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ABSTRACT

- i. The paper considers the extent to which regulatory reform may improve performance in urban public passenger transport and the nature of the regulatory reform necessary to achieve the greatest benefit.
- ii. It is argued that totally free entry may lead to undisciplined and uncoordinated bus operation in urban areas. While regulation is not justified on scale economy grounds, but that some form of intervention in market processes may be justified on grounds of economies of scope, the need to maintain safety, environmental quality, affordability and some minimum level of public service. Traditional non-competitive monopoly franchising fails to achieve these objectives because of misguided government intervention, excessive labor costs, perverse management incentives and lack of management dynamism that it causes. The essential requirements are therefore to separate political and operational responsibilities and to increase operational efficiency through the introduction of effective competition. This can be secured either in the market (between modes or among operators of the same mode) or for the market (through subcontracting, management or service franchising); mixed systems are also possible.
- iii. The main *recommendations* on regulatory reform are as follows:
 - ◆ Political responsibility should always be separated from operational responsibility
 - ◆ Any subsidy should be in the form of service contracts between political authorities and operators and should be open to competitive process.
 - ◆ In selecting a form of competition, particular attention must be given to the varying ability of the country concerned to introduce, administer and enforce the necessary supporting conditions. Guidance on appropriate form can be advised by reference to some quantitative indicators.
 - ◆ Appropriate institutional frameworks must be established as a pre-requisite for competition.
 - ◆ Competition in the market requires good supervisory, coordination and infrastructural arrangements.
 - ◆ Competition for the market requires efficient service planning and contract management institutions.
 - ◆ Equal treatment of all operators is critical to any form of competition.
 - ◆ Supply structure requires supervision by some formal body to prevent the establishment of private monopoly power either by formal company merger or by less formal operators' associations.
 - ◆ Operator behavior must be subject to effective supervision and control to prevent physical or commercial predation.
 - ◆ Congestion and environmental quality management are best achieved through targeted regulatory interventions, compatible with competitive operation, and not by general restriction on entry.

CONSTRUCTING A COMPETITIVE ENVIRONMENT IN URBAN PUBLIC TRANSPORT

THE ISSUES

1. In most major cities in developing and transitional economies public road passenger transport is the primary means of meeting basic passenger transport needs. In many cases the performance of public transport is poor and deteriorating with city area vehicle speeds less than 10 kph, often accentuated by long average waiting times resulting from a deficiency of supply. Transport expenditures for the work journey can be as high as 30 percent of the income earned.

2. Governments have frequently attempted to improve the situation, either directly by the creation and subsidization of parastatal monopoly suppliers or indirectly by regulating private sector operators in an attempt to create cross subsidy from profitable to unprofitable routes and activities. This has usually led to the creation of a local private monopoly. Both public and private monopolies have tended to operate inefficiently, and even private monopolies have needed subsidy to maintain the desired level of service. In many countries the fiscal burden of public transport subsidies has become intolerable. In a previous World Bank report¹ it was argued that the best way to reconcile the desire for service with limited fiscal capability was to grant maximum freedom for private sector entry into the public transport market. However, in a number of countries even a totally unregulated market has failed to solve all the problems. This paper considers a wide range of regulatory regimes falling between the extremes of state monopoly provision and unregulated private sector provision in the light of more recent experience, and offers some guidance on how the selection of a regulatory regime might be approached.

THE CONSIDERATIONS

Regulatory Objectives and Limitations

3. The traditional reasons for regulation concern the perceived failure of markets to generate economically or socially optimal outcomes. These arguments need to be viewed with caution.

- (a) *Scale economies and natural monopoly.* Urban bus operating costs are highly divisible, and bus operations offer little if anything in scale economies.
- (b) *Coordination and economies of scope.* Regulated operation can ensure strong service coordination including integrated route structure; through ticketing; coordinated scheduling of services; multi-modal coordination; and centralized information supply. This may justify monopoly franchising only if the benefits generated exceed

¹ A. Armstrong Wright and S.Thiriez. "Bus Services: Reducing Costs, Raising Standards." World Bank Technical Paper Number 68. Urban Transport Series. July, 1987.

the extra cost imposed² and the coordination cannot be more economically achieved in some other way.³

- (c) *Safety and environmental protection.* Restricted entry is widely believed to facilitate better safety and environmental standards by protecting the financial capability to secure high levels of maintenance and by giving the regulator an easier monitoring task and greater leverage in enforcing safety requirements. The empirical evidence in the bus sector indicates that, where appropriate provisions have been made for direct implementation of safety control there is no discernible impact on safety.⁴ Similarly it is probably better to address environmental impacts directly with the relevant technical or operating standards or constraints than to approach them indirectly through entry control, though in the absence of efficient road pricing there may need to be some location specific regulation of movement imposed.
- (d) *Affordability* High money costs for the journey to work accentuates poverty.⁵ However, in the absence of subsidy, imposition of uneconomically low fares may also accentuate poverty by reducing the availability of service and limiting access to jobs.⁶ The key to low fares is low costs. Monopoly operation *per se* does not usually contribute to low costs and “affordable” transport.
- (e) *Minimum level of service* In some cases, land use and residential locational distortions may justify the maintenance of unremunerative services (for example, between distant townships and work locations in South African cities). Monopoly only supports unremunerative services at no fiscal cost if there is a profitable basis for cross-subsidy. Without that basis even peak levels of service may be very low and waiting times long, as in the case of Lagos.

4. Regulation may fail to achieve these social objectives for several reasons (see Annex 1 for a tabulation of the reasons for monopoly franchising and their limitations).

² Strict avoidance of duplication of services, either within a mode or among modes, reduces competitive pressure. The existence of such competition explains the high service levels and relatively low costs of public transport in many of the richer Latin American cities.

³ For example, it may be difficult to organize a satisfactory revenue-division arrangement to allow the travel card system to continue with multiple operators, but it is not impossible as interline revenues can be divided in many acceptable ways, basing such arrangements on surveys or ticket validations.

