

The role of competitive tendering in transport integration: the cases of Chile and South Africa

Le rôle joué par les concessions de transport public à des opérateurs privés dans l'intégration des transports en commun: les cas du Chili et de L'Afrique du Sud.

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ABSTRACT: The principal objective of this study is to review the role of competitive tendering in the coordination of public transport services in two middle-income countries: Chile and South Africa. It proposes to analyse each country's regulatory structure and identify some of the implications (e.g., benefits and constraints) that the tendering process has for facilitating seamless travel within urban areas.

RESUME : L'objet principal de cette étude est le rôle des concessions d'exploitation à des opérateurs privés dans la coordination des transports en commun dans deux pays de produit national brut moyen: le Chili et l'Afrique du Sud. Ces concessions reposent sur des appels d'offres ouverts et se traduisent par des licences d'exploitation de lignes. L'étude se propose d'analyser la réglementation de ces deux pays et d'identifier certaines des conséquences (avantages ou contraintes) du système de concession quant à la continuité de la couverture géographique des régions urbaines.

1. INTRODUCTION

In response to the past wave of public transport deregulation, most experts have acknowledged that whilst these policies have increased supply and reduced government spending on transport, they have also resulted in the deterioration of some coordinated services. Consequently, travel mode splits have continued to shift in favour of the private auto, further contributing to increased motorisation, traffic congestion and pollution.

In contrast, a key objective of the competitive tendering process has been to preserve systemwide planning and accountability, whilst promoting widespread transport coordination. A number of countries have introduced competitive tendering schemes as part of the bus privatisation process, arguing that it will allow them greater control over specific service features, such as integration.

Whilst tendered bus routes can effectively be structured to maximize the transfer of passengers, it should be noted that there are tradeoffs between system coordination and service innovation. In order to facilitate system coordination, regional authorities may wish to include integration guidelines in the tendering process, as long as they do not inhibit the commercial integrity of participating operators.

This study provides important insights into the inherent limitations faced by transport authorities and operators in promoting systemwide coordination, and it reviews some of the necessary conditions for preserving widespread integration in a privatised environment. It begins by reviewing the potential benefits of competitive tendering and interoperator integration; and provides background information on the case cities: Santiago, Chile and Cape Town, South Africa. Next, this study comments on the evolution of bus tendering in Santiago, and explores some of the key objectives behind ongoing efforts to introduce a tendering scheme in Cape Town. Finally, it draws conclusions concerning the prospect of improving integration through the tendering process.

2. AN OVERVIEW OF BUS TENDERING

In some cities, authorities have attempted to improve the process for awarding route concessions to private operators. London, Adelaide and Santiago (Chile) have implemented bidding processes for specific routes or service areas, based on performance criteria. Many experts believe that this structure provides for a coordinated network of public transport services, whilst promoting the benefits of privatisation (e.g.,

reduced government expenditure, innovative services).

Although this process is often restricted to private operators, there are examples where public carriers have been allowed to submit bids, such as in Adelaide, Australia. In this case, both private and public sector carriers were initially awarded tenders. Nevertheless, in many cases, governments advocate limiting competition to only private sector companies.

One such example of competitive tendering was initiated in London in the 1980s. Twenty years ago, most urban bus services in the Britain were publicly planned/operated, however, in 1985 the Thatcher Government privatised the urban bus market, curtailing the powers of regional transport agencies and reducing public subsidy. In addition, deregulation accompanied privatisation in most areas of Britain, except for London, where planners felt that deregulation would negatively impact systemwide service (e.g., causing widespread confusion).

Consequently, after passage of the *1984 London Transport Act*, private sector operators were allowed to compete for routes through competitive tendering. Over the next decade, bus services were gradually transferred to the private sector (e.g., under three-year contracts with the regional authority). Performance criteria were developed to ensure safety, punctuality and coordination with other bus operators.

Since the mid-80s, tendering has yielded positive results in London: a 20 percent rise in bus mileage, a 40 percent drop in cost per bus mile, and a 27 percent drop in total network costs. In addition, the total number of passenger journeys in Greater London has increased, despite the fact that it has significantly decreased in other areas of the U.K. (DETR 1999). In addition, there has been a rise in the use of system Travelcards and a rise in the provision of formal transfer facilities and information. Thus, in the case of London, competitive tendering has reduced public sector costs without sacrificing system integration.

