

A Light-Touch Regulation Model for Public Transit in Small Cities

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ABSTRACT: In the rule, regulatory frameworks developed for major cities, which foresee rigid “public service” concepts, are simply transferred to the smaller ones without any deeper regard for their appropriateness, producing important inefficiencies. Frequently, the services in these cities are operated in a unreliable manner by a single larger monopoly company. The present paper envisages to develop an alternative light regulation approach which may be adapted even to legal systems where public transit is ruled by the public service approach, i.e. where the entry is controlled and submitted to tendering procedures. By this model, the entry shall be submitted to a previous tendering procedure which does only reject operators which do not comply the least performance and management standards, but the operators are free to determine the line, its frequencies and fare prices. The paper describes further details of the model and develops its application in a Brazilian case study.

1 THE DEREGULATION DEBATE

In general, the regulatory issue in public transport has produced two antagonist positions (Berechman 1993): the first one defends an active regulation and planning by the authorities as a mean of ensuring network efficiencies and social justice; public transport would also be a central tool for reducing externalities as congestion and pollution, and free competition would produce monopolies in the long run because of the network economies. The other side rejects such argumentation, pointing out that economic regulation would hardly lead to an economically optimal service network but would, in the contrary, imply higher costs. Road public transport itself has low sunk costs, producing a high degree of contestability, and only restrictive regulation would put barriers to free competition, as purely economic features as e.g. technical competence, capital costs for the operators and the like would not set up effective hindrance for free entry. Moreover, larger incumbent companies would always be threatened by hit-and run competition offered by smaller entrants and assume a behavior that would not be purely monopolistic in terms of pricing and service quality..

Actually, these hypotheses are put into question in the urban transport market, as the incumbent operators are able to counteract to the competitive threat by a large set of strategies. As they use to op-

erate larger fleets, they may explore network economies. And by using an integrated network fare system they can ensure the loyalty of a large number of passengers. In the event of a defiance by an entrant operator, they could always lower the fare prices on the attacked line to a dumping level, which would be financially sustained by cross subsidies between the different lines of the network. On the other side, all these circumstances are not present in the interurban travel market, where some assumptions of the contestability theory do apply.

Nevertheless, whether by fiscal or by political reasons, some countries have adopted regulatory reforms for the industry, which vary from total (economic) deregulation (UK outside London, Chile) to the maintenance of regulation but introducing competitive tendering procedures (e.g. Sweden, UK in London); other countries have reintroduced some sort of regulation after the failure of the deregulation policy (Chile, in Santiago). On the other side, deregulation or partial deregulation has worked relatively well in interurban road transport (medium and long distance travel markets, as it was the case in Chile, Sweden and United Kingdom – see: White, 2001; Jansson, 2001), even when some countries prefer to maintain the economic regulation and to introduce competition by means of tendering procedures (as in Spain - see).

Of course, different variants of regulatory reform policies appear between the two main streams of regulated and deregulated markets. The notion of light touch regulation aims to introduce an intermediate solution, where some features of the regulated regime are kept (as the obligatory tendering procedure as a tool for entry control), but others are released (for example, by admitting some planning competences for the operators; see the example of Australia, especially the well-known case of Adelaide, as described and analyzed by Bray & Wallis 2001, for example). Especially where full deregulation may be plausible for economic reasons (for instance, in the interurban market) but the legislation does not enable its application at least in the short term, light touch policies may represent a useful compromise solution.

2 TRANSIT IN SMALL CITIES IN THE DEVELOPING COUNTRIES

Transit services in small cities in Developing Countries are hardly referred in the technical and scientific events that deal with urban transportation issues. In the rule, regulatory frameworks developed for major cities, which foresee rigid “public service” concepts, are simply transferred to the smaller ones without any deeper regard for their appropriateness. Frequently, a single larger company operates the services in these smaller cities. These big operators are generally involved with urban road transport production in some larger city in the same region or they are the providers of intercity services passing by the regional corridors in which the small city is located.

Although at the first look the transit problems of these cities may appear not severe, compared with those of larger cities, malfunctions in their public transport may harm the local economy, which is intensely linked with the rural economy. Local intraurban transport market is not large in these smaller cities. In the other side, just a few passengers are travelling regularly from the rural districts to urban core in order to have some activity there or to ride medium or long distance buses.