⁴ An analysis of British experience shows that deregulation broadly changed accidents in proportion to activity rates. It reduced bus patronage and consequently reduced the number of occupant casualties, but increased bus kilometers and consequently increased the number of accidents involving buses and other road users. See A.W. Evans, “Bus Accidents, Bus Deregulation and London.” Paper presented to the Third International Conference on Privatization and Deregulation in Passenger Transport Missisauga, Canada, September 1993.

⁵ The World Bank conventional wisdom has been that journey to work costs exceeding 10 percent of income for more than 15 percent of the workforce were “discriminatory,” A. Armstrong Wright and S. Thiriez, op.cit.

⁶ Stringent fare control typically reduces the quality of vehicles operated, reduces frequency and thus increases crowding and waiting time, restricts the distance operators are prepared to carry passengers for particular fares, or increases the minimum loads with which they are prepared to depart from terminals. Ultimately it can lead to withdrawal of service.

- (a) *Misguided intervention* Governments commonly overestimate what can be accommodated through internal cross subsidy, and therefore impose unsustainable fare and service conditions.
- (b) *Excessive operating costs.* Costs per passenger kilometer have been shown to differ by 100 percent and more as between public and private fleets in a number of developing country cities such as Accra, Ankara, Calcutta, and Jakarta.⁷ Even for private operators, in the absence of competition, the lack of alternative service causes governments to accept the subsidy cost of excessive wages or slack operating conditions in the face of strike threats. The introduction of competition has reduced operating costs per vehicle mile by over 30 percent in several European countries.
- (c) *Perverse management incentives.* Where entry is restricted, prices are usually controlled to limit the rate of return on capital. This will lead to “padding out” of costs, excessive capitalization; unwillingness to pool resources such as terminals; unwillingness to lease; use of more expensive equipment and earlier vehicle replacement than a competitive market would support; excessive vertical integration into supply markets (vehicle manufacturing) and terminals.
- (d) *Lack of dynamism.* Strict regulation excludes the possibilities of providing innovative forms of low cost transport meeting the transport demands of the poorer groups⁸ or higher quality alternatives meeting the needs of those willing to pay.

5. The key to the provision of efficient bus services is the creation of a commercial, competitive, environment. There are usually four components in the creation of such an environment.

- (a) *Depoliticization of operations.* Separation of regulatory and operational responsibility is necessary to reduce adverse effects of misguided government intervention on operational efficiency.
- (b) *Commercialization.* Transport operators should behave commercially. Government influence should be exercised through arms-length regulatory and contractual relationships with operators.
- (c) *Liberalization of entry.* Competition should be introduced to create incentives to efficient operation. Achievement of competitive pressure requires that new suppliers should be able to enter the market.
- (d) *Privatization.* Ownership matters for two reasons. First, governments usually saddle parastatals with labor agreements which result in over-staffing, over-generous wage bills, poor efficiency and low fares, which result in excessive demand and poor cost

⁷ A. Armstrong Wright. *Public Transport in Third World Cities*. TRL State of the Art Review No. 10. TRL, Crowthorne. 1993.

⁸ For example, the matatus of Nairobi, although grossly overcrowded and unpleasant to ride, offer affordable transport at higher frequency and greater availability than the regulated bus sector.

recovery. Second, the continued existence of state-owned enterprises, interfered with but immune against bankruptcy, may discourage new entry and hence impede effective competition.

6. These elements are complementary. Removal of the barriers to entry without effective policies to promote and preserve competition will have little impact. Effective competition will only occur if new entrants feel that there is a livelihood to be earned for an efficient service provider. That will only be so if there is a “level playing field” on which competitors contend. Hence the need for commercialization of operations so that “unfair” advantages are eliminated. Privatization of parastatals may be the only basis on which that commercialization, and hence inducement to competitive entry, can be achieved. The creation of a commercial, competitive environment thus requires a balanced combination of regulatory, behavioral and structural elements.

The Alternative Forms of Competition

7. The essential requirement is to secure effective competition between alternative sources of supply. That can be achieved in a number of ways, which can be categorized into forms of competition “in the market” and forms of competition “for the market.”

Competition in the Market

Competition Among Modes

8. *Core competition.* In very large cities, and particularly in the richer and more recently developed conurbations such as Hong Kong, the combination of density of demand and relatively high income may be sufficient to support a number of commercially viable alternative public transport modes. Where several modes are ready to compete with each other without subsidy, the service/fares offer of each will be kept in line with the competitive offers to achieve efficient and innovative operation. The main problems in these option rich situations are avoiding road congestion and securing efficient coordination between modes.⁹

9. *Opening up the fringes.* Gaps in service in less remunerative areas, at the peak, and for differentiated services are often filled illegally, by the growth of an unregulated informal sector which the government is unable to suppress.¹⁰ The informal sector often provides basic, low-cost services in situations where the regulated operator has been constrained in ways which keep its basic standard of service, and hence cost per passenger, above that which the consumer really demands. The molue in Lagos is an example of such a situation. In other cases the regulatory agency may itself institute a parallel but differentiated service, often of a higher quality and fare, alongside that of the

⁹ In Pusan, Korea, investment in bus/rail interchange facilities is currently being proposed in order to bring about a more rational division of functions between metro and bus operations.

¹⁰ For example, in Harare, the government's diffidence about controlling the emergency taxis which operate in defiance of the bus company's exclusive franchise has undermined the bus company's ability to cross-subsidize low income passengers.

original exclusive franchise.¹¹ In some cases, fringe entry may kill the core operator due to its inherent inefficiency.¹² In others it may lead to violence on the streets.¹³ If the incumbent exclusive franchisee's ability to meet its social service obligations under the franchise is diluted by the presence of the other operator the outcome may simply be that fares are *de facto* allowed to rise, without the government appearing to be responsible, and without any lasting market segmentation or improvement in service.