Nevertheless, there are those that point to the key role of the operator as entrepreneur. Some argue that the tendering system favours the larger operators and that some requirements are too prescriptive to ensure operator innovation. On the first point, large operators often can afford to invest in vehicle improvements and route coverage, giving them a competitive advantage over the small operators, which often provide limited services. In response to the second point, competitive tendering must be structured in a way that does not endanger the commercial integrity of operators.

3. PUBLIC TRANSPORT INTEGRATION

Integration is a key element of any transport system. Whilst operators serve key origins and destinations, it is too costly for them to provide direct service between all points and some interchange is inevitable (LTP 1997, White 2002). Passengers interchange when there is either no direct service, or when transferring offers a faster alternative (TfL 2001). In order to serve transferring passengers, it is often important to provide key services, such as timetables, transfers, and off-street facilities (Cervero 1998).

Interoperator integration can expand the range of options available to the passenger, and provide such benefits as urban mobility and economic efficiency. Commuters spend less time travelling, and not only save time and money, but also contribute less to urban congestion and pollution. Whilst time-savings is of primary interest to middle and high-income urban residents, cost savings is critical to the survival of low-income residents (e.g., a higher percentage of their wages are spent on transport). Public transport must be coordinated so that the transferring passenger only pays once; routing and headways facilitate the transfer of passengers; and interchange facilities are kept clean and safe for the passenger (Rivasplata 1993).

It is important to note that there are different forms of integration, requiring varying levels of operator and/or public involvement. For example, physical integration, the most common and least expensive form of coordination, involves establishing transition points between public transport networks (Henry 1990). Whilst this contact is essential, without some element of fare integration (e.g., standard transfer procedures financed by participating operators and/or the government), passengers may be inclined to drive rather than to rely on transfers.

Informational integration is key to the distribution of up-to-date route, fare and timetable data, whilst institutional integration ensures public sector participation in ongoing planning and investment in interoperator agreements. Logically, under optimal conditions, the more integrated the public transport system, the greater the potential is for significant cost and time-savings to the passenger.

Furthermore, interoperator integration establishes the conditions for two or more operators to develop a multi-ride ticket/pass, i.e., offering a significant reduction in the combined cost of each individual ticket. In such urban areas as Paris, London, and the Rhein-Ruhr, comprehensive transfer systems have been developed for multioperator journeys. Nevertheless, the specific organisational characteristics of an urban area often inhibit widespread integration.

In a privatised environment, regional transport planning is often not conducted on an ongoing basis,

leaving operators to operate freely, without fare and timetable coordination. In cities where a majority of the bus market is privatised, widespread accessibility and system connectivity are jeopardized if fares, routes and schedules are not monitored on an ongoing basis. However, some argue that there are cities where the demand for interoperator transfers is low because there are a small number of operators.

One of the conditions necessary for the development of a well-integrated public transport system is that an autonomous, metropolitan authority be given the power to introduce a set of through-service standards (Nash 1988). When establishing a set of intermodal transport objectives, this authority must balance the commercial interests of the operators with the needs and expectations of public transport passengers. Indeed, it is essential that regional coordination policy be transparent to all; be designed to preserve operator competitiveness and integrity; and respond to a proven demand for transfers.

In the developing world, if public transport integration is to be achieved, it is essential that regional plans propose policies and financial support for integration. In addition, it is important that public transport service plans incorporate the needs and desires of all parties, including passengers, operators, local communities, and society-at-large.

4. THE CASE CITIES

As previously mentioned, in Chile and South Africa, there have been efforts to improve system coordination through the competitive tendering process. For the purposes of comparison, Santiago and Cape Town serve as examples of these efforts.

4.1. *Santiago*

Greater Santiago was one of the first urban areas in South America to implement a competitive scheme for granting bus route licences to operators. This section briefly describes the region, its public transport network and the evolution of the tendering system there. Santiago is located in Central Chile, 1,100 kilometres west of Buenos Aires. Currently, it is the sixth largest urban area in South America, with more than five million inhabitants (see Table 1). Greater Santiago encompasses an area of 600 square kilometres, and serves as both capital and principal commercial centre of the country.