These facts conform, from the big company perspective, just residual markets that are not sufficiently interesting to attract its interest. Consequently, it is usual that users have to face poor services that do not meet their essential needs. In the same direction, the absence of adequate passenger transport links reduces the possibilities of some endogenous social and economic development that could integrate rural and urban sides of the municipal economy.

In Brazil, as the Federal Constitution regards municipal public transportation as an essential public service (art. 30), its supply is considered to be a duty of the public administration, which can provide it di-

rectly or delegate to the private industry by means of procurement procedures (art. 175). Whereas this legal framework seems to be appropriated to larger cities, where the supply of efficient transit services is an essential issue for the whole economic and social function of the city, and where the municipal administrations use to setup technically developed agencies, for smaller municipalities, some questions arise.

In these townships, the transit market differs essentially from the market of the larger cities for several reasons: the built-up areas of the core towns use to be small enough to be crossed by foot or by bicycle. Therefore, for the dwellers within the core town, transit is not an essential need. Thus the very transit market arises between the townships, say between the core township and the rural agglomerations. The trip frequencies are then different from the typically urban pattern, as the motivation is not the daily journey to work, but arise from the need to perform other activities (for example, health services, banking, weekly shops and so on). The only regular daily journey is the journey to school, either by students and teachers, which uses to be served by public school buses provided by the local Government. Therefore, rural dwellers are rarely daily and network dwellers, and loyalty measures as integrated network operating and ticketing will not work as much as in larger cities. As a further consequence, larger operating companies are not necessarily more efficient and competitive in this milieu, making thus the market more contestable.

In Brazilian small towns, these hypothesis may be confirmed by some observable facts as the considerable presence of bicycles and motorcycles, these last often been used as taxi (“moto-taxi”); in some cities, they are even tolerated or legalized. Moreover, there is a massive presence of illegal public transport services by vans. As a counterpart, the regular bus services are often delegated to a single private operator, whereby the interference of the public authorities is minimal with regard to route and timetable planning (Aragão and Marar 1996), and fare definitions, in the absence of local expertise, uses to be done by means of mere internalization of urban fares established to another — usually not comparable — local networks. In the rule, the bus operators adopt normal size buses, which are often too large for the market; as a result, frequencies are low. Furthermore, buses that are no more accepted to run in the larger cities where the same company operates generally form operating fleet.

We can conclude that in these cities, the public authorities are not much concerned with public transport, as it usually does not pose a serious political issue for the administration. The rise of illegal

transport in the rural areas, which uses smaller vehicles and supplies higher frequencies, confirms moreover the hypothetical contestability of the market. Notwithstanding, the authorities and bus operators insist to keep the regulated and monopolist operator model for small towns (Associação Nacional de Transporte Público *et al.*, 1999).

3 A LIGHT TOUCH REGULATION MODEL FOR SMALL TOWNS IN BRAZIL

Assuming that public (road) transport in Brazilian small towns do not have network efficiencies which would favor larger companies, but on the contrary are potentially contestable, the present model proposal starts from the British deregulation model, which foresees free entry (at most a qualitative entry control), but using the legally mandatory procurement procedure rather as a competitive performance oriented exclusion tool. The outline of the model is as follows:

- a) The candidates for the operation of public transport services must undergo a preliminary license test, where they have to prove that they dispose over adequate vehicles, drivers and management skills as foreseen by regulation.
- b) Simplified and frequent (say every three months) procurement procedures select operators that are pre-licensed and have a performance score above an established minimum level; pre-licensed new entrants obtain automatically an initial score which is superior to this threshold level. The selected operators obtain a definitive license.
- c) Every licensed operator is free to establish his route, frequency and fare price, provided that he registers it previously at the Authority. Every change or suspension of the registered service has to be announced in advance. Optionally, the single operators may organize themselves into co-operatives, in order to facilitate regular line operation.
- d) The Authority takes over the responsibility to centralize the service information and to inform the public on the services.
- e) The Authority also organizes the central terminal in the core city, whereby the slots are to be distributed to the operators by means of a random drawing procedure.
- f) The Authority analyzes the resulting network of services and the eventual needs for its complementation (timely and spatially). The complementary services may be tendered competitively for the least subsidy requirement.
- g) The Authority controls the supply accordingly to the registrations, takes note of failures with respect to the service, vehicle and driver, receives reclamation from the passengers and the community and adjusts the individual score points of

the operators accordingly to the regulation for the performance evaluation. The best placed operators may obtain surplus score points, turning the procedure competitive (benchmark and yardstick competition).