Competition Among Operators

10. *Total commercial freedom* This involves the right to operate services on whatever routes and at whatever fares and frequencies the entrant chooses, subject only to non-discriminatory qualitative conditions. In developing countries there is usually no shortage of potential entrants because of the relatively low skill and capital requirements involved. This form of deregulation was implemented in most areas of the United Kingdom, in Santiago in Chile and in Sri Lanka. It is commonly agreed that in all cases deregulation reduced the costs of operation per vehicle-kilometer¹⁴ and increased the total supply of services and has been associated with a substantial reduction in public subsidy of bus services. There is also general agreement that there has been some fragmentation of operating responsibilities, a reduction in average vehicle loadings, and a continuing process of entry and exit (and in that sense instability) in the market. In some cases the most dynamic element with the lowest entry threshold (often the owner-driven mini-bus) may capture so much of the traffic on each route that other forms of service cannot achieve profitable volumes. Fares, although nominally freely determined, will normally settle into generally accepted patterns imposed either by users or by cartels which emerge to try to lift profits.¹⁵ The main problems of totally free entry are that excess supply may cause prices to rise while costs of supply are falling; that service may be unstable and information for passengers difficult to maintain: that predation by incumbents or cartellization may emerge; that bus maintenance, and hence safety, may deteriorate; that undesirable operating practices may arise; that congestion and environmental externalities may be accentuated; and that some unremunerative services will disappear.¹⁶

¹¹ For example, in the cities of Guayaquil and Quito, "standard" bus services were supplemented, and eventually totally undermined, by the entry of a higher class of service at higher (but still controlled) fares, which have in their turn succumbed to yet a new layer of services operating without fares control to meet the remaining deficiencies. Differentiated service also occurs in Seoul and is being planned for Dhaka.

¹² That happened in the early sixties in Buenos Aires, in the early eighties in Kingston, Jamaica, and is currently happening in Barbados and in several African countries. Attempts to resuscitate ailing parastatals, especially where their decline is associated with competition from an efficient private sector alternative, should be viewed very cautiously.

¹³ In several South African cities, failure either to control the numbers of combi-taxis, or to ensure that they have adequate work in the context of the continuing subsidy of regular buses at higher cost, has led to violence among combi-taxi owners and risk to passengers.

¹⁴ In the UK, real savings of between 30 and 40 percent have been achieved by deregulation, predominantly from increased productivity of vehicles and labor, rather than from reduced real wages.

¹⁵ See O. Figueroa *Organization et Fonctionnement des Transports Collectifs a Santiago du Chili: bilan de 10 ans de dereglementation* INRETS, Paris, juillet, 1991. Also, see R. Darbera. "Deregulation of Urban Transport in Chile: What Have We Learned From The Decade 1979-1989?" *Transport Reviews*, Vol 13, No. 1, 1993, pp 45-59.

¹⁶ There are a range of dangerous and wasteful operating practices, to be observed in competitive bus transport operations in countries such as Sri Lanka, Venezuela, and Jamaica. These practices include:

11. *Open entry with fare/route control.* Open entry may be applied *with fares and/or route control* as in a number of South American cities (e.g. Buenos Aires). Note that the specification of fares levels has the effect of preventing very excessive levels of supply and very low load factors, as these would not be commercially viable. The main problems with the fares and route control approach are those of controlling operating practices; maintaining safe operation; avoiding congestion in the areas of highest central demand and avoiding the creation of exploitative cartels. Liberalized competition in the market, with or without fare and route controls thus needs to be supported by controls on both structure and behavior of competitors

Competition for the Market

12. It is possible to reconcile the maintenance of some planning control (which may be used to avoid some of the problems mentioned above) with the introduction of competition *within* the bus sector through competitive bidding for monopoly franchises. Franchising arrangements may vary in many respects, including size of package, length of contracts, nature of responsibility transferred, conditions of operation, and arrangements for renegotiation or continuation. These conditions are not independent of each other. For example, if packages are big and contracts are short private contractors are unlikely to be willing to accept the risk of vehicle ownership. There are therefore several main variants of the franchising approach reflecting compatible combinations of conditions.

The System Management Contract

13. At one extreme a whole area may be franchised to a single operator for a protracted period, either with or without a complete specification of service structures and fares. This has the advantage of giving security of service. But it is then difficult then to find credible alternative operators; terminals, vehicles and even staff may need to be transferred between operators as a consequence of franchising changes. Competition is primarily among different management groups, with inter-area emulation and professional reputation being the main instruments of competitive pressure. This approach does effectively separate the political and professional management elements, and is the prevalent system in France. But it is susceptible to capture both by incumbent management groups, who have a great advantage in the periodic competitions, and by organized labor, which may be under no effective competitive threat. The selected management may have inducements to subcontract to small operators if they operate more economically.

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- *hanging back*—trying to widen the gap between vehicles in order to increase the number of passengers picked up;
 - *blocking*—blocking exit from terminals for competing vehicles until a full load has been obtained;
 - *nursing*—running buses closely in front of and behind a competitor’s vehicle to limit his access to passengers;
 - *racing*—racing to overtake the preceding vehicle in order to pick up more passengers;
 - *refusing passengers*—declining to carry legally entitled concession fare passengers, such as students or pensioners;
 - *turning short*—turning short of the terminal point of the route to pick up passengers going in the opposite direction.

At first sight these appear to deny rationality on the part of the evolving set of participating operators, whose aggregate profits will be maximized by tailoring their offers to the market's needs. But this is a kind of prisoner’s dilemma example, where it is to the advantage of any individual to behave “irresponsibly” if the others behave responsibly, and to the advantage of responsible operators to conform to the irresponsible behavior once a significant number of others have adopted it. The “irresponsible” outcome thus prevails.

The Service Supply Contract

14. Competition may be intensified by putting smaller packages of service out to tender, as in Great Britain and Scandinavia. There are two main variants of this approach. The “gross cost” variant involves bidding on the basis of the total costs of provision of the specified service, with all revenues accruing to the central authority.¹⁷ This shields the operator from any revenue risk and hence reduces his incentive to produce high service quality or to collect farebox revenue. It also increases the monitoring requirement for the authority over revenue collection and service delivery. The “net cost” variant involves bids on the basis of the supplemental revenue or subsidy required by the bidder. This puts revenue as well as supply cost risk firmly with the supplier, and appears to have the greatest efficiency incentives. However, incumbents have an extra advantage by knowing current patronage and revenues,¹⁸ and an operator’s success may depend more on skill in negotiating a share of off-bus revenues than on operating efficiently.