Table 1. Urban Characteristics of the Case Cities, 1998

Indicator	Santiago	Cape Town
Population (thousands)	5,000	3,200
Total Employment (thousands)	1,300	1,200
Density (per hectare)	83	39
No. of Administrative Districts	34	6

Sources: City of Cape Town 2002, Mideplan 1997, Sectra 1998

The average population density of Santiago is less than 90 persons per hectare, relatively low by developing country standards. This particular pattern of development has resulted in high average trip lengths and long public transport journeys. Despite the historic predominance of public transport, there has recently been a marked rise in private auto usage, particularly in the middle to high-income residential areas east of the city core.

At present, the regional network consists of bus services, shared taxi services, a heavy rail metro and state railway. The first two are privately run, whereas the rail-based modes are run by public sector entities. Collectively, this system carries over 3 million daily passengers: 80 percent by bus, 6 percent by shared taxi and 14 percent by rail (see Table 2). Most public transport services extend from the urban core to outlying suburbs (Rivasplata 2000).

Table 2. Travel Characteristics of the Case Cities, 1998

Indicator	Santiago	Cape Town
Daily Trips (thousands)	8,370	3,500
Daily Mode Split* (percent)		
Auto	24	48
Public Transport	76	52
Public Transport Modes (percent)		
Rail	14	62
Bus	80	18
Shared Taxi/Minibus	6	20

*motorised modes

Sources: City of Cape Town 2002, CMC 1998, Sectra 1998

Whilst public transport integration was an objective of the 1968 urban transport report that recommended construction of the Metro (BCEOM-SOFRETU-CADE 1968), once the first segment was built, the military regime advocated a policy of transport deregulation that ultimately discouraged interoperator coordination. Subsequently, it was the Santiago Metro that first introduced formal integration, (through its Metrobus Program), in an attempt to extend its catchment area.

Since 1987, the Santiago Metro has operated the Metrobus Program, which relies on a series of bilateral agreements between the Metro and individual private bus operators to provide integrated feeder services at

designated Metro stations. Metrobus passengers can purchase a combined metro ticket and bus token for 60 to 70 percent of the combined cost of these instruments. Sale of this intermodal ticket/token package has been limited to Metro stations, where single and multi-trip fare options are available. The Metro employs a system of flat fares, so all Metrobus packages cost the same, regardless of the operator or route. The Metro reimburses operators a fixed amount for each Metrobus token accepted.

Whilst this program has provided cost and time savings to passengers, only 3 percent of all intermodal passengers take advantage of its fare savings (Cedano and de Freitas 1994). Many Metrobus passengers are unaware of the Program, or have poor access to Metrobus ticket locations. Others take the Metro, but don't connect to a Metrobus because it does not take them where they need to go, they are unwilling to wait for it (e.g., some board the first bus to arrive at a stop), or they only use the service occasionally. In addition, there are two principal reasons that Metrobus is still not widely used: a very small proportion of all bus operators accessing the Metro actually participate in the Program; and the Metrobus Program is voluntary, so participating operators reserve the right to withdraw at any time. Nevertheless, this Program still continues.

In response to worsening traffic congestion and air quality problems in Santiago, a competitive tendering scheme was developed in the early 1990s. Initially, tender requirements focused on vehicle age, use of street facilities and professional integrity, however, they have been expanded to include other aspects. Over the past decade, at least three major bidding schemes have broadened the geographic limits to include most areas within Greater Santiago.

However, whilst the democratic governments of the 1990s have re-regulated many services, until recently, little had been done to encourage further integration between buses and between buses and other public transport modes. As a result, informal integration still characterizes a large proportion of multioperator trips.

Local government has been hesitant to require that operators coordinate and has delayed setting policy on integration. For example, the Transport Infrastructure Planning Commission's (Sectra) *Urban Transport Development Plan* set intermodal fare integration as a goal for 2005, but did not outline a plan of action (Sectra 1995). Nevertheless, it is widely speculated that the upcoming tendering process will include provisions for ensuring formal integration with the metro, through a revamped Metrobus system.

