Reforms and infrastructure regulation in Brazil: The experience of ANTT and ANTAQ

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Abstract

Increasing attention has been paid to the Brazilian regulatory experience. However, it can be argued that the large majority of this recent and incipient literature has focused on the cases of telecommunications (ANATEL), electricity (ANEEL), and oil and gas (ANP). This paper analyzes some issues concerning the Brazilian regulatory experience of railways and roads (ANTT) and harbors (ANTAQ), mainly due to their importance to the country’s international trade performance. The article scrutinizes the Brazilian regulatory experience as a whole and emphasizes the ANTT and ANTAQ’s trajectories, by stressing the following features: the original conception and the lack of coordination, the heritage of bureaucratic personnel, the political influence, the budget evolution, and the performance of regulated companies.

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Keywords: Regulation; Brazil; Infrastructure; Transport

1. Introduction

Investments in infrastructure sectors, such as telecommunications, electricity, transports, and oil and gas are usually considered as a crucial factor to foster the economic growth of a given country. In the last two decades many nations have promoted important changes in infrastructure sectors as a way to increase their efficiency. This process was started in the 1980s, comprising not only developed countries – United States and United Kingdom, for example – but also emerging nations, such as Latin America in the 1990s.

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Infrastructure reform was based on the privatization of state-owned enterprises (SOEs). Indeed, there was an acceleration of privately owned companies’ market share in telecommunications and electricity. According to Pinto and Fiani (2002, pp. 533–534) this reform consisted of six crucial features: (a) vertical disintegration (or unbundling) of the infrastructure activities; (b) the introduction of competition in different market segments; (c) the openness to access the network by other firms; (d) the establishment of new contractual forms; (e) privatization; and (f) the creation of new regulatory mechanisms and institutions.

Monopoly in infrastructure sectors needed significant changes in the regulatory framework. New institutional mechanisms were required in order to deal with a new kind of relationship between the state- and private-owned firms. This transition was not an easy task. In the case of developing countries, much attention should be paid to what can be termed the “privatization’s quality”, which is related to the transparency and to a reliable and stable institutional framework.

Concerning the Brazilian experience, the discussion about infrastructure sector reform could not be dissociated from the macroeconomic agenda, in which the fiscal crisis has been playing a prominent role. Generally speaking, Brazil paradoxically had a heavy tax burden on one hand, and a low capacity of governmental investments in infrastructure on the other hand. In this context, privatization was understood to be a solution to circumvent the fiscal fragility that has characterized the Brazilian State.

Brazil underwent an aggressive privatization program during the 1990s. The State sold initially its participation in large manufacturing companies (i.e., steel, fertilizer, and petrochemical firms) and, afterwards, in infrastructure activities (telecommunications and electricity, in particular). In the case of the latter, the public sector removed itself from the productive function – losing ownership control of the public utility firms – and began to act more intensively as a regulatory agent.

In most cases regulatory agencies were set up simultaneously or even after the privatization, which created additional problems for the embryonic regulatory framework. Moreover, to run a regulatory agency is a difficult job anywhere per se, because of the need to reconcile different goals, such as to increase the quality of services, to promote the universalization, to raise productivity, and to guarantee the transfer of part of the efficiency improvements to consumers.

Mueller and Pereira (2002) considered that in developing countries, including Brazil, the rupture of contracts’ conditions is common. Therefore, the aim of the regulatory agencies is the issue of credibility.

“Brazil has a history replete with examples of government opportunism; debt payment moratoriums, confiscation of savings, use of utility tariffs to control inflation, several price freezes, manipulation of economic variables, reneging of contracts, disrespect of intellectual property rights, arbitrary rule changes, etc. (. . .) Given this history, it is clear that the issue of credibility was a major concern of the Brazilian government as it launched one of the largest privatization programs in the world in the mid 1990s” (Mueller & Pereira, 2002, p. 3).

Regulatory reform in Brazil began in 1995 with the “Law of Concessions”, which affected mainly the telecommunications and electricity sectors. Immediately after the introduction of this Law, there was a reduction of restrictions which used to obstruct the participation of private (domestic and international) enterprises. This change was not enough to attract private investors, except for the telecommunication sector, due to the risks associated with the lack of a coherent regulatory framework.
Bearing this context in mind, this article tries to answer the following question: How can the newborn Brazilian regulatory system be evaluated, in general, and in the case of transport, in particular?

2. The Brazilian regulatory experience

2.1. A general overview

According to Pires and Goldstein (2001, p. 7), the international trend concerning the regulatory governance reform has been the creation of independent regulatory authorities. These entities play a prominent role in decisions related to tariffs, barriers to entry, quality of service, universalization, and interlink of networks. Their scope of responsibility is generally defined by laws. Looking at the Brazilian experience, Pinheiro (2003, p. 1) concludes that:

“Following international practice, infrastructure regulatory reform involved the separation of commercial, regulatory and policy activities. State-owned enterprises continued to be responsible for commercial activities, but were restructured, often through privatization. As the new regulatory model stressed the introduction of competition, privatization was often accompanied by the vertical and/or horizontal breakup of state-owned enterprises and the end of barriers to new private entry”.

Nevertheless, it seems that there are some important differences among regulatory agencies in Brazil that should be stressed. Three of these are: (a) the date of establishment; (b) the nature of the agency; and (c) the type of competition in force.