15. In these tendering systems the franchising agency may be persuaded to require of new entrants too many of the characteristics of the incumbent. This will limit the competitive field to ‘established’ operators, all of whom have routes to protect and who may therefore choose, in an oligopolistic stand-off, not to compete for each other’s routes. Quality requirements for entrants, and the size of packages of services tendered, must thus be set sufficiently flexibly as to permit effective competition. The main problems of this approach are thus ensuring fair competition; preventing cartellization; administering the tendering procedures; and planning a service provision to maintain innovation.

Unbundling and Sub-Contracting

16. Even where the supply of bus transport services is formally a protected monopoly right for a parastatal, there are a number of ways in which competition and private sector involvement can be secured. Few parastatal bus companies manufacture their own vehicles, despite the inducements to vertical integration implicit in rate-of-return regulation.¹⁹ Other activities which may be contracted out include vehicle maintenance, particularly for light vehicles for which there is usually a large commercial maintenance sector. Where more competitive service supply is desired, but planning skills are concentrated in the incumbent (parastatal) operator, the master operator may be required to subcontract part of its operations to the private sector (as in Delhi, Melbourne). This effectively delegates the management of the city-wide service to the original bus operator, but achieves competitive supply of service. The main problems are those of creating sufficient incentive to subcontract, ensuring fair competition between “in-house” and externally contracted suppliers, and ensuring that the master operator uses its powers to meet the social objectives.

¹⁷ This service-only contracting is used in London and Melbourne, where multi-modal fare-card schemes are used.

¹⁸ The extra risk that this creates for a new entrant may reduce the number of competitors or lead prospective entrants to bid very conservatively. Analysis of tendering in the UK has suggested that gross cost tendering results in significantly greater net outlays for a supporting authority than net cost tendering. See P. White and S. Tough. “Alternative Tendering Systems in the UK.” Paper presented at the Third International Conference on Competition and Ownership in Public Transport Mississauga, Canada. September, 1993. This may be overcome to some extent by requirement of disclosure of information as part of the terms of the contracts, so that the information asymmetry is only great in the first round of competition.

¹⁹ The structural distortions induced by rate of return regulation are discussed in A.E. Kahn *The Economics of Regulation: Principles and Institutions*. MIT Press. Cambridge, Mass. 1988.

Mixed Systems

17. A mixed system, used in the United Kingdom outside London, combines free entry into the industry without subsidy, with subsidized services put out to competitive tender. The main problems of this type of competitive system are ensuring fair competition, and particularly preventing cross-subsidy of bids by parastatals; establishing the relationship between the “commercial” and the “subsidized” sectors to prevent game playing by incumbents; establishing the appropriate administrative skills for operating a tendering system: monitoring performance to establish that contract conditions have been satisfied; and providing information to customers where a service network is divided among multiple operators.

RECOMMENDATIONS

Selecting a Competitive Form

18. Because there are so many different possible competitive arrangements, with differing merits and limitations, selection of an appropriate arrangement calls for;

- (a) A measurement of performance of systems (symptoms)
- (b) An identification of the problems generating the symptoms (problems)
- (c) A pathological definition of the source of the problems (causes)
- (d) A prescription of actions (sustainable regulatory reform)

Performance Indicators and Standards

19. From the users’ viewpoint one may observe characteristics of *service quality* and *service affordability*, indicators of which can be obtained from the *internal* operating statistics of either a single parastatal or an association or sample of private operators, and from information *external* to the operators (see Annex 2, Table 1). Such indicators are only meaningful when set against some standard. These may be obtained from evidence of what can be achieved elsewhere in best practice situations, or by reference to some concept of “reasonableness.”

Performance Profiles and Problem Identification

20. The symptoms of low quality or high cost to consumers can be associated with the characteristics of supply, which constitute the problem identification. Looking at the supply side one can observe the *financial* and *operational* performance of the undertakings involved (see Annex 2, Table 2). Performance indicators are, at best, only guides and it is not possible to prescribe rigidly what are acceptable levels of each individual aspect of service. However, if operational performance appears poor on several counts, it is then possible to identify the nature of the major problems.

Diagnosis

21. The dimensions of poor supply performance need to be associated with structural and behavioral elements that are capable of improvement. This is an art rather than a science. A

particular supply defect may have a range of alternative, or simultaneously contributing, causes. A test of this might be to check the local evidence on all of the indicators against the standards offered (see Annex 2, Table 3 for an example of the diagnostics that might be adopted).

Sustaining Regulatory Reform

22. Various forms of competition have been identified. For each alternative we can suggest some critical requirements for satisfactory operation (see Annex 2, Table 4). Where competition in the market is among modes there must be comparability of infrastructure charging, consistency of safety and operational controls, and non-discriminatory public service obligations. Where competition in the market is between operators of the same mode there must be creation of an initial competitive structure; control of structural concentration; and prevention of predation by incumbents. Where competition is for the market there must be efficient specification of the service requirements; monitoring of bidding procedures; and proper supervision of service provision. This highlights the onerous public sector responsibility to establish and maintain the institutional framework for competition. Institutions must also exist to prevent the emergence of private monopoly power; to avoid various forms of anti-social or predatory competitive behavior; and to manage the impacts of competition on urban congestion and the environment.

Establishing and Maintaining Appropriate Institutional Structures

Competition in the Market—Coordination and Infrastructure Requirements.

23. Even for competition among operators in the market, there may still be a residual requirement for some public sector activity to support coordination, such as organization of joint timetable production, and facilitation of multi-mode, multi-operator or multi-journey ticketing arrangements.

In large cities coordination needs may require the establishment of a public transport planning office.

24. Public infrastructure is also important. The use of terminals for loading urban buses may be attractive to cities for traffic management reasons and to passengers for the fairness of boarding vehicles in turn. But enforcement of terminal loading increases walk times for passengers and enhances the ability of unions, criminal elements, or established operators' cartels to exploit control of supply. There are several ways of attempting to maintain physically free entry to match the nominal regulatory free entry:

- (a) on-street loading should be encouraged wherever possible;
- (b) a variety of terminals should be provided to minimize passengers' walk times to a minibus;
- (c) driver-induced delays in terminals should be monitored and controlled.

Public infrastructure, including terminals, must be provided and managed in a non-discriminatory way.