4.2 Cape Town

Whilst Cape Town has yet to implement a competitive tendering scheme, the South African government has developed general guidelines for bidding the rights to provide bus, minibus and rail services in the major cities. This section describes the Cape area, its transport network and recent progress made toward introducing a tendering system there.

The Cape Metropolitan Area, which includes the City of Cape Town and its surrounding suburbs, is located in Western Cape Province, approximately 1,200 kilometres southwest of Johannesburg. It is situated between the Atlantic and Indian Oceans, and is surrounded by a vast area of coastal mountain ranges and scenic parklands.

Currently, the Cape Metropolitan Area is the second largest urban region in South Africa, with more than 3 million residents (see Table 1). It serves as legislative capital of the country and is a key commercial and cultural centre. Like Santiago, its Mediterranean-type climate attracts visitors from all parts of world.

The average population density of Cape Town is even lower than that of Santiago, with fewer than 40 persons per hectare. This dispersed pattern of land development is a direct result of the isolationist land use policies of the apartheid governments. Residents of colour were systematically settled in areas far removed from downtown and relied on permits and public transport to travel to work, whilst most white residents had access to private autos and lived closer. Indeed, recent government policy has supported social integration, however, the remnants of two distinct transport systems still dominate: one based on public transport modes, and the other based on the auto.

At present, the former system consists of Metrorail, a unit of the national commuter rail company; Golden Arrow (GA), the privately-owned bus company; and many, separately-run "minibus" services. Collectively, this system transports close to 1 million daily passengers: 14 percent by bus, 24 percent by minibus and 62 percent by rail (see Table 2). Spatially, bus and rail services extend out from the downtown to outlying areas, whilst minibus services principally link low-income townships with major employment centres.

Prior to the 1990s, public transport integration was clearly a secondary concern for apartheid-era planners as major road improvements were financed in the affluent communities, but few investments were made in the outdated rail and bus systems. In contrast, there has recently been a greater awareness that bus and rail modes were developed in isolation of each other.

Given that Metrorail plays a key role in the provision of public transport, a rail-based network of

bus and minibus feeder routes should be a major focus of integration efforts. Investments in vehicle rolling stock must be accompanied by improvements in intermodal compatibility and facility management throughout the Metropolitan Area.

In response to these needs, the federal government's *Transport White Paper* (1996) and the provincial government's *Moving Ahead* (1998) document have placed greater emphasis on renewing investment in public transport and reducing travel time and cost for rail and bus commuters. In particular, the latter document supports "an effective, efficient, equitable and affordable transport system" (CMC 1998).

The federal government has committed itself to the tendering of all urban bus routes, including those currently operated by GA in Cape Town. In effect, this process will break up services provided under the existing monopoly. Whilst this tendering process could encourage innovation and reduce subsidies to the current operator, it will require greater government investment in regulation and coordination, if the government objectives listed above are to be achieved.

Since the release of the government documents, Cape Town has led efforts to strengthen integration between existing public transport services through the construction of new interchanges and bus shelters, as well as the systemwide rationalisation of services. For example, the Modalink program, created in 1996, is a joint venture between transport authorities and operators that fosters greater systemwide cooperation. Demonstration projects have included development of a telephone information centre, dial-a-ride services for the disabled, and the drafting of guidelines for the operation of interchanges (City of Cape Town 2002).

Despite this effort, there are many operational and institutional issues that still need to be resolved. Key problems facing the system include ageing vehicle fleets, escalating federal subsidies to GA, rail safety concerns and widespread rail fare evasion (Clark and Crous 2002). Whilst there have been improvements in physical route and facility integration (e.g., over 100 new interchanges), the coordination of fares is still quite limited, due in part to uneven levels of subsidy and territorial rivalries. Similarly, improved access for the disabled has yet to be fully implemented.

Thus, the tendering process provides a unique opportunity for establishing cooperative programs. Clearly, for some of these integration efforts to be effective, particularly those related to bus-rail and minibus-rail arrangements, tenders will need to include provisions that cover such issues as fare integration, minimum headways and informational resources.