Regarding the first issue, according to Martins (2004), quoted by Peci (2004), it is possible to distinguish three generations of regulatory agencies in Brazil. The first generation was characterized by the creation of three regulatory agencies related to infrastructure sectors in the period 1995–1998: Agência Nacional de Energia Elétrica (ANEEL), Agência Nacional de Telecomunicações (ANATEL), and Agência Nacional de Petróleo e Gás Natural (ANP). They are responsible for electricity, telecommunication, and oil and gas sectors, respectively (see Table 1).

A second generation appeared in the period 1999–2000, when the Agência Nacional de Vigilância Sanitária (ANVISA), Agência Nacional de Saúde Suplementar (ANS), and Agência Nacional de Água (ANA) were established. ANVISA’s main scope includes: (a) coordination of the National System of Health Surveillance; and (b) establishing norms and standards regarding restrictions on contaminants, toxic waste, disinfectants, heavy metals, and other materials

<table>
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<tr>
<th>Regulatory agency</th>
<th>Scope of responsibility</th>
<th>Law</th>
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<tr>
<td>Agência Nacional de Energia Elétrica (ANEEL)</td>
<td>Electricity</td>
<td>9.427 (December 26, 1996)</td>
</tr>
<tr>
<td>Agência Nacional de Telecomunicações (ANATEL)</td>
<td>Telecommunication</td>
<td>9.472 (July 16, 1997)</td>
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<td>Agência Nacional do Petróleo (ANP)</td>
<td>Oil and gas</td>
<td>9.478 (August 6, 1997)</td>
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<td>Agência Nacional de Vigilância Sanitária (ANVISA)</td>
<td>Health surveillance</td>
<td>9.782 (January 26, 1999)</td>
</tr>
<tr>
<td>Agência Nacional de Transportes Terrestres (ANTT)</td>
<td>Railway and road</td>
<td>10.233 (June 5, 2001)</td>
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<tr>
<td>Agência Nacional de Transportes Aquaviários (ANTAQ)</td>
<td>Harbor</td>
<td>10.233 (June 5, 2001)</td>
</tr>
<tr>
<td>Agência Nacional de Cinema (ANCINE)</td>
<td>Movie industry</td>
<td>PM 2228 (September 6, 2001)</td>
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</tbody>
</table>

Source: Own elaboration.
that constitute a health risk. ANS is in charge of supervising “supplementary health assistance”, which in practice means that it monitors the privately owned health insurance companies. ANA’s mission is related to the use of water and to the implementation of the National System of Hydro Resources.

In the period 2001–2003, three additional regulatory agencies were established: Agência Nacional de Transportes Terrestres (ANTT), Agência Nacional de Transportes Aquaviários (ANTAQ), and Agência Nacional de Cinema (ANCINE). This is the third generation, although there are substantial differences among them. ANCINE is dedicated to foster the movie industry, whereas ANTT and ANTAQ are related to transport regulation. In the particular case of ANCINE, it was not created by law, but by a “provisional measure”, which is a project proposed by the government that needed to be ratified by the Congress in a short period of time in order not to lose legality.

Concerning the nature of a regulatory agency, Salgado (2003, p. 32) points out that the widespread use of the term “regulatory agencies” in Brazil ends up hiding one important distinction. According to the author, it is wise to differentiate State Agencies, which regulate public services through the application of specific legislation, from Governmental Agencies (or Executive Agencies), which follow governmental guidelines. In other words, State Agencies regulate services independently, at least theoretically, from both the government and from regulated companies. Conversely, Governmental Agencies implement the government’s decision. Keeping this distinction in mind, ANEEL, ANATEL, ANP, ANTT, and ANTAQ are considered as State Agencies, while ANVISA, ANS, ANA, and ANCINE are Governmental Agencies.

On the subject of the competition, Rigolon (1997) stresses four issues: (a) privatization; (b) competition for the market (concessions and leasing); (c) competition in the market; and (d) competition by substitute products or services. The latter is important in the energy and transport sectors. Natural gas, oil, coal, and water are substitutes in electric energy generation. Another example of competition by substitution is rail transport as alternative to road and water transport. It is appropriate to distinguish between “competition for the market” and “competition in the market”. Concerning the former, it comprises the concessions of public services and leasing. Competition occurs before the signature of the contract, while direct competition in the market is not allowed. In concessions, the private-owned company takes the responsibility for investments, which is not the case of leasing. Competition in the market can be a result of liberalization, de-vertical integration, or the sale of multiple concessions. Obviously, the four types are not necessarily exclusive.

Table 2 shows the application of Rigolon’s contribution to Brazilian infrastructure regulation. In fact, privatization was not mentioned in Table 2 because it can be combined with any of the other three types of competition. Broadly speaking, at the first stage, the bulk of infrastructure was in the hands of the Brazilian State, via SOEs: Eletrobrás was responsible for electricity; Telebrás, for telecommunications; Petrobrás, for oil and gas; Rede Ferroviária Federal (RFFSA) for railway; and Portobrás, for harbors. As a result of privatization, de-regulation, and liberalization, two main models were developed. The first one was based on a monopoly – which is the case of electricity distribution, railway, road, and harbor. The second model was based on competition improvement in the market, which was the case with telecommunication and oil.

2.2. An overview by regulated sector

In the 1980s and 1990s, privatization and liberalization of the telecommunications occurred in many countries. In the United States, for instance, this process started in 1984 with the end of
Table 2
Infrastructure competition in Brazil

<table>
<thead>
<tr>
<th>Initial situation</th>
<th>Alternatives of industrial structure</th>
<th>Alternatives of competition</th>
<th>Brazil’s experience</th>
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<tbody>
<tr>
<td>Integrated public monopoly</td>
<td>Monopoly in specific markets</td>
<td>• Competition for the market (Concessions or leasing)</td>
<td>• Electricity distribution</td>
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<tr>
<td></td>
<td></td>
<td>• Competition by substitute products or services</td>
<td>• Railway</td>
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<td></td>
<td></td>
<td>• Market competition, with newcomers</td>
<td>• Road</td>
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<td></td>
<td>• Harbor</td>
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<td></td>
<td></td>
<td></td>
<td>• Telecommunications</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>• Oil</td>
</tr>
</tbody>
</table>

Source: Based on Rigolon (1997, p.128).

the monopoly exercised by AT&T. The reform was concluded in 1996, when the “Communications Law” was promulgated. In the United Kingdom, this reform began in 1981, when British Telecomm was privatized. In both cases, the reform took a long time, lasting more than 12 years. Nonetheless, the telecommunication reform in Brazil was carried out in a short period, as in 7 years (1995–2002), all commercial activities were transferred to the private sector.

The telecommunication reform started in 1995, when a constitutional amendment authorized the investments by privately owned companies in the sector. Moreover, in 1997, the sector’s regulatory framework was approved in the form of the “General Telecommunications Law”, when ANATEL – the Brazilian telecommunication regulatory agency – was created. The objective of this Law was to promote competition and to define the rules for concessions, considering that they should be non-exclusive. Additionally, the cross-subsidies that used to exist between local and long-distance services were eliminated. This process culminated in 1998, when Telebrás was privatized with the sale of 13 subsidiaries (one long-distance carrier, three fixed-phone, and nine mobile-phone companies).

The main objectives of the privatization of Telebrás were to promote competition, to increase regulatory efficiency by the reduction of asymmetric information, and to expand investments. Regarding the second issue, if the government had decided to sell Telebrás as a whole, a technique of privatization that was adopted in other countries, such as Mexico, the asymmetric information between the regulated company and regulatory agency would have been higher. Concerning investments and in their impacts on universalization Pinheiro (2003, p. 4) points out that: “The concession contracts, signed in 1998, required an expansion in the number of fixed lines from 15.3 million to 50 million, and in the number of cellular lines from 4.0 million to 26.2 million, respectively, in 10 years”.

After the privatization of Telebrás, another set of regulatory changes was promoted. Some of these steps were contained in the “general plan” that determined the guidelines for: (a) fixed lines services; (b) interlink between networks; (c) universalization, including the determination that all localities with more than 100 inhabitants should have one fixed line as of December 2005; and (d) the quality level of the services.

Since its creation in 1997, ANATEL is engaged in fostering competition. Thus, in the period 2001–2003, new concessions for mobile telecommunication (Bands C, D, and E) were sold and, consequently, an impressive number of newcomers entered this market. As a general rule, ANATEL established pro-newcomers policies aiming to reduce the incumbents’ market power.
The results of this transformation affected the industrial structure dramatically, as well as the performance of companies and the quality of services. Pinheiro (2003, p. 4) summarizes as follows:

“In 2000, 2 years after privatization, the number of fixed lines had already reached 35.0 million and that of cellular phones 21.5 million, almost doubling the combined number of lines. By mid 2002 the regulatory reform process in the telecom sector was greatly advanced, with a large increase in supply and a fullblown competitive environment was in place. In June 2002, the number of installed fixed line phones had reached 45.1 million, with 38.2 million in use. The number of mobile phones, in turn, reached 35.3 million in January 2003, with 36.6 percent of them operated by companies other than those resulting from the spin-off of Telebrás”.

Unlike ANEEL and ANP, ANATEL has the right to analyze antitrust cases jointly with Conselho Administrativo de Defesa Econômica (CADE). For instance, in 2002, it took part in the case involving Embratel and Intelig against Telemar, Brasil Telecom, and Telesp. The former alleged that the latter were subsidizing long-distance calls via discriminatory prices in the interconnection services. The policy of ANATEL is that negotiations need to occur preferentially among the companies; thus, the regulatory agency will only arbitrate when these negotiations fail. Nevertheless, the interconnection rights are an extremely complex issue because it involved the backbones access of the large distance operators to data transmission and Internet services (Pires & Goldstein, 2001, p. 20).

ANATEL differs from ANP and ANEEL in other ways. First, ANATEL’s law involved the creation of a council, with delegates from Congress, the Executive, companies, consumers, and society. Secondly, ANATEL must publish annual reports to be approved by Congress (Salgado, 2003, pp. 31–32).

Regarding the oil and gas sectors, in 1995, a constitutional amendment ended Petrobrás’ oil monopoly. The decision opened the opportunity to privately owned companies to explore oil in the country. Two years later, Law 9.748 established the Conselho Nacional de Política Energética (CNPE), an entity related to the Brazilian Ministry for Energy and Mining. Its goal was to develop the regulatory environment. In 1997, the so-called “Oil Law” was introduced, aiming to define strategies for the oil and gas sector and, to a lesser extent, for new types of energy sources. This Law created ANP with the goal to implement a competitive model for the oil and gas sector (or at least to foster competition in it).

Pinto and Fiani (2002, pp. 541–542) observe that the ANP’s regulatory responsibilities are defined in Law 9.748 as follows:

“(1) to implement an oil & gas national policy; (2) to control directly or via agreement all activities of the oil industry; (3) to promote bidding for oil fields, in order to consolidate the entry process of new companies; (4) to structure and to control royalties and other governmental participations; (5) to establish the criteria for transportation and commercialization of oil & gas; (6) to establish the regulation regarding the access to oil ducts; (7) to make sure that good practices are employed to promote the rational use of oil & gas and to protect the environment; (8) to support a data base and to diffuse geologic information; (9) to guarantee the offer of derivatives to all parts of the country; (10) to protect the consumers’ interests related to price, quality and availability.”

It can be argued that on paper ANP is both autonomous both financially and in decision making. In fact, however, it faces a difficult situation due to the high degree of verticalization of Petrobrás,
which continues to dominate the Brazilian oil market. Traditionally, the oil sector is divided into three production stages: upstream (exploration and production), middle stream (transportation and refining), and downstream (distribution and sales). Petrobrás is the largest oil producer in Brazil. Furthermore, it dominates the middle stream. It manages all the infrastructure of the oil terminals and plumbing systems. In the case of imported oil by third enterprises, they need to use Petrobrás’ installations. Petrobrás also dominated the refining phase and it controls the largest gas distribution company in Brazil. In contrast to what occurred in the telecommunication sector, Petrobrás continues to be a SOE. Moreover, it should be remembered that ANP does not deal with tax and price regulation, which were under the responsibility of the Brazilian Ministry of Finance.

In 1999, ANP held the first auction for the exploration and production of oil in Brazil. Since then, ANP has annually organized an auction to sell the rights to explore oil and gas. These auctions have allowed multinational enterprises (such as Agip, Exxon Mobil, Royal Dutch Shell, and Texaco) to enter the Brazilian oil and gas exploration market. This liberalization seems to deliver limited results in terms of competition in the Brazilian oil market, which continues to be strongly controlled by Petrobrás.

In relation to the natural gas sector, Pires and Goldstein (2001, p. 11) consider that the natural gas segment is still in its early stages. Nevertheless, Petrobrás controls all segments of the productive chain, except for the downstream segment, in which the local state companies, several with equity participation of Petrobrás, exercise a regional monopoly.

The electricity sector reform began in 1992, when Light and Escelsa were included in the “national privatization program”. The model of this reform was based on some international experiences, such as the United Kingdom with the “Energy Act”, and United States with the “Energy Policy Act”, in 1992. In Brazil, this process was reinforced with the promulgation of the “Law of Concessions” in 1995, which set the rules to start the bidding, general conditions for concessions, and the tariffs determination. This Law made possible the industrial transformation as it allowed the participation of private-owned companies in the sector.

Traditionally, the electricity sector is divided into four different activities: generation, transmission, distribution, and commercialization. The discussion of the electricity sector privatization was based on the premise that generation and commercialization activities were potentially competitive, but that transmission and distribution constitute natural monopolies. The fiscal crisis principle, however, was also present. Thus, privatization was viewed as a way to reduce the public expenditures too. The privatization of electricity distribution companies required the creation of new regulatory institutions.

In the case of the Brazilian regulatory model for electricity, there was a general consensus among economists. Rigolon (1997), Pires and Goldstein (2001), Salgado (2003), and Pinheiro (2003) agree that a major problem was derived from the fact that the government did not establish regulatory rules prior to the privatization process. Moreover, the privatization was incomplete due to fact that some large-generation electricity companies were not privatized.

Indeed, it was only in 1996 that ANEEL was created, while privatization was initiated 4 years previously. Besides ANEEL, the Brazilian regulatory electricity model was based also on the Operador Nacional do Sistema Elétrico (ONS). The ONS is a non-governmental institution, coordinated by different agents of the sector, consumers, and government. The ONS’s functions were defined as to plan the operations and to execute the centralization of the electricity generation. This institution was supposed to settle on the process for the transmission network enlargement, but, in practice, these activities were coordinated by the government. Nevertheless, the national electricity rationing in 2001 showed that there was something wrong with the model.
Pinheiro (2003, p. 16) stresses that private investment in Brazil has also been discouraged by poor intra-sector as well as inter-sector coordination. Concerning the first issue, in the case of the electricity there is still no clear separation between the functions of the various agencies involved (ANEEL, ONS, Ministry for Energy and Mining, and the Eletrobrás). In relation to the second one, the coordination among ANEEL, ANP, ANA (the water sector regulator), and Ibama (the environmental protection agency) is still weak. Similarly, Pires and Goldstein (2001, p. 37) point out that a major characteristic of the Brazilian regulatory system is the insufficient coordination among the different agencies. According to these authors, there are three other problems regarding the Brazilian regulatory experience: (a) the vagueness in defining the responsibilities for each agency; (b) the lack of effectiveness in decision making; and (c) inappropriate contracts and rules.

3. The Brazilian transport regulatory experience

The transport sector reform in Brazil has shown some similarities to the electricity, oil and gas, and telecommunication sectors. Indeed, the Brazilian transportation sector reform started in the 1990s. Its main goal was to transfer to the operations of railways, roads, and harbors to private-owned firms. Nevertheless, analogously to what was observed in the electricity sector, it could be considered a partial reform because only a reduced number of roads came to be operated by private-owned companies.

It can also be argued that the Brazilian transport regulatory agencies have not received the same attention as the ones in charge of telecommunications, electricity, and oil and gas sectors. This is a quite understandable situation, mainly when three main aspects are taken into consideration.

First, timing matters. The academic literature is focused on the experiences of ANP, ANATEL, and ANEEL; all of them can be considered as the first generation of regulatory agencies in Brazil. Conversely, ANTT and ANTAQ can be understood as examples of the third generation.

Secondly, privatization revenues matter. Differently from what happened to the telecommunication and electricity sectors, the privatization of the Brazilian transport sector did not involve the acquisition of assets (except for goods of low value), but the purchase of exploration rights. Pinheiro (2003, p. 14) observes that the privatization (concession) of transportation facilities generated revenues of US$ 2.3 billion, against a replacement value for the assets transferred to private-owned companies estimated at US$ 36 billion, just for harbors and railways. In contrast, privatization revenues in telecommunications and electricity totaled US$ 30.5 billion and US$ 24.7 billion, respectively.

Thirdly, budget and number of employees matter. In 2004, for instance, ANP’s budget was 19 and 60 times higher than the ones of ANTT and ANTAQ, respectively. Regarding the number of employees, ANATEL had 1486, ANP 657, ANTT 483, ANEEL 325, and ANTAQ 143 (Oliveira et al., 2004).

The three differences – shorter time of existence, smaller privatization revenues, and smaller budget and number of employees – seem enough to explain the reasons why little attention has been paid to the ANTT and ANTAQ’s experiences. However, this should not be understood as an indication of their irrelevance, because they might influence (positively or negatively) the competitiveness of Brazilian products abroad, as well as the inverse trade flow. Therefore, ANTT and ANTAQ might affect the country’s macroeconomic performance, in general, and the trade balance, in particular.

In order to analyze ANTT and ANTAQ’s cases, five features were selected: (a) the original conception and the lack of coordination; (b) the heritage of bureaucratic personnel; (c) the political influence; (d) the budget evolution; and (e) the performance of regulated companies.
3.1. The original conception and the lack of coordination

As highlighted in the previous section, one of the major problems regarding the Brazilian regulatory experience is the lack of coordination among the agencies. Unfortunately, the same issue is observed in the specific case transport regulation.

The first aspect to be stressed is that two different regulatory agencies related to the transport sector were created in 2001: Agencia Nacional de Transportes Terrestres (ANTT) and Agencia Nacional de Transportes Aquaviários (ANTAQ). Both were established by the same Law (10.233), promulgated in June 2001.

In the original project, which was conceived by the government and sent to Congress, just one regulatory agency would be responsible for all transportation modes in Brazil. However, in the Câmara dos Deputados, a substitute project was proposed by Mr. Eliseu Resende, a Congressman who is a former Brazilian Minister of Transport. The most important alteration proposed by Mr. Resende was to split the planned transport regulatory agency into two different entities, with the justification that this would make it easier to pay appropriate attention to harbor regulation. Some Congressmen from the State of Rio de Janeiro had defended this standpoint, mainly as a consequence of the lobby exercised by the shipbuilders installed in the mentioned State.

The proposed (and, eventually, the effective) split into two different transport regulatory agencies was criticized by at least two important business associations: Confederação Nacional da Indústria (CNI) and Associação Brasileira da Infra-estrutura e Indústrias de Base (ABDIB). The critics focused on the difficulties that might arise in articulating the inter-modality (Prates, 2001). In other words, the separation would add unnecessary difficulties in regulating the coordination of agencies, but it would attend to the interests of companies and politicians. Two entities would facilitate lobbying by business groups and result in the creation of more positions to be occupied by cronies of politicians.

Not surprisingly, after ANTT and ANTAQ began their operations, the lack of coordination between them became obvious. For example, in May 2005, Mr. Wilen Mantelli, the president of Associação Brasileira dos Terminais Portuários (ABTP), which represents private-owned firms that own or run harbors, declared that there was divergence between ANTT and ANTAQ in relation to one railway access to the harbor of Santos, the country’s largest port. According to him:

“(...) if there would be a port policy [in Brazil], it could be discussed a way to improve the railway system until the harbor. This would imply a faster load and unload, due to fact that it would reduce the trucks’ utilization. But, if the Agência Nacional de Transportes Terrestres (ANTT) and Agência Nacional de Transportes Aquaviários (Antaq) can not agree between them, what can be done?” (Carvalho, 2005).

If the lack of coordination is frequently observed in the Brazilian regulatory experience as a whole, in the particular case of the transport, a large responsibility for this situation is derived from the split of responsibilities into two different regulatory agencies – instead of just one, as originally conceived. A lesson that can be learned by policymakers in emerging countries is about the risks of the establishment of multiple regulatory agencies, in order to satisfy politicians or any other group of interests, which tend to multiply the coordinating problems afterwards.

As in the case of electricity, the timing of the creation of the Brazilian transport regulatory agencies was far from the ideal. Though ANTT and ANTAQ were established in 2001, the auctions to sell the rights to use the railway networks of RFFSA were held in 1996, 5 years before the set-up of ANTT. In the case of harbors, the situation is even worse, because the harbor institutional
reform in Brazil began with the promulgation of Law 8.630, the so-called “Law for Harbor Modernization”, in February 1993.

3.2. The heritage of bureaucratic personnel

As a consequence of ANTT and ANTAQ’s creation, the Departamento Nacional de Estradas de Rodagem (DNER), which was frequently associated with corruption cases, was extinguished in 2001. Besides DNER, other organs linked to the Ministry of Transport were also extinguished and then substituted by the Departamento Nacional de Infra-estrutura em Transporte (DENIT). According to Prates (2001), all the employees from the eliminated agencies were to be reemployed by the new structure: ANTT, ANTAQ, and DENIT.

The heritage of bureaucratic personnel has advantages and disadvantages. It can be considered as positive in the sense that it helps to avoid losing the knowledge about the regulated sector, as a consequence of the reform. Additionally, it could mitigate problems regarding public servants’ labor rights. On the contrary, it can be interpreted as negative, due to the legacy of bureaucratic personnel with a heavy state intervention orientation. Possibly, a new regulatory agency can be more effective with people that have not shared the previous way of dealing with infrastructure businesses.

Looking at the ANTAQ’s experience, its annual report of 2003 mentioned that in accordance with Law 10.233, its management can admit personnel without the tenure that came from Empresa Brasileira de Planejamento de Transportes (GEIPOT), Companhia Docas do Rio de Janeiro (CDRJ), RFFSA, and Ministry of Transport. Those people were already working at ANTAQ and were just waiting for a formal appointment. In 2003, considering a total of 196 jobs, 63 (or 32%) came from GEIPOT and 29 (15%) from CDRJ. Additional 12 (6%) came from Ministry of Transport and 16 (8%) from other governmental institutions. In reality, only 26 (13%) were nominees for jobs for which it is unnecessary to have governmental links, 19 (10%) were under temporary job contracts, and only 30 (15%) were contracted by ANTAQ itself.

It is important to stress that the inheritance of bureaucratic personnel was observed in other Brazilian regulatory agencies too. In the case of electricity, Pires and Goldstein (2001, p. 24) point out that the majority of ANEEL’s top manager used to have prominent positions in the Departamento Nacional de Água e Energia Elétrica (DNAEE). According to the authors, this situation gives a signal to private-owned companies that crucial aspects of regulation continued to be related to technical, legal, and operational issues and not to the creation of economic incentives needed to develop a truly competitive market.

3.3. Political influence

Maybe the most controversial issue regarding the role and the performance of a regulatory agency is its independence of the state, and of the regulated companies’ interests.

Oliveira et al. (2004) elaborate a very interesting exercise in order to evaluate the so-called “Independence Index” (II) of the regulatory agencies in Brazil. It consists of the sum of seven attributes: the decision process; budget autonomy; the nomination process; the leader’s technical specialization; the leader’s stability; the possibility of interference in the procedures from the direct administration; and the enforcement capability. Thus, the “Independence Index” can vary from 0 to 7. According to the authors, ANATEL’s outcome reaches 5.5, followed by ANEEL and ANP with 5.0 each, and ANTAQ and ANTT with 4.5 each. Thus, ANTAQ and ANTT
performances are slightly worse than their peers. Their comparative weaknesses are due to the possibility of interference in the procedures from the direct administration and the enforcement capability.

A second item of interest is related to the duration of the mandates. Again, according to Oliveira et al. (2004, p. 130):

“(...) a fixed mandate for agency directors helped to prevent them from being influenced by political pressures and to fulfill the objectives set by the legislation that created the regulatory agency. Mandates are fixed and, in general, the period is the same or less than the term of office of the President. More specifically, regulatory agency director mandates may be 4 years (ANEEL, ANP, ANTT and ANTAQ) or 5 years (ANATEL) without there being any apparent reason for the differences. It is argued that the possibility of repeated mandates for ANTT and ANTAQ directors would affect their independence, since there might be an incentive to a director to be conciliatory in relation to the government to obtain another mandate”.

Therefore, in the particular case of ANTT and ANTAQ, there is the possibility that a director can have one re-appointment, which can be considered as a negative characteristic in comparison with ANEEL, ANP, and ANATEL.

Another aspect of this issue is director’s political connections. In the case of the ANTT, the divergencies between directors that were evident in the previous government (1999–2002) and the ones that were nominated by the current government (2003–2006) seem to be substantial. According to Sobral (2005), at that time, one group of directors was formed by Mr. José Alexandre Resende and Mr. Noboru Ofugi. Both were initially appointed during the Cardoso administration (1999–2002). Mr. Resende, who is ANTT’s general director and also son of Mr. Eliseu Resende, has a mandate that runs until 2008. Mr. Ofugi was re-indicated in 2005 for an additional mandate. The other group was composed for the following directors: Mr. Gregório de Souza Rabelo Neto, Mr. José Airton Cirilo, and Mr. Francisco de Oliveira. They were approved to ANTT’s board in 2004, already in Lula’s administration. They were indicated from the following political parties: Partidos dos Trabalhadores (PT) and Partido do Movimento Democrático Brasileiro (PMDB). Mr. Cirilo, for instance, was PT’s candidate for the State of Ceará in 2002, but he was not elected. Mr. Rabelo Neto and Mr. Oliveira both were indicated by the PMDB.