Competition for the Market—Service Planning And Contract Management Institutions

25. Under a system of competitive bidding for franchises service planning remains a task for the government, or some quasi governmental authority. Ideally that requires a clear statement of political objective, together with technical skill in defining network structures, service requirements etc. In many cases such skills are not available in developing countries.

Establishment of competition may require technical assistance to develop the necessary analytical and management skills.

26. Contract management is not a trivial task. It requires clear specification, firm but fair contract terms, high integrity evaluation and award process, demanding performance standards, good quality monitoring of safety and operational performance, and clear penalties and enforcement procedures for non-performance.²⁰ This poses significant demands on the competence and integrity of those administering the system. It may be possible to hive off the planning unit of the parastatal, and give it a formal role of supervising the tendering situation. If appropriate incentives are created for the efficient performance of this role this can be very effective and has worked well in the metropolitan counties in the United Kingdom.

Where effective contract management cannot be constructed or guaranteed it is sensible to seek a form of competition with less requirement of administrative skill.

27. Particularly in urban areas where fixed rail systems exist, a rational division of function between the modes is desirable. Ideally one might look at urban rail and bus services as the equivalent of primary and secondary roads within a highways hierarchy. That implies some coordination of route structures, schedules, fares and interchange facilities. It is uncertain whether in unregulated developing city situations sensible intermodal arrangements will emerge as a consequence of market forces. The main pressure for that to occur is the self-interest of bus operators in concentrating on routes where they can move reasonably freely, and hence get high levels of utilization.

Selection and design of a competitive regime should take into account the impacts of competition on intermodal coordination.

Equal Treatment Of All Competing Operators

28. Common to both forms of competition is the requirement that suppliers compete on the same footing. This imposes some strong institutional conditions, particularly if any public ownership remains.

- (a) *Similar commercial objectives.* The imposition of an ostensibly commercial structure on a parastatal is no protection against predatory pricing or bidding, unless it is also subject to the same bankruptcy constraint as a private company.

²⁰ See N. Newton. "Competitive Tendering—The London Experience." Paper presented to the Third International Conference on Privatization and Deregulation in Passenger Transport Mississauga, Canada, September 1993.

- (b) *Similar commercial freedom.* Competition will be distorted if some operators (typically the publicly owned or longest established) are expected to carry public service obligations while others are not.²¹
- (c) *Fair access to public network facilities.* This applies particularly where terminals are publicly owned.
- (d) *Similar access to subsidy.* Differential access to public subsidy often occurs by mode²² and by ownership, with subsidy paid only to parastatals. This destroys private incentives to compete.
- (e) *Similar constraints on operations.* Some operational constraints may occur for traffic management reasons.²³ These must be seen to be implemented in a way which does not distort competition.
- (f) *Similar safety requirements.* The enforcement of stringent safety standards on traditional operators in contexts where the informal sector operates with much less control, will adversely affect the viability of the traditional sector. However, care must be taken to ensure that any constraints imposed on the informal sector have a valid safety basis and are not tacit barriers to entry.²⁴

Conditions for fair competition should be legally established as a prerequisite for the introduction of competition in any form.

Controlling Supply Structures

Ownership

29. In principle, there is no reason why public and private sector companies should not compete on equal terms in liberalized markets. In practice it may be difficult to restructure a publicly owned company in such a way as to give it the same conditions and constraints as the private company (employment conditions, social service obligations, bankruptcy constraint, etc.). If there is any fear in the private sector that the public companies have any special treatment, competitive entry will be inhibited and the objectives of liberalization frustrated.²⁵ The level of concentration is also

²¹ For example, DTC are expected to provide for students and others at concessionary fares in Delhi, whilst private sector competitors are not.

²² For example, in South African cities rail and bus services receive heavy subsidy, but combi-taxis (minibuses) operate similar routes without support. The availability of subsidies, particularly for the buses, limits the competitive fares which combi-taxis can charge, and hence (so it is claimed) their ability to replace vehicles.

²³ The locations at which minibuses may pick up, set down and stand in Hong Kong are controlled to limit congestion.

²⁴ Mini-buses require little more driving skill than automobiles. This was recognized in the British deregulation by eliminating the requirement of minibus drivers for Public Service Vehicle License. This had a dramatic effect on the bargaining power of the traditional union representing bus crews, and was instrumental in the radical revision of wage and operating agreements.

²⁵ The attraction of municipal ownership of an undertaking diminishes in direct proportion to the amount of discretion that ownership gives to the local politicians.

important. Liberalizing and privatizing may not be sufficient to stimulate competition if the incumbent has a monopoly position from which he can practice covert predation. Even duopoly structures may turn out to be inimical to effective competition as the duopolists mutually recognize their advantage in “standing off.” Thus attention must be paid to the existence of sufficient potential competitors and sufficient fragmentation to prevent either predatory monopoly or joint profit-maximizing duopoly.

This requires both the initial establishment of a competitive structure and continuous monitoring and control of efforts to reduce effective competition through merger.

Cartels and Operators Associations

30. Operators frequently attempt to collaborate to limit entry and maintain prices. Such institutions are common in South America²⁶ and Africa.²⁷ Associations are driven primarily by self interest. Some of the ways in which they may pursue that self-interest are in the public interest. For example, in Buenos Aires, operating franchises are only granted to legally constituted cooperatives, who perform the function of planning, scheduling and controlling operations on their routes. Competition is maintained by ensuring that the associations have franchises which compete with each other, and it is then in the interests of individual associations to have open entry and to maintain high quality of service.²⁸ Some are not in the public interest. If the “operators association” (the cartel) succeeds in lifting fares to cover the costs of its least efficient members, excess supply will result, and fares will be too high for many former bus users, as in Santiago.²⁹ The outcome is in the public interest when associations are able and motivated to ensure operational discipline, but unable to exploit their position to increase profit at the expense of consumers welfare. This suggests the following:

- (a) no bus cooperative should ever be given a complete monopoly status;
- (b) associations granted local monopoly franchises must be open to new members;
- (c) associations must not be given any special preference;
- (d) associations must be seen to be subject to public scrutiny; if the transport sector is completely deregulated they should be subject to general regulation of monopoly and restrictive practice;

²⁶ United Nations. Economic Commission for Latin America and the Caribbean, 1992. *The Impacts of Subsidies, Regulation, and Different Forms of Ownership on the Service Quality and Operational Efficiency of Urban Bus Systems in Latin America*. August.