- h) The licenses have a relatively short validity period (say, three to five years), and after this period the current operators have to undergo a new procurement procedure. Those who have a final score under the minimum level are excluded from the service for a given punishment period (say, until the next procurement procedure). Again, the best-placed operators may obtain a surplus bonus period.
- i) In order to avoid eventual market concentration, the Authority may impose some limits to the market participation of single operators, companies or even co-operatives.

It is clear that the present model will need a new type of Authority, less prescriptive and more oriented to objective goals with respect to performance, quality and overall accessibility. In principle, the contestability characteristics of the market should ensure that functional market mechanisms produce efficiency and efficacy of the system. But a prepared crew of officials would be an essential pre-condition for the success of the model. A modern Authority would employ a small but well-prepared staff; the field officials with control and supervising functions may concentrate their duties in the main terminal and make random tours through the registered routes and peripheral terminals. A good communication network between the passengers, the community and the Authority could additionally enhance their control capacities. Modern information and communication technologies will also ease execution of the control duties by the Authorities.

A centralized training program should facilitate the adoption of this model by the different communities. Also, these communities may share, in a regional basis, some functions as preparing tendering processes. A first step should be, however, to test it in a selected community which bears some favorable characteristics as a) a small sized core town, which can be crossed easily by foot or with a bicycle; b) a weakly networked transit market, where the main journey desires occur between the core town and the rural periphery and do not have a daily frequency; c) the Authority is willing to try new regulatory schemes; and d) there is already a lot of small operators who, even running informally, provide a considerable part of the service network.

4 A CASE STUDY

Parnamirim is a Brazilian Municipality in the Metropolitan Region of Natal. Natal is the capital of

Rio Grande do Norte State, in the Northeastern region of Brazil. The whole Metropolitan Region has about 1,000,000 inhabitants. The 85,000 inhabitants of Parnamirim are divided into two main areas: the urban core and the beach districts, the latter with more or less 15,000 people living in. Each of these areas is functionally connected with the central city of Natal through regular buses and vans. The urban core of Parnamirim is also served by rail passenger services respect to travels to Natal.

Two questions are interesting to observe in the case. Firstly, there is not a significant amount of daily travels between the beach districts and the urban core of Parnamirim. Secondly, even in the urbanized area it is possible to observe some remote districts that are essentially related to Natal, not to Parnamirim, in terms of travel needs. These features may be approaching the Parnamirim case to the typical small city model we described above in which relates to the transport linkage between districts and urban core.

A practical result that supports the analogy is that there is no bus network operator present in the intraurban or intramunicipal service in Parnamirim. In fact, the incumbent of Urban Parnamirim-Natal bus route — an operator with a total fleet that sums up to 30 buses and minibuses — has had the municipal exclusive concession for running local buses until 4 years ago. The design of local routes followed a proposal by the operator who intended, in 1994, to integrate local services with Parnamirim-Natal routes in a bus-to-bus basis. Low frequencies and high fares were the main reason for that, around 1995, Parnamirim begun to witness the emergence of illegal operators running vans between the remote urban districts and the urban core. As the Municipality refused then to use police power and measures to ban those illegal operators, the incumbent decided to leave the local network and concentrate its efforts on the more profitable route linking the central core of Parnamirim to Natal.

In consequence, the Municipality decided to give temporary authorizations to the operator of kombis to guarantee the supply of transport services in its geographical area. Subsequently, these authorizations were converted into permissions but without taking in account the legal requirement (Federal Act n. 8987/95) to perform tendering procedures before delegating public services to private operators. Only this year of 2002 the Municipality is trying to establish a group of officials in order to follow the legally prescribed requirements. It is worthy to note that we are describing the case of a Municipality in the neighborhood of a State capital, with almost a hundred thousand inhabitants. So, it is possible to suppose how difficult it would be to smaller cities far

from the technical facilities and expertise available in the capital.

Presently, five regular van routes, comprising 60 vehicles, compose the intraurban regular transport network of Parnamirim. But a sixth planned route, exactly that with the task to provide access from the more remote urban districts to the center, is not operating regularly under municipal permission due to divergences between operators and local officials with respect to alignment and frequency features. Operators are not prone to submit themselves to the proposed standards once patronage is extremely irregular and daily travels originating in these districts mainly are addressed to Natal, not to Parnamirim.

The fact is that there are vans running the sixth route without the correspondent permissions, but operators — in an absolutely commercial basis — define timetable and route alignment. Of course, this is typically a result of a lack of adjustment between the interest of Municipality in strictly establishing operational standards and the absence of a market with the minimum dimensions to support these standards.

Another important empirical observation is the significant presence of “moto-taxis” (a motorcycle being used as a taxi) in Parnamirim. According to interviewed local officials they can be roughly estimated to sum up over than five hundred although it is really difficult that all of them could be met in streets in a given moment. This kind of transport supply has been legalized in Parnamirim by means of 200 licenses given to individuals around two years a half ago. But, again, the Municipality is unable to enforce the regulation and ban from the streets a quantity of motorcycle drivers that offer their transport services in any corner of the street network. Organized “moto-taxi” services also exist and compete directly with those regular vans: usually the motorcycles are parked in terminals strategically positioned all over the urban core and make incursions into the areas served by vans along the headways of vans operation. Nevertheless, there are users who prefer to phone to the terminals or to cellular phones carried by “moto-taxis” drivers, which has their numbers conveniently informed to households thru the distribution of cards.

The individual character of “moto-taxi” use seems to be perceived by people as a much more user-oriented service than those provided by regular vans. Especially the door-to-door nature of services is seen as an advantage of “moto-taxis”, more over when extended route alignment of vans services is not sufficient as to cover reasonably well areas of low density. Again, the strictly prescriptive kind of service regulation used by the Municipality is responsible by the inability of vans operation to approach more ef-

fectively user needs and expectations: this statement applies more exactly as we leave the urban core of Parnamirim and go into the low density housing projects in its peripheral area.

Finally, we shall consider the problem of the connections between the central area of Parnamirim and the beach districts. These developments lay almost continuously along the South Sun Road, a highway that connects Natal to the Atlantic beaches in the south of the capital. The development of tourism in the last twenty years has brought many improvements in the infrastructure of this zone, as well as some permanent economic activity that attracted new residents looking for job opportunities. Hotels, restaurants, some shops and leisure places are now present where, two decades ago, there were only summer and holiday houses.

There is a reasonably intense passenger flow between these beach districts and Natal and a State Government concessionaire operates a well-evaluated bus service. However, regular transport links between the area and the central core of Parnamirim are in absence. Nowadays, a few vans illegally run some daily service, except in weekends and in summer months when temporary jobs and also leisure possibilities produce a very strong increase in passenger flow. Then illegal operators are prone to work intensely, increasing substantially the number of round trips as related to those they provide on working days. On the other side, as fewer vans are needed in the regular routes in these summer times, holidays or weekends, regular operators intend to run their vehicles in these routes — in fact some of them really do this although the Municipality could penalize them hardly.

It is possible to agree that this transport link between beach districts and the central urban core exhibits some characteristics (low patronage on working days, relatively high patronage on summer days and weekends) that are too hard to deal if we think about the traditional service public approach to economic regulation. But it is also agreeable that bettering transport conditions in this link is a very important feature to enrich the possibilities of Parnamirim to project some sort of local development, with an independence respect to Natal regarding economic and social improvements.

Combining the observations made with respect to the problems of providing transport services within Parnamirim, it is possible to conclude that essentially their nature is related to the practical impossibility of imposing the typical requirements of the public service approach over thin markets. Another idea that arises from the case analysis is that there are real possibilities of improving transport conditions for

the population if the Municipality would work creatively with the light touch regulation model proposed in this paper.