5. ASSESSING THE IMPACTS OF TENDERING

A comparative analysis of these case cities indicates that whilst both have adopted policies supporting competitive tendering and have faced many of the same barriers to implementation, Cape Town planners have more aggressively sought to improve the integration of services and facilities in tandem with the development of a bidding process. Whilst Santiago has always been aware of the need for better interchange, authorities have historically been hesitant to introduce tendering provisions that require operators to work together to improve integration.

Perhaps, one advantage held by Cape Town is that the competitive tendering process there will open the market to many new operators, a situation that could cause havoc if service integration is not ensured by the government. Like Santiago, a large percentage of the population of Cape Town relies on public transport; however, key destinations in South African cities are much more widely dispersed, generating greater demand for transfers. In Santiago, the public transport network is denser and more readily accessible to the poor (e.g., there are numerous transfer opportunities). In addition, powerful operator cartels in Santiago have never widely embraced fare and timetable integration.

One way of measuring the impacts of tendering on integration is to analyse its changes to fare and route coordination. Whilst an assessment of the Cape Town experience cannot yet be made, we can evaluate the Santiago case. The Metrobus Program has been the most successful example of fare integration in Santiago thus far, however, its scope is limited and local tenders have not yet included specific requirements for promoting either rail-bus or bus-bus coordination. Nevertheless, the Metro is working with Sectra and the Ministry of Public Works (MOP) to improve fare coordination, through the development of a single fare instrument for all modes, and a reduced fare for intermodal trips (Metro de Santiago 2002).

In the area of route coordination, Santiago has many transfer points, but only some feature convenient and safe connections, and off-street facilities. The Metro is working with Sectra and MOP to design feeder routes that directly serve Metro stations. These routes may be put out to bid in the next tendering phase, due to begin in 2003 or 2004 (Metro de Santiago 2002).

Whilst these interagency efforts are promising, unless policy direction is established at the regional level, operators will continue to allocate time and resources to the improvement of their own services, and will often avoid integration.

6. CONCLUSION

This study has reviewed the role of competitive tendering in the provision of service integration. A comparison of existing and planned competitive tendering schemes leads us to conclude that this form of regulation can be instrumental in preserving a desired level of public transport integration as long as the regulator incorporates specific provisions into the bidding process. In the case of London, competitive tendering was initiated during a period of transition towards privatisation, a process that allowed regulators to encourage operators to provide integrated services.

In contrast, in the cases of Santiago and Cape Town, bus services were already provided by the private sector, so local governments were faced with convincing operators that competitive tendering would improve the system. In the case of Santiago this entailed a long period of negotiation, during which integration objectives were never articulated. In Cape Town, the tendering process was delayed, but it appears that coordination provisions will be made.

Once existing transport operators have agreed to support efforts to introduce tendering, it is important that the process be administered by an independent transport agency capable of maintaining a high level of objectivity in the selection of operators, and charged with ensuring that operators work cooperatively for the collective good of the public transport system. The establishment and regulation of tenders should not only focus on improving overall service quality, but also facilitate systemwide, multioperator travel.

In order to remain competitive, operators must be granted some degree of autonomy to set their own timetables and fare structures, consistent with network standards. In addition, a committee comprised of representatives of passenger groups, public transport operators, and regional and federal transport authorities, should be created. Its mission should be to develop acceptable integration standards for all.

Once the process has been agreed upon, it might be advisable to systematically phase-in elements of interchange. This approach should ensure that the regulatory agency and bus operators are prepared to implement these changes. Tenders should ensure that operators provide the following:

- punctuality and reliability;
- improved physical access to transfer services;
- availability of timetables (or service intervals)
- participation in network through-ticketing.

In sum, this paper concludes that each city must define its long-term transport objectives and establish its own set of criteria for developing a coordinated network through the tendering process. In general,

programs must reflect local urban values and needs. Nevertheless, experience has shown that without public oversight, coordination is difficult to achieve. Competitive tendering provides an attractive option for maintaining integration. Tenders should encourage operators to facilitate transfers; provide better access for the disabled; improve urban links; and provide access, safety and security to passengers.

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