²⁷ Pradeilles, J.C., G. Garcia-Oriol and I. Tall. “L’organisation corporative des chauffeurs de taxis collectifs a Bamako et Lome” in X. Godard (ed). 1992. *Mobilite et transports dans les pays en developpement*. Paris: L’Harmattan.

²⁸ See K.M. Gwilliam *Bus Operators Associations* Infrastructure Note.

²⁹ Darbera, R. op.cit.

- (e) associations must always be subject to some external pressure (either from other modes, other operators in the market, or the regulator);
- (f) it must not be possible to “buy off” that external pressure by political influence;
- (g) where an association is the channel through which tendered services are won, any penalty for non-performance should be imposed on the association, which should then discipline its non-performing members;
- (h) where associations are seen to be performing a useful function they should be legally recognized, to avoid the criminal elements that commonly appear within illegal organizations.

Operators’ associations should be treated as possible instruments for achieving efficient operation within a liberal, but scrutinized, framework; not as an alternative to public regulation.

Controlling Behavior

Operating Practices

31. Some of the dangerous and socially unacceptable operating practices which have been observed to occur in competitive situations are described in Annex 2. Action by the authorities sometimes accentuate problems, for example by enforcing the use of unsuitably designed terminals.³⁰ Many problems can be reduced by careful design and effective enforcement of quality regulations.

Quality and safety regulation and enforcement should be adequately resourced in regulatory reform.³¹

Commercial Predation

32. Where there is no entry limitation and where any qualified operator can signify its intention to operate, predatory tactics may be used to punish entry and ultimately to deter it. This may involve offering services or fares which incur losses, in order to reduce the traffic available to a competitor, so that the competitor's departure will ensure higher long run profits. In theory, the ideal public defense is rules which require service “innovations,” however subtle their anti-competitive intent, to be offered for a period sufficiently long, and certainly beyond the time when a competitor might be

³⁰ For example, in both Lagos with the unregulated molues, and in Port Moresby where only vehicle quality and nominated routes are controlled, most passengers at the inner ends of routes join at terminals. In both places, local authorities have constructed bus stopping places in a layout which enables the bus in front of the queue to remain on the stand until it has gained what the driver considers to be a payable load. In Lagos, the result is that Molues run very small distances each day, spending up to half of their operating time in queues at terminals, and doubling the journey times for many passengers while they wait for loads to accumulate.

³¹ For example, in Jamaica the monitoring of vehicle quality requirements for the highly fragmented bus industry is totally beyond the capability of the Island Traffic Authority with its existing resources and facilities.

driven off, to (a) give users continuing benefits and (b) to impose significant costs on the would-be predator.

*Some public supervisory institution is necessary to protect the public's interest against predation.*³²

33. In the case of competition for franchises the problem is to enforce fair bidding, and to prevent the parastatal (or indeed any large incumbent) from loss-leading or cross-subsidizing. Unless private bidders can be assured that such bidding will be fair, they are unlikely to bid. The first step in this direction involves the realistic setting of capability qualifications for bidders, at both managerial and operating levels.³³

Where parastatals are involved there will be a need for audit to exclude "low-ball" bidding. Performance monitoring is also required to ensure fairness in service provision.

Fare Setting

34. *Fares with free entry.* Fares may increase in liberalized markets either as a result of cartellization or as a consequence of the peculiarities of the competitive process for transport service. At very high fare levels one might expect new entry to be effective; the main reason why this has not happened in extreme cases like Santiago appears to be the exercise of intimidation. The conclusion to be drawn is that in open entry situations the emphasis should be put on ensuring the absence of cartels (or in the case of operators associations ensuring that they are open entry associations), and the suppression of illegal intimidation.

Fare controls should only be resorted to where it is considered easier to enforce control of fares than of cartels or where, as in some taxi markets, fragmentation of supply makes price competition unlikely.

35. *Fares in competitive tendering systems.* If fares freedom is allowed and service provision franchised to the operator able to make the best bid, monopoly prices would be charged. Whilst that would be the best outcome for the managing authority in cost or revenue terms, it would not yield a welfare optimum. There are three main bases on which this problem might be confronted, namely:

- (a) Inviting bids offering different combinations of fare and frequency.
- (b) Specifying frequency and selecting the bid which offered the lowest fares.
- (c) Specifying fares and frequency, and selecting the best priced bid.

³² See M.E.Beasley: "Collusion, Predation and Merger in the UK Bus Industry," Journal of Transport Economics and Policy, Vol. 214, pp. 295-310.

³³ Managerial capability qualifications, as required in the British tendering system, may be an unnecessary reservation of what is essentially a very simple business. In India, preference in the Delhi tenders has been given to ex-servicemen, a preference also having no grounds in terms of likelihood of success as bus operators.

36. The first approach is logically optimal, but is most complex and open to corruption, as it involves selecting the offer considered to maximize welfare. The second approach would allow bidders to show initiative in their fare structures, but is inadequate as for some desired services there might not be any fares at which service was worth providing. The third approach gives the least freedom to bidders, but the greatest simplicity of administration. It has the advantage of not requiring any knowledge of operating costs so long as there are sufficient competitors to tender independently and appropriate specification and controls on the quality of service and makes the consequences of setting fares too low immediately apparent.

The tendering system should be selected to avoid the emergence of monopoly prices.

Managing Congestion And Environmental Pollution

37. In the absence of sophisticated road pricing to internalize the external effects of transport appropriate physical restraints on traffic may be used in its place. There is no reason why public transport vehicles should be exempt from such controls where the net costs they impose are particularly high.³⁴ But measures to restrict bus capacity in circumstances where other vehicles are not so circumscribed will not provide a solution to the general congestion problem, but only discriminate against one class of (highly efficient) road user. The general conclusion must be that buses should only be constrained in very specific local circumstances where the net economic benefit of the constraint can be demonstrated. Congestion is unlikely ever to be a justification for general restriction on bus service competition. The same arguments hold for the treatment of the effects of buses on the urban environment. In addition, liberalization may have adverse effects on the environment as a consequence of its effect on the vehicles used.³⁵

The remedy for environmental impacts should lie in specific regulation of emissions, noise levels, etc., applying to all types of vehicle operators, and not general restriction on bus competition.