At first sight, the peak of the dispute between the two groups happened in mid-August 2005, when Mr. Rabelo Neto, Mr. Cirilo, and Mr. Oliveira approved a “united notification” impeding Mr. Resende to name or to discharge employees for ANTT’s trust positions (manager and assistances) in the states. They also accused Mr. Resende of doing the distribution of shares “in an addressed way”, without the accomplishment of a draw in the presence of all directors (Sobral, 2005). This is clear evidence that a political battle occurred among the directors, which influence negatively the regulatory agency’s performance.

The political dispute can have a harmful affect on the regulatory agencies by slowing down the nomination of directors by the government and approval of his/her name by the Congress. In Brazil, the maximum number of directors of each regulatory agency is five. Nonetheless, at the least in the period February–May 2006, ANTAQ did not have any director. Gôes and Schüßner (2006) comment that:

The vacancy in the Antaq’s board of director impedes the agency of granting authorizations for the operation of new private terminals. Empresa Brasileira de Terminais Portuários, which has project for a port terminal of multiple use in Santos (SP) at cost of R$ 181 million,
is suppose of receiving Antaq’s authorization since the beginning of the year, but it has been unable to get it because the agency is acephalous.

ANTAQ have not also authorized the operation of new navigation companies in processes analyzed already by the technical area. We “supervised, but we are not able to open administrative proceedings”, Ana Maria Pinto Canellas, superintendent of the area of navigation of ANTAQ, says.

ANTT had three directors in May 2006, the minimum number required to deliberate. However, if there is disagreement on any subject, there will be a delay in making decisions, and delays new investments (Gões & Schüßner, 2006). It can be argued that vacancies came to be a general and undesirable trend of the Brazilian regulatory experience. In May 2005, the ratio of directors’ vacancies reached 20% in ANATEL, 40% in ANEEL and ANTT, 60% in ANP, and 100% in ANTAQ.

3.4. Budget

The budget is very important for the regulatory agency’s financial independence, which dominates the entire decision-making process. Table 3 shows the evolution of selected regulatory agencies’ budgets in the period 1998–2004. One observes that ANP’s budget increased substantially, whereas ANATEL and ANEEL showed an involution. In the case of ANTT, a sharp decline occurred in 2003, while at the same time there was a cut in ANTAQ’s budget. The data are already deflated, in order to adjust to the 2004 price level. Considering ANTAQ and ANTT jointly, their share in the total budget of the five infrastructure regulatory agencies examined was reduced from 7.3% in 2002 to 4.3% in 2004.

In the last years Brazil attempted to deal with its fiscal crisis by reducing the expenditures of the regulatory agencies. Rittner (2005) explains that the budget cuts have been so strong that they impose serious limits to the regulatory agencies’ abilities to perform their tasks. In April 2005, the Brazilian regulatory agencies were understood to have been in severe financial conditions. In the case of ANTT, excluding personnel expenditures, the Ministry of Transport decided to make a 34% budget cut. As a consequence, there was a considerable risk of a stoppage of supervision of road and rail transportation in the second half of 2005.

According to Rittner (2005), for ANTT, the budget cut would postpone the plan to inaugurate a regional branch in the city of Fortaleza in 2005, in order to coordinate its activities in the northeast region. The first ANTT personnel recruitment would be postponed too. The agency had asked for authorization to hire 813 employees. Due to budget limitations the Ministry of Planning could only approve the hiring of 540 individuals.

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<th>1998</th>
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<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
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<tbody>
<tr>
<td>ANP</td>
<td>422,183</td>
<td>318,851</td>
<td>434,870</td>
<td>874,917</td>
<td>1,420,919</td>
<td>1,680,931</td>
<td>2,189,439</td>
</tr>
<tr>
<td>ANATEL</td>
<td>1,058,991</td>
<td>839,396</td>
<td>825,389</td>
<td>1,032,965</td>
<td>1,228,723</td>
<td>754,665</td>
<td>823,483</td>
</tr>
<tr>
<td>ANEEL</td>
<td>406,102</td>
<td>322,381</td>
<td>323,602</td>
<td>393,247</td>
<td>303,129</td>
<td>240,076</td>
<td>219,041</td>
</tr>
<tr>
<td>ANTT</td>
<td>188,659</td>
<td>188,659</td>
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<td>188,659</td>
</tr>
</tbody>
</table>

Source: Oliveira et al. (2004).
3.5. Performance of regulated companies

Besides the analysis of the regulatory agency per se, another possibility is to scrutinize the evolution of regulated companies’ performance. Oliveira et al. (2004) estimate the so-called “Effectiveness Index”, which is calculated as combination of the price and investment indexes. The results are reproduced in Fig. 1. It will be noted that the best performance was achieved by telecommunication companies. In second place, but very far from the telecommunication firms appeared the electricity enterprises, followed by oil and gas, harbor, and terrestrial transport. Somehow, this empirical evidence supports the common intuition that the telecommunication sector has shown the best results among regulated sectors in Brazil. On the contrary, the companies regulated by ANTT have demonstrated the worst outcomes. It is interesting to note that the performance of the regulated company is not necessarily correlated with the regulatory agency’s budget. This is clear when observing the case of ANP.

One might criticize the methodology used by Oliveira et al. (2004). It seems questionable to adopt the same base for comparison among sectors that experienced chronological differences in terms of the regulatory agencies’ creation. Indeed, it should be stressed that ANTT and ANTAQ are newer than ANEEL, ANP, and ANATEL. If somebody accepted 2001 as the base for comparison, the outcome would be very different. The improvement in the “Effectiveness Index” in 2003 against 2001 level reached: 100% for the companies regulated by ANTAQ; 65% by ANTT; 56% by ANEEL; 26% by ANATEL; and 14% by ANP.

The result of “Effectiveness Index” can be disaggregated into two sub-indexes: price and investment. The situation of the firms regulated by ANTAQ, in period 2001–2003, improved 152% in terms of prices and 41% with respect to investments. In the experience of ANTT, the numbers are 73 and −19%, respectively. The latter number is disappointing due to the fact that one of the most important motivations of the regulatory reform in Brazil was to foster sectorial investments.

4. Final remarks

This article’s goal was to examine the Brazilian regulatory experience, in general, and in the transport sector (ANTT and ANTAQ), in particular. Little attention has been paid to these regula-
tory agencies, most probably as for three reasons: shorter time of existence, smaller privatization revenues, and smaller budget and number of employees. In order to analyze ANTT and ANTAQ, five main features were studied: the original conception and the lack coordination; the heritage of bureaucratic personnel; the political influence; the budget evolution; and the performance of regulated companies.

Although ANTT and ANTAQ can be considered the “younger cousins” of Brazil’s regulatory agencies, they have much in common with ANEEL, ANATEL, and ANP. As is the case with the latter, the two transport regulatory agencies in Brazil face problems of coordination. However, in this particular case, this negative outcome is an obvious corollary of the fact that, differently from the original project, it was decided to create two regulatory agencies to deal with transportation.

As in the case of electricity, the timing was also unsatisfactory, because the beginning of the reform preceded the establishment of the regulatory agency. The auctions for the rights to use the railway networks of RFFSA occurred in 1996, 5 years before the creation of ANTT. Concerning harbors, the institutional reform started in 1993 and ANTAQ was created in 2001. Again, as in the case of electricity, at least ANTAQ inherited bureaucratic personnel from extinguished governmental organs. The perception of continuity is disappointing in terms of a new institutional model.

Regarding political independence, the possibility of a director being re-appointed applies only to the directors of ANTT and ANTAQ, while this is prohibited in ANEEL, ANP, and ANATEL. This can be interpreted as a negative difference for the transport regulatory agencies in Brazil, since it may make them a less independent.

However, the most sensitive issue related to political influence concerns political appointments. In the case of ANTT, two groups of directors exist within the agency – one consisting of directors nominated by the former administration (1999–2002), the remaining by directors selected by the current administration (2003–2006). Due to the fact that the divergencies between these two groups gained media headlines, the degree of conflicts is high.

Concerning the budget’s evolution, in the experience of ANTT, a strong involution was observed in 2003 in comparison with the previous year, while ANTAQ also had a cut in the same year. Considering ANTAQ and ANTT together, their share in the total budget of the five infrastructure regulatory agencies declined from 7.3% in 2002 to 4.3% in 2004. Furthermore, the budget cuts, carried out by the current administration, have been so strong that they impose serious limits to the regulatory agencies’ abilities to execute their basic mandates.

In terms of the performance of regulated companies, a mixed result was found. If 1995 is considered as the base of comparison, the “Effectiveness Index”, which is calculated as combination of price and investment indexes, had the worst results in the case of ANTT. On the contrary, if 2001 is accepted as the base, the better outcomes are observed in firms regulated by ANTAQ and ANTT.

The most interesting lesson that policymakers can learn from these case studies deals with the political influence on regulatory agencies. It is usually assumed that the creation of a regulatory agency will help to attract more investments to infrastructure sectors, due to its independence. In other words, technicians instead of politicians will be in charge of decisions, based on law and various technical considerations. In this ideal world, the regulatory agency’s actions will be based on long-term perspective, considering the good of society at large rather than the interests of the current government. However, this was not observed in the case examined, because the political aspects have influenced even the number of regulatory agencies created. Also shown were the negative impacts related to the nomination of directors by different political parties. Thus, a regulatory agency in practice, at least in Brazil, may result in a reduction – but not the
elimination – of governmental influence on the infrastructure sector. The regulatory framework continued to be very politicized.

Bearing this context in mind, it can be concluded that ANTT and ANTAQ are quite similar to ANP, ANEEL, and ANATEL’s trajectory, for their positive and negative aspects. One might conclude that during the conception of the “third generation” of Brazilian regulatory agencies, little has been learnt from previous experiences. Nevertheless, more thorough research should be done to get a greater insight into the peculiarities of these regulatory agencies. This should help in the formulation of policies. This is important due to fact that since April 2004, a project to create the “General Law of Regulatory Agencies” has been under discussion in Congress. Another interesting theme for future research deals with the impacts of ANTT and ANTAQ on Brazil’s export performance.

References