REGULATION OF THE INTERURBAN COACH SERVICES IN BRAZIL

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1. Introduction

This paper aims to discuss the economic regulation of the interstate and international coach services in Brazil, underscoring the need to promote competitiveness in the sector. Such competitiveness will serve as a tool towards achieving economic efficiency in services, protecting public interest and guaranteeing users' welfare.

Brazil's interstate and international coach services, which will be referred to as TRIP throughout this paper, is the responsibility of private operators which include 260 companies. In 2002, data was collected on 213 companies, which used 13.5 thousand buses and covered a total of 1.5 billion kilometres to complete over 4 million journeys, carrying around 136 million passengers.

The paper starts with the micro-economic characterisation of the activity and the reasons for its economic regulation, focusing on the competitive potential of the services provided. It then discusses the regulatory framework of the activity, based on the current legislation. Thereafter, with the support of studies carried out by the Brazilian Audit Office (TCU), the paper presents the main outcomes of the current regulation of TRIP in Brazil, as regards its economic concentration in the sector. The paper also puts forward the hypothesis that such concentration, which is a result of the current regulatory barriers to the entry of potential competitors in the market, may not be helping to promote economic efficiency and users' welfare. Thus, principles and guidelines are suggested towards an agenda to update the regulation of the activity, bearing in mind three main objectives, namely those of equity in access, continuity of the services, and reduced fares.

2. The economic rationale of state intervention to regulate road transportation of passengers by bus.

To evaluate the current TRIP legislation in Brazil, it is necessary to discuss the major failures in the market that justify government intervention in the sector. According to economic theory, the justification for the regulation of certain services or activities lies in the inability of the market itself to provide an optimal solution, both from the economic and from the social points of view. Such inability is defined as a market failure. When failures in the market are spotted, there arises the need for state intervention, which may take place both through the direct provision of the good or service and through the regulation of the activity carried out by the private sector. In order to promote the regulation of the activity, the Public Authority intervenes administratively to ensure a steady, suitable offer of the good or service for the population, with administered fares. State intervention takes place by means of control over fares, over the conditions to enter or leave the market, over quantity available, over performance standards, and over quality of services offered. According to specialised literature, the main reasons for the economic regulation in transport services is the presence of natural monopolies, network industries, and externalities.

Natural monopolies occur when a given market does not allow for more than one firm due to the presence of significant economies of scale. In this market, competitiveness would imply a double offer while demand is kept at the same level, leading to an increase in average production costs and, consequently, inefficiency. Without regulations, a monopolist would reduce offer and increase the price of the good or service, thus generating a loss in social welfare (i.e. the transfer of consumers' income to the monopolist). In the case of land passanger transport, natural monopolies are to be seen in the physical infra-structure, such as subway rails and highway infra-structures.

However, there are instances when, despite the absence of natural monopolies in the operation, regulation is necessary to ensure efficiency in services, as in the case of network industries, such as public urban transportation (TPCU). In this service, the interconnection among a wide variety of companies and the integration of various modes of transportation, co-ordinated by the public sector, results in greater efficiency both in the offer of services, which results in fewer redundant/overlapping services, and in the use of those services (for instance, the integration between buses and trains increases users' choice of services; consequently, fares are lower than if both services were used independently). Should there be no regulation, companies would compete for the same users, overlapping routes and times in high-profitability areas, whereas the offer in sparsely populated areas would fall, which would result in losses for the system as a whole. Let us not forget the difference between the concept of network industries and the concept of natural monopoly: the latter is associated with company size, while the former concerns the interconnection of companies.

Externalities, in turn, arise when a certain activity causes negative or positive effects, generating, respectively, costs or benefits for others, which are not internalised. Due to these flaws, the prices freely established by the market do not reflect accurately the cost or benefits for the society; thus, the free market's provision is inefficient. In urban transportation, for instance, traffic hold-ups and pollution, both caused by the excessive use of automobiles, constitute negative externalities, for the drivers do not incorporate the social costs (traffic hold-ups, pollution, and accidents, among others) generated by their decision to use their private cars in certain parts of the city at certain times of day. As for the positive effects of public transportation, such as lower levels of air pollution and fewer traffic hold-ups in big cities, they benefit not only the direct users of the services, but also the whole town.

Therefore, under no circumstances could TRIP be considered a natural monopoly. Neither can it be seen as a network industry since the relevant market in TRIP is made by routes, which eliminates the delegation of network services. Moreover, this service does not generate externalities that justify the regulation of price and quantity.

On the other hand, it is worth pointing out that , beyond economic efficiency, there are reasons of equity for the provision or regulation, by the government, of certain goods and services. TRIP is a service whose use is directly related to the welfare of society, particularly of those populations who cannot afford private means of transportation. Without regulation, the market might not guarantee the desired social level of offer in certain areas, such as in sparsely populated areas or rural areas. In this case, the Brazilian Federal Constitution defines this service as public to ensure the continuity and availability of services at low cost. Therefore, the rational behind state regulation of TRIP services is due to social reasons and to reasons of national unity and integration, rather than reasons of economic efficiency.

In conclusion, there is competitive potential in the operation of TRIP services so as to allow new companies to enter the market and to encourage competition through prices and quality of services in a number of routes, a procedure that will benefit users. It is up to the state, however, to ensure that low-income populations and sparsely populated areas (non-commercial areas) are catered for. Regarding users' security and information, these could be guaranteed by a strict set of technical regulations.

3. The Brazilian regulatory framework

TRIP services in Brazil have always been provided by the private sector, though under strong state intervention, due to its relevance to the community and to its role in promoting regional integration within the country and among the countries that are members of the Mercosur (Argentina, Uruguay, and Paraguay).

In Brazil, the 1988 Federal Constitution defines as a federal service the provision of interstate and international coach services. The general guidelines that rule the delegation of public services to the private sector were established by Federal Law 8987, which regulates Article175 of the Federal Constitution. In this context, Decree 2521 was issued which regulates these services. Lastly, Federal Law 10233 establishes the National Agency for Land Transportation, which takes charge for drawing up and editing the administrative rules for the provision of such services.

The federal legislation on the concession of services, issued in 1995, aimed at encouraging competition through public bidding to explore a given market, through concession or permission. It is through public bidding that the best proposal to explore the market and offer services will be selected, taking into consideration minimum standards of quality defined by the Public Authority. The legislation on concessions has also strengthened competition by eliminating market reserve and rights of exclusivity (the latter will be maintained as long as they are indispensable for the economic and financial equilibrium of the contract). In addition, the legislation has set a deadline for the delegation of services to be terminated, thus leading to competitive pressure among the incumbents as the contract approaches its end, due to the potential competition (the bidding may allow for new, more efficient operators in the market).

Furthermore, the regulation of the services and the drawing-up of the contract have become key aspects to enable services to be delivered accordingly, that is, meeting the principles of generality, or universality, and reduced fares. To this purpose, Federal Law 9074 reinforced the concept of universality in the service, holding the state responsible for ensuring wide coverage of the market, without excluding low-income populations, sparsely populated areas, or rural areas. Users' rights were also safeguarded by the legislation, particularly in their right to obtain information and in their freedom to choose from the various operators.

4. Concentration and economic efficiency

Studies carried out by the Brazilian Audit Office (TCU, 2004) reveal that the regulation of TRIP services has proved to be fairly strict, preventing competition within the market and for the market, particularly due to the demands imposed on those willing to participate in the public bidding and to the parameters set for the services. Martins (2004) argues that strict state intervention in this sector has favoured economic concentration in the offer of services. On using the concentration ratio index[1] to assess the 2001 data on production, Martins discovered that the main licensee, among 197 firms, held 13% of the production of passenger-per-km ratio, whereas the values of CR4 and CR8 reached 33% and 44%, respectively, in the segment of links that cover the offer of both conventional and differential services[2]. With regard to semi-urban transportation, at the end of 2001, the main firm, among a total of 33, held 33% of the market in the passenger-per-km ratio, while the values of CR4 and CR8 reached 78% and 97%, respectively.

In his analysis, Martins cross-checked the data collected on the shareholders of 175 firms and identified 17 joint ventures[3], a fact which indicates the actual concentration in the TRIP sector. By combining the production data of those groups, he found out that, at the end of 2001, the main production unit[4] of conventional and differential services held 16% of the passenger-per-km supply, whereas CR4 and CR8 reached 39% and 57%, respectively. On the other hand, the main unit supplying semi-urban transportation services had, at the end of 2001, a 39% share in the passenger-per-km supply, while CR4 and CR8 indicated 86% and 98%, respectively. This shows that concentration increases when there is economic interdependence among operators.