FURTHER READING

1. For a comprehensive review and analysis of different aspects of the British experience of bus deregulation see *Journal of Transport Economics and Policy* 24 (3), September, 1990. A recent assessment is found in Mackie, P.J., J. Preston and C.A. Nash. 1995, "Bus Deregulation: Ten Years On." *Transport Reviews* 15 (3). 229-252.

³⁴ In Manila, Philippines, public transport service on the highest volume road (EDSA) reserved predominantly for large buses to the exclusion of the smaller jeepneys. In Hong Kong similar constraints on public light buses in parts of the Kowloon Peninsula force passengers to use the more road-space-efficient large buses, or the Mass Rapid Transit Railway.

³⁵ Increased competition in the UK and Chile has led to increased vehicle lives. As older vehicles tend to be both technologically inferior and worse maintained than newer vehicles this will increase the emission rates per vehicle kilometer. It is notable that in Santiago it has been considered necessary to take specific action to control this phenomenon.

2. For an example of how environmental and social considerations can be reconciled with competition in a competitive regime , see Darbera, R. 1993. “Deregulation of Urban Transport in Chile: What Have We Learned From The Decade 1979-1989?” *Transport Reviews* 13, (1) 45-59.
3. For a review of experience with different regulatory regimes in Latin America see . United Nations. Economic Commission for Latin America and the Caribbean, 1992. *The Impacts of Subsidies, Regulation, and Different Forms of Ownership on the Service Quality and Operational Efficiency of Urban Bus Systems in Latin America*.
4. For a description of an experiment abandoned see Matsoukis, E.C. 1995. “Privatization of Bus Services in Athens, Greece.” *Transport Reviews* 16 (1).67-78.

ANNEX 1

REASONS FOR MONOPOLY FRANCHISE AND THEIR LIMITATIONS

<i>Arguments For Monopoly Franchise</i>	<i>Presumed Advantage</i>	<i>Presumed Process</i>	<i>Limitation Of Aim</i>	<i>Limitation Of Instrument</i>
Efficient capacity use	Higher load factors	Restricting frequency on more populous routes	Frequency yields time savings which may be very valuable	Tendency to support vehicle size, too large many routes and time
Economies of scale	Lower cost per seat kilometer	Larger company size reduces procurement costs	Very little evidence of scale economies in operations	Discourages different scales being adopted different functions
Economies of scope and service coordination	Lower unit costs Time savings Improved comfort	Higher asset utilization Network and timetable rationalization	May trade off gains for transfers against best performance for direct links	Offset by union restriction Requires high level of information
Safety	Better maintenance and shorter vehicle life	Better financial capability and greater regulatory leverage	Safety not simply a function of vehicle age	Tacit collusion between regulator and operator
Social service functions	Enables cross-subsidy to protect poor	Protection of route monopolies	Unremunerative routes may serve middle rather than low income groups	Poor targeting of the
Environment protection	Less congestion Better vehicles	Use of large vehicles on environmentally sensitive routes	May conflict with service quality objective	Less direct and weak firm environmental standards
Regulatory convenience	Less admin cost. Greater regulatory effectiveness	Easier monitoring. Greater leverage on management	May not be in user interest	Mutual dependence on regulators freedom

ANNEX 2

A DIAGNOSTIC APPROACH TO REGULATORY REFORM

Table 1. Indicators of Consumer Service Characteristics.

<i>Problem Addressed</i>	<i>Operators Indicator</i>	<i>External Indicator</i>	<i>Standard</i>
Service Quality			
Low comfort	Average vehicle age		10 years
		Number of modes available	2
Slow journey speed	Bus kms per hour		15 km/h
Excess waiting time		Average waiting time	15-20 mins
Peak Overloading	Passengers per vehicle / nominal capacity		120%
Service reliability	Breakdowns in service		10% of vh/day
Excessive interchange		Ave interchange per work journey	0.5-1.5
Safety	Accidents per 100,000 bus kms		1.5-3.0
Affordability			
Work journeys		Ave fare/average wage	10%
		% of walk trips of over 1 hour	5%

Table 2. Indicators Of Financial And Operational Performance

<i>Problem Addressed</i>	<i>Operators Indicator</i>	<i>External Indicator</i>	<i>Standard</i>
Financial			
Subsidy cost	Operating ratio		1.05 - 1.08
Excessive overheads	% non crew costs		
Excessive wages		Bus earnings / manual ave	0.9 - 1.1
Operational			
Inadequate capacity	Pass per day / crush capacity		12-15
Excess labor	Total staff per bus operated		3-8
	Admin staff per bus		0.3-0.4
	Maintenance staff per bus		0.5-1.5
Bad maintenance	% fleet available for service		80%-90%
Poor vehicle use	Vehicle hours per vehicle		10
	Ave kms per vehicle day		210 -260
Poor routing	% dead running mileage		0.6-1.0
Poor scheduling	Platform hours per paid hour		0.9

Table 3. Service Diagnostics

Symptom	Problems	Causes	Possible Remedies
Low revenue generation	Low % farepayers	Interest group exemptions High fare evasion	Review concession system Enforce, commercialize
	Low fares	Political control	Review subsidy policy Competitive franchising
	Low utilization	Oversupply due to political control Too high fares	Rationalize network Commercialize/privatize
Long passenger waiting times	Low frequency	No alternatives	Liberalize entry
	Overcrowding	Fares too low	Relax fares control
	Vehicle bunching	Predatory operating practices	Operators associations Franchise enforcement
Long journey times	Slow vehicle speed	Road congestion	Bus priorities Traffic management
	Excessive interchange	Network design Fares regulation	Redesign network Relax fares control
	Long journeys	Urban form/growth pattern	Targeted subsidy
High production cost	Excessive staff/vehicle	Union strength	Liberalize Competitive franchise
	High labor wage rates	Union strength	Privatize, competitive franchise
	Low vehicle availability due to poor vehicles	Restrictive import policy	Relax import controls
Diminishing market share	Increasing private transport use	Inadequate service quality	Liberal size entry of superior service Liberalize fares
	Loss to informal sector	Formal sector uncompetitive in cost or service	Liberalize entry

Table 4. Designing Sustainable Competitive Packages

<i>Regulatory Strategy</i>	<i>Problems To Be Addressed</i>	<i>Relevant Component In Regulatory Package</i>
Competition In The Market		
Core competition among modes	road congestion coordinating modes	traffic and travel demand management supervisory commission
Opening up the fringe to new modes	satisfying “basic demand” predation congestion cartels controlling operating practices	selective subsidy regulatory institution and incentives to self regulation traffic management regulatory institution traffic enforcement
Complete commercial freedom	excess supply predation by incumbents congestion safety and bus maintenance operating practices	maximum fare controls regulatory institution traffic management proper inspection regulations and finance traffic enforcement
Open entry with fare or route control	maintaining safe operation congestion cartels associations	proper inspection regulations and finance traffic management regulatory institution
Competition For The Market		
Subcontracting supply	supply cartels	regulatory institution
Service subcontracting	fair competition incumbent self interest	separate control from operations
Comprehensive competitive tendering	fair competition monitoring performance cartellization administering bidding procedures planning service provision	auditing of bids contractual penalties for non-performance institutional provision regulatory institution technical assistance technical assistance redeploy parastatal planners
Mixed Systems		
Tendering for unremunerative services	fair competition cross-subsidy by parastatals predation by incumbents administrative competence monitoring performance	legal bidding rules audit provisions regulatory institution technical assistance redeploy parastatal planners technical assistance

ANNEX 3

REGULATORY SYSTEM HISTORIES

The following cameos identify key components in situations where regulatory reforms have had substantial effects on the performance of an urban bus system.

MANCHESTER: Free Entry Supplemented By Tendering For Social Services³⁶

PERCEIVED PROBLEM: Rising subsidy cost. Prior to the 1985 Transport Act, services were provided either directly by the metropolitan Passenger Transport Executive (PTE) or by operating companies of the parastatal National Bus Company (NBC). Although the long term patronage loss of 3 to 4 percent per annum had been arrested between 1981 and 1985 subsidies were still rising .

REGULATORY REFORM The 1985 Transport Act allowed free entry to provide service on a commercial basis (including freedom to set fares). Provision was made for supplementary “social services” at controlled fares to be franchised under competitive tendering on a net cost basis. Public sector operators were either privatized (NBC) or commercialized (PTE).

CONSEQUENCES: By the end of 1993, bus kilometers operated had increased by 20 percent, operating cost per bus kilometer had fallen by nearly 40 percent, and subsidy was reduced by about 75 percent. But the proportion of buses over 12 years old had doubled, passengers per bus kilometer had almost halved and the cumulative patronage loss was 36 percent.

LESSONS: *Competition can reduce costs and subsidy requirements. Social services can be sustained by supplementary competitive tendering of subsidized services at the expense of service instability and loss of modal integration.*

SANTIAGO: Competitive Tendering To Protect Inner City Environment Combined With Free Entry Elsewhere³⁷

PERCEIVED PROBLEM: Inefficiency of parastatal operations; environmental problems of free competition.

REGULATORY REFORM: The bus industry in Santiago was totally deregulated in 1979. In 1991 quantity control on entry of buses to the central area, with licenses distributed on the basis of a competitive tender. The criteria for award of the licenses included not only the fare to be charged but also the capacity, age and environmental characteristics of the vehicle.

CONSEQUENCES: Between 1979 and 1988 the big bus fleet increased by 93 percent and the minibus fleet by 135 percent. Average passengers per day declined from 670 to 295 for big buses and from 490 to 340 for minibuses. Real fares of big buses increased by 158 percent and those of minibuses by

³⁶ Tyson, W.J. 1995. “Bus deregulation—the planning dilemma” *Transport Reviews* 15 (4) 307-315

³⁷ Darbera R. “Deregulation of urban transport in Chile: what have we learned in the decade 1979-89?” *Transport Reviews* 13 (1) 45-49.

87 percent, with the differential between them disappearing. Traffic congestion in the city center exploded, as did bus generated air pollution. After the introduction of the competitive franchising system fares have been stabilized in real terms, congestion has been relieved and environmental impact substantially reduced.

LESSONS: *Total deregulation may reduce costs but can lead to excess capacity and hence increased fares and negative environmental impacts. This can be controlled by well designed competitive tendering.*

SEOUL: Two Tier Regulation With Fare Control³⁸

PERCEIVED PROBLEM: Poor service quality and safety in unregulated competition among small operators.

REGULATORY REFORM: In 1961 The Automobile Transport Business Law provided for licensing routes. Franchisee companies must have a minimum of 70 vehicles and specified minima of capital, terminal and depot facilities. Fares, vehicle age, service levels on less remunerative routes and periods, management and labor quality and working conditions were all strictly regulated. Operators were permitted to offer superior service (the seat bus) at a premium price.

CONSEQUENCES: During the 1980s the controlled fares fell in real terms, bus stock increased by about 20 percent, though due to increased congestion passengers per bus fell by over 20 percent. Bus market share fell to 42.7 percent in 1992 (partly associated with increased metro rail capacity). The premium service took a progressively increasing share of total supply.

LESSONS: *Fare controls depress total supply quantity, even if quality controls operator safety and vehicle quality. This can be offset by the provision of multiple tiers of service at different prices.*

LONDON: Comprehensive Competitive Tendering³⁹

PERCEIVED PROBLEM: High operating and subsidy cost of the public monopoly operator. Prior to the London Transport Act, 1984 the publicly owned London Buses Ltd. had been in receipt of increasing subsidy despite increasing real fares.

REGULATORY REFORM: The 1984 Act provided for London Buses Ltd. to be divided into 11 separate operating units, ultimately to be privatized; and for services to be progressively subject to competitive tendering on a “gross cost” basis. London Regional Transport became the “public customer”, defining the routes, setting fares, paying operators for the service provided and collecting all revenue, and maintaining intermodal ticket availability and coordination.

CONSEQUENCES: By 1996 London Buses Ltd was totally privatized. 50 percent of the service contracts were competitively tendered. In ten years operating costs had fallