding year – Malha Paulista, Malha Sul, and Ferrovias Centro Atlântica). One maintained the rate (Estrada de Ferro Carajás). Two of them decreased their rates (Ferrovia Norte e Sul e Vitória Minas). Four have not even registered circulation of other railroads locomotives (Ferroeste, Ferrovia Tereza Cristina, Transnordestina, and MRS).
The government then felt it was time for structural changes in the sector, which we detail in the next section.

6. The reform currently under discussion

In 2013, the federal government launched the National Logistics Integration Plan (PIL), aiming at: (i) The redemption of railroads as a logistic alternative; (ii) The end of monopoly in rail service provision; and (iii) tariffs’ reduction. The Plan was included in the Brazil's Growth Acceleration Program (PAC).

The structural and regulatory reform is an attempt to reverse the low standards of infrastructure investment and to add more competitiveness within the sector by means of establishing open access as a general rule. It also aims at rail network expansion, which differentiates this project from the privatization process experienced in the 90s, where the main proposal was to modernize the already existing network.

With regard to railroad regulation, the PIL suggests the inauguration of a new concession model, which purpose is the segregation of the activities within the sector, splitting investment in infrastructure operation and maintenance from service provision. The government is supposed to launch public bids for the construction, operation and maintenance of the rails only, service provision being excluded. The whole capacity of the rail will be purchased by VALEC, a federal State-owned company.

Once a new railroad has been built, VALEC shall annually purchase its entire operational capacity and undergo public auctions to sell such capacity. This is how the open access is supposed to be introduced. ANTT shall then authorize the functioning of Independent Rail Operators (OFIs), who shall transport either its own goods or thir-parties’ freight. According to Technical Note n. 11/2013 of ANTT, which instructed a process of stakeholder’s consultation to draft the OFIs’ Regulation, the new regulatory framework shall function as follows:

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The general goals to the country’s logistics to be achieved through the PIL are (i) to reestablish the capacity of transportation system integrated planning; (ii) to integrate railroads, waterways, ports and airports; and (iii) to articulate the system with value chains.
7. Institutional Actors and their Roles in the New Arrangement

Brazil has no general law on railroad regulation but rather only a Presidential Decree (1.832/1996), the concession contracts and, after 2001, the federal statute the provides for ANTT legal attributions. Railways are currently regulated by ANTT, an independent administrative body incorporated in 2001, hence after the privatization process had taken place. Previously, regulatory functions used to be performed by the Ministry of Transportation.

However, ANTT is not the only legal entity with legal attributions over rail infrastructure. There are two State-owned companies that only participate in the process: EPL and VALEC.

EPL is the Logistics Planning Enterprise, a federal State-owned company incorporated in 2011 (Statute n. 12.404/2011). Its corporate purpose is logistics planning. In addition to the efforts regarding the high-speed rail project currently under discussion to connect Rio de Janeiro and São Paulo (the two major cities of the country), EPL shall also prepare projects, perform studies and undergo researches to subsidize the federal logistics planning in Brazil.

As previously mentioned, VALEC is also a federal State-owned company. It was incorporated in 1972. During the 1990s there were efforts towards its privatization, which, however, did not take place. In 2008, the company was restructured and excluded from the National Privatization Program in 2010. In 2013 it suffered another restructure. According to its new by-laws, the main activities to be performed by VALEC shall be: (i) to plan, manage and execute programs for network capacity operation in railroads which she is the concessionaire; (ii) to purchase and sell through public auctions the open access rights in rails.
conceded to third parts; (iii) to develop studies and projects of rails infrastructure network expansion; and (iv) to promote the development and integration of the network, endorsing interoperability.

In accordance with the Federal Government explanation, VALEC will act as a network manager; it will acquire from infrastructure concessionaires their whole network capacity of transportation and will auction such capacity to: (i) customers willing to transport their own cargo; (ii) independent rail operators (the OFIs); and (iii) to already-existing rail transportation concessionaires (the ones privatized in the 1990s). The company shall then work as a “manager of marketplace”, in which providers and customers meet themselves through VALEC (PINHEIRO, 2014).

As previously mentioned, OFIs shall be legal entities authorized by ANTT to provide rail freight transportation services untied from infrastructure exploration. The OFI plays a central role in the achievement of an open access policy in the sector. In its Technical Note No. 11/2013, ANTT enlightened that the introduction of OFI in the rail system is expected to have a major role in the increase and universalization of the public service of rail freight transportation and to lower costs by means of fostering competition.

As a consequence of the unbundle scheme introduced during the regulatory reform, Brazil shall live with two different types of concessionaires: The vertical and the horizontal concessionaires. While the first is defined as a legal person that detains the right to explore both the rail infrastructure and the provision of rail freight transportation services, the second and new sort of concessionaire is defined as a legal person that detains the right to explore the rail infrastructure, being prevented from rendering services.

According to ANTT rules, OFIs shall be entitled to access any railroad, including those already existing and conceded to vertical concessionaires. Two different contracts shall be executed: one of Onerous Transfer of Rights of Using Traffic Capacity with VALEC, and another of Transport Operation to be signed with the infrastructure concessionaire where service will be provided.

In this new institutional configuration, ANTT shall be entrusted, among other activities, to: (i) regulate the service of rail freight transportation; (ii) take into account the rights of VALEC, concessionaires, operators and customers; (iii) encourage, support and monitor the infrastructure investments for expansion and modernization of the network; (iv) promote service offer increasing and costs reduction; (v) grant access equitably as well as system interoperability; and (vi) restrain any practice harmful to competition or that could constitute an abuse of economic power.
Concerning the vertical concessionaires, ANTT clarifies that VALEC shall have the attribution of purchasing the right of use of the spare capacity to subsequently operate an onerous transfer to the independent rail operators.

8. Tariffs

With regard to spare capacity, ANTT rules clarify that an amount shall be paid by VALEC to the vertical concessionaires regarding the transfer of the right of use. The price shall be determined throughout free negotiations between VALEC and the concessionaires. However, some rules shall be respected: (i) tariff shall be composed of just a portion regarding fixed costs associated to the spare capacity transfer; (ii) the portion correspondent to capital return shall be calculated as an aliquot of the payment basis plus taxes; (iii) the aliquot shall be established for each concessionaire separately by ANTT; and (iv) the payment basis shall be composed of the capital employed for the infrastructure provision,

The tariff for the traffic capacity shall be an amount to be paid by OFI’s to VALEC for the transfer of the right of capacity using. It shall be stablished by VALEC to the OFIs. The selling of this capacity shall occur through auctions promoted by VALEC.

In turn, the fruition tariff is an amount to be paid by the OFI to the concessionaires in return for railroad infrastructure use. It shall be calculated according to transportation operation contracts and concession contracts. It shall be levied by the concessionaires, the following general rules being respected: (i) tariff shall be composed solely of a part of the variable cost associated to infrastructure use; and (ii) it shall be stablished: 1. In the case of horizontal concessionaires, throughout the result of the bidding procedure, following the rules of revision and readjustment of their correspondent concession contracts; and 2. in the case of vertical concessionaires, throughout free negotiation between OFI’s and concessionaires.

Finally, the negotiation process for service provision between OFI’s and customers is free. However, ANTT shall pursue investigations for competition infraction and abuse of economic power whenever: (i) the price of transportation service provision charged exceeds the fees established for the vertical concessionaires when the service is rendered beginning in its own network; and (ii) the price of transportation service provision exceeds in 150% the sum of the fruition tariff and traffic capacity tariff when the service is initiated in an infrastructure conceded to a horizontal concessionaire.
9. Towards unbundling or not: some considerations

The new regulatory arrangement proposed by the Federal Government has led to some concerns.

The Federal Court of Accounts has expressed its opinion that the new regulatory model lacked legal basis. On preliminary discussions, the Court signalized that the biddings would not be approved without a legal basis for the intended changes in the sector. As a result, Decree No. 8.129/2013 was promulgated clarifying that VALEC is authorized to purchase the whole operational capacity of the new concessions, eliminating the risk of demand of the horizontal concessionaires.

There are some concerns about the fiscal budget related to the purchase of infrastructure capacities to be made by VALEC since the company is dependent of financial fundings from the National Treasury to develop its activities. PINHEIRO (2014) argues that since the resources to be transferred to VALEC must be approved in the Annual Budget Law there is a risk that in any of these years this budget is not ratified, whether by lack of authorization by the Ministry of Finance whether by a Court of Accounts decision. Brazil has experienced in recent past years situations of budget contingency, to which the Company would be possibly exposed.

Furthermore, in principle, concessions are characterized by the business risk being allocated to the private party of the contract; even so, in Public Private Partnerships this risk can be shared. In this sense, in case of high demand risk, theory indicates the possibility of contract provisions to mitigate risks for both parts as, for example, payments of indemnifications and supplementary instalments when proved necessary. In any case, it must not be forgotten that demand is a risk naturally affected to markets, with which the private initiative is usually accustomed to deal with.

Another uncertainty is regarding the concessions from the 90s. The OFI Regulation anticipated two concessionaires’ species: vertical and horizontal. It means that the modelling of the 90s concessions shall be respected at least for the remaining contractual term. However, up to this moment there has been no public discussion regarding what to expect in connection to these concessions once they expire.

The heterogeneity in models can originate new bottlenecks in transport operations involving the crossing through an unbundled network to a vertical integrated one. The selling of spare capacity may not be enough to avoid bottlenecks in direction to the Atlantic Cost, and some operational/regulatory issues may still remain.
As pointed by the Transport National Confederation (CNT), the simultaneous validity of both contracts would imply an institutional insecurity situation, given that such duplicity shall last for at least 15 years. Thus, the diversity of rules may inhibit private investments, hampering the bottlenecks corrections and requiring higher expenditures from the Federal Government (2013, pp. 23 – 24).

It deserves to be highlighted, also, the historic problem with the network heterogeneity concerning the gauges. If the new concessions standardize a different length, we may have the mutual traffic, in some lines, as a rule, thereby hindering the effects intended with the new model.

A special consideration shall also be made in relation to means adopted for the procedure of such a reform. In Brazil, the main adjustment in the rail sector has been realized by Presidential Decrees. There is a prominence of monocratic norms delivered by the Executive Power, missing a wide-ranging public debate over the subject, as occurs in legislative procedures and public audiences promoted by regulatory agencies.

It is important to discuss the real role of VALEC under the new concession model. Should the State-owned company take the role of being the horizontal concessionaire of the network to be constructed instead of purchaser of the capacity?

Additionally, it may be questioned if the purchases of all rail capacity will not act to disincentive infrastructure investment and improvement of services provision. Will this arrangement pose an obstacle to the positive effects expected with the insertion of competition in the sector? Further, it is also important to question if VALEC’s responsibility to secure regularity and continuity of the rail transportation service provision in those less profitable lines will be sustainable in the long run.

Incentives behind the role the State-owned company is likely to play in the new framework shall also be considered, especially taking into account issues of regulatory governance of the sector. Actually the federal regulatory agency (the National Terrestrial Transportation Agency – ANTT) is currently experiencing threats to its autonomy in terms of directors’ positions pending of designation by the President and the Senate; budgetary contingencies, etc.
Given the possibility of economies of scope in the vertical model, it is important to question whether the process wouldn’t benefit from Regulatory Impact Analysis before making the decision towards unbundling. It is also important to mention the lack of a sectorial bill, structuring the Brazilian Railroads, clarifying principles and, specially, conferring legal security.

Even so, a decision towards unbundling must consider a number of variables, which may also differ among different public utility sectors and countries stage of development. Shall the owner of the cargo be allowed to be an infrastructure concessionaire? Shall the owner of the cargo be entitled to become service freight operator? Shall the infrastructure concessionaire be allowed to render services as freight operator? Will the intended benefits of unbundling and introducing competition in the railway sector overcome the economies of scale of a vertical integrated structure and the transaction costs that are typical of unbundled public utility industries? Most of the answers to these questions can depend significantly on the size of the market, types of products being transported, risks involved in investing in the sector, safety of operations and, most of all, on the main goals envisaged by the sectoral public policy. There may also raise conflicts between short-term and long-term policy goals, such as developing the network and providing low tariffs.
Conclusion

Railways are an efficient system to transport huge volumes of cargo throughout long distances when compared with road transportation system. Even though Brazil has a vast territory extension and great dependence on commodities exportation, its rail system is quite poor in continuation and integration. It explains, then, how important is to have a public policy inducing investments and fostering competition in the sector.

We presented two regulatory arrangements able to introducing intramodal competition in railroads, being the regulatory tools to grant infrastructure sharing, and unbundle schemes. The understanding of this structures are important to comprehend the two Brazilian patterns of railroad privatization and sectorial regulation, the one in force, and the one proposed to be implemented through a regulatory reform.

The arrangement now in force is a project from the 90s, which came out of the Federal Railway Network privatization. It is based upon vertical integration between infrastructure maintenance, service provision, and also cargo. The Brazilian Railroads were mainly privatized to its clients.

In order to promote competition within the sector and rail network expansion and integration, the Brazilian Federal Government is scheduling a Regulatory Reform, involving unbundling between infrastructure construction and maintenance, and service provision. This new regulatory framework, however, predicts a strategic performance of VALEC, a State-owned company that shall act as a monopsonist in the network capacity purchase and a monopolist in the auction of this capacity for the rail services providers (OFI).

Considering the peculiarities of this proposition, we pose that some further considerations are necessary before making a decision towards unbundling or not the rail Brazilian sector. The role to be played by VALEC is one of the major points of concerns, involving regarding legal, fiscal, and operational aspects.

References