Horizontal integration is a strong indicator that TRIP operators are widening their scope towards other markets by forming new enterprises. This may be reducing or masking competition and increasing levels of concentration, inasmuch as potentially competitive firms become part of the same joint venture. Such procedure could be compromising efficiency in the sector, especially allocative efficiency, (i.e. through reduced fares for users) due to the strictness of the market and to the regulatory barriers to the entry of new firms.

According to Porter (1986), joint ventures strengthen their firms, enabling them to face the five competitive forces in an industry, namely: the threat of new entrants; the threat of alternative services or products; clients' bargaining power; suppliers' bargaining power; and firms' manoeuvrings for securing positions. In the case of TRIP, the major threats are the alternative services, provided by the air industry and by informal road transportation services, and firms' purchase power with vehicle and input suppliers. This may be leading to higher productivity of the companies that are part of a joint venture, especially those licensees whose groups are positioned among the eight most productive ones. According to Martins (2004), the licensees try hard to maintain close relations with one another so that they can share activities that will favour both an increase in return on assets, which will meet the needs of the shareholders or of the joint venture which they belong to, and their participation in

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[1] The Concentration Ratio is an index that shows the market share of the main companies, and is defined as

$$CR(k)=\sum_{i=1}^{k} s_i$$ where CR(k) = the concentration ratio of the k main companies; k= 1, 2, 3, ..., n; and si= the relative share of each company in the industry.

[2] Conventional service: an ordinary bus with or without a lavatory. Differential service: coach with sleeping facilities, with or without air-conditioning; "semi-leito" (a type of coach with larger seats); "executive coach"; and double-decker.

[3] A joint venture is an association of companies to act together in shared enterprises. It may be formed by the holding company and its subsidiary companies, and their aim is to gather resources and efforts to realise their objectives, or to participate in activities or enterprises. Their members are interrelated.

[4] The phrase "production unit" refers to an associate group or to an independent company.

other markets, which will mean wider coverage. However, such productivity does not necessarily lead to greater allocative efficiency, with the decrease in fares, as the market is strict and there are regulatory barriers to the entry of new firms. It is worth pointing out that, in thesis, economic concentration does not mean, in itself, economic inefficiency. On the contrary, it may preserve the market structure, economies of scale, and economies of scope in a given industry. However, in the case of TRIP, such concentration results from the current regulatory barriers, and it does not enhance users' welfare.

These findings reveal the need for a regulating reform in the sector, with the aim to protect public interest and users' welfare. Some principles and guidelines for this reform are discussed in the next section of this paper.

5. Recommendations for a pro-competitiveness reform

As discussed before, the empirical findings about the effects of the present structure of the regulations of TRIP in Brazil point to a high level of concentration in the sector which, associated with regulatory barriers to entry, conduces to the creation of closed markets with no stimuli to allocative efficiency, that is, part of the profits made by the licensees are not transferred to the users of the services. In this way, it is evident that there is the need for a reform of the present regulations , aiming at higher competitiveness and better quality in services. Below are suggested guidelines to this reform:

- Effective introduction of competition for the market (by means of public bidding) and within the market (among companies);
- Strengthening of technical regulations and more flexibility in the economic regulation, with an emphasis on the monitoring and control of performance in services;
- Ensuring universal access to the system, national unity, and regional integration.

Promoting higher competitiveness for the market through public bidding

Public bidding allows the choice, by means of criteria of efficiency, of the best firms to explore the market. To this purpose, they should be broad and allow for the participation of anyone who is interested. Nevertheless, the bidding regulations forbid the participation of consortiums and the regulation of services does not permit the participation of individuals in the process. The inclusion of individuals in the competition for the market would lead to a wider offer of services to markets which are not economically viable for bigger firms.

Still with regard to potential bidders, competition for the market could become more efficacious if the demand for technical qualification applied to the professionals who work for the firms, and not only to the firms themselves, which currently have to show some certification of capacity to perform the activity described in the bidding bill.

As for the length of contract, it should be ruled by the nature of the investments and the assets used when delivering the services. In order for the length of the contract to be shorter than the economic durability of the assets, these should be reversible, as in the case of the vehicles used in public transportation: they can be sold or diverted to other markets. This means that there are no significant sunk costs in the activity. In other words, there is technically no justification whatsoever for such long contracts as the existing ones (around 15 years).

Promoting higher competitiveness on the market, for commercial services.

Competitiveness in the market can be encouraged by the entry of new operators in commercially viable markets, through competition, under minimum specifications of quality, security, and protection for the user, and with rules for quitting that will prevent discontinuity of the service.

To this purpose, implementing flexible operational parameters may lead to efficiency, innovation, and quality of services. An example of this is the use of smaller vehicles. The bidding bills standardise the type of vehicle to be used in the regular routes: 46-seat buses, with 32% idle capacity. As the operator is in direct contact with his clients, he can have a better perception of the needs and expectations his clients have towards the services offered. Let us not forget, however, that the extent of flexibility and the desired level of competitive pressure in a given market must strike a balance.

According to Guimarães and Salgado (2003), competitiveness in markets operating under permits can be promoted through the entry of "mirror-companies," which would operate with a permit on the routes they were admitted to. However, the authors emphasise that it would be necessary to alter the present legislation in order to create a new market design.

In this scope, it is important to identify markets which, despite their not becoming an autonomous route to be explored under permit, could be made viable by a special permit, with the purpose of adjusting to the market demands and meeting the general interest, even if on a temporary basis. Decree 2521 indicates the possibility of secondary or subsidiary markets to be catered for according to its provisions[5].

Ensuring universal access to the system, national unity, and regional integration.

The aspects of equity, universal access, and guaranteed national unity and regional integration must not be abandoned by the State. It is the duty of the State to cater for the sparsely populated areas. In this case, hiring lower-cost services or choosing low-subsidised services in order to provide social services or to attend to non-commercial areas would be the best alternatives. Specific tools and policies should be designed (for example, direct subsidies for low-income users).

Emphasis on the monitoring and control of performance in services.

The cost of the fares should be conditioned to criteria of performance and efficiency appraisal, as in the price-cap models, and should not consider the existing model (average cost

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[5] The legislation that defends competitiveness aims to restrict market forces, from an economic point of view, and to guarantee conditions of competitiveness that favour an increase in efficiency in the regulated sectors. Such conditions may be guaranteed through preventive control of concentrated structures which favour market anomalies, or through repressive control of anti-competitiveness attitudes.

of service), as it does not encourage efficiency with lower fares. Actually, its main weakness is the fact that users never benefit from the productivity profits earned by the TRIP firms. Besides that, the adoption of the ‘cost plus’ model, estimated through fare charts, transfers the cost risks to the users, those who pay the fares. Moreover, the implementation of mechanisms for monitoring performance and contracts, such as benchmarking and yardstick competition, may contribute to efficiency in services.

Strengthening of participation and social control.

Users’ direct involvement (accountability), both in the inspection and control of the service provided and through opinion surveys, is still incipient. Client-satisfaction surveys among users might set the criteria for an eventual renewal or termination of the contract – the users of the service are the main ‘inspectors’ of its quality and suitability. Likewise, according to Federal Law 8987 and Decree 2521, users should have guaranteed access to information on the services, so that they can defend their own interests (both individual and collective ones), and on how to have access to them, with the freedom to choose from a variety of operators, according to each case and in conformity with set rules.

REFERENCES

GUIMARÃES, E. & SALGADO, L. (2003). *A Regulação no Transporte Rodoviário Brasileiro*. Nota Técnica. Brasília: Ipea.

MARTINS, F. (2004). *Transporte Rodoviário Interestadual e Internacional de Passageiros*: regulação e concentração econômica. 160 f. Monografia (Especialização em Controle da Regulação de Serviços Públicos Concedidos) – Tribunal de Contas da União, Instituto Serzedello Corrêa, Brasília.

PORTER, M. (1986). *Estratégia Competitiva*: técnicas para análise de indústrias e da concorrência. 7ª ed. Rio de Janeiro: Campus.

TRIBUNAL DE CONTAS DA UNIÃO. Acórdão nº 1926/2004 – Plenário (Ata n° 46/2004, Sessão de 1º/12/2004, Diário Oficial da União, 16/12/2004).