5 CONCLUSION: THE FITNESS OF THE MODEL TO THE CASE STUDY

Brazilian Federal Constitution indicates that municipalities shall manage local public transport networks observing the public service approach. Furthermore, Federal Act n. 8987/95 rules that the concession or permission of local public transport services has to be made following delegating processes that necessarily include formal tendering procedures. The proposed model internalizes these legal features but intends to overcome some of the limitations that their strict use presents in the case of thin markets. The basic assumptions made are related to the contestable nature of travel markets where large-scale network services do not apply, as well as to the optimality of vehicle size adjustment to market size and expected frequencies from the users' point of view — this means that other features like greater security perception due to bigger vehicles are not considered.

The case presented here does not fit exactly to the general idea of a small city without any need of transport services in its central urban core. Parnamirim is not what we can consider a small city even for Brazilian standards. It could be better defined as a medium city. On the other side, Parnamirim does not register too much rural districts, as could be the case for many cities in Brazil with similar population. Nevertheless, the situation in Parnamirim is such that can be understood as a good case for discussing the proposed model. Firstly, because beach districts present, as it refers to their travel connections with the urban core of Parnamirim, those characteristics that are required as pre-conditions for the proposed model: relatively low patronage, travels that are not repeated daily, peaks of passenger flow in some weekend days. Secondly, because intraurban trips originating in the peripheral area of the core, although certainly part of them are work trips, also present some irregularity besides the fact that low densities provoke that incumbents fail in providing good services.

Then, the central directions of the proposed model may be followed to the case, some adaptation being necessary in order to overcome the distinctive features and case singularities.

The essential element for regulatory reform in the case is the understanding of market complementarities. In order to proportionate more profitability to producers, it is necessary to integrate intraurban and beach-urban core markets and to explore conven-

iently the value they can aggregate each other. Trips in the link urban core-beaches are typically non-work trips except for temporal workers in summer vacations. So they are less dependent on time than intraurban trips. But intraurban trips faces poor services because markets are thin and densities are low as to support denser networking. So, it may be constructed an operational arrangement in which the excess of fleet of intraurban routes in out-of-peak hours should be transferred to beach districts routes or remote district ones. The same may be arranged in which respects to summer days and weekends. In these cases, beach districts require more services but intraurban links will present lower patronage.

Items (a) and (b) in Section 3 does not need any adjustment. Every operator in Parnamirim should be registered and undergo a license test. The first round of procurement would be based in three distinct elements: the score obtained in the license test; frequency and fare levels proposed for the different operational areas of urban core (with fixed route as the currently used) and working days operation of beach districts; and frequency and fare levels proposed for weekends and summer times in the beach districts operations. Those pre-licensed operators intending to better serve remote districts of urban area or beach districts in working days would be benefited in the distribution of the quotas of services initially established to be provided to beach districts in summer days and weekends.

Respect to item (c), the current routes would be taken as basis in order to establish a price-cap on fares proposed to correspondent operational areas. But each approved and licensed area operator would be free to register routes with the Authority — different routes (from the current ones) would be object of fare proposal by the operator, but this proposal should be analyzed in respect to price-cap above mentioned. Quotas to profitable services licensing would be negotiated with respect to proposed fares. In each area, licensed operators would be stimulated to organize themselves in co-operatives and some incentive should be given to achieve larger degrees of association. Co-operatives should be able to raise special funds and to obtain technical assistance thru public banks and agencies. They can be supported also by municipal aid (short courses, negotiation with public agencies, simple technical studies, arrangements with manufacturers and so on).

Route alignments missing, or the absence of proposals for night services, for example, should be treated as non-commercial services. But the option for subsidized services should be the last one. Firstly, it is possible to impose some exigencies of public service obligation in order to avoid extreme cream skimming behavior by the proponents. Secondly,

once organized co-operatives may be able to distribute non-commercial services among their components as a return to public that corresponds to the public aid they receive.

Other items in the model outline in Section 3 do not require further comments. But in the case of Parnamirim it could be interesting to mention another possibilities that would help to launch such a regulatory reform. Firstly, “moto-taxis” will not be banned immediately because they may help to achieve objectives of reform imposing a competitive threat on the licensed operators. But they should be contained around the 200 already licensed. Improvements in the level of service of vans would do the rest of the job. Finally, the local Government should promote very incentives to the adhesion of operators. Funding arrangement to fleet replacement and integrated ticket systems with bus or train operator could help to achieve better transport services and innovation.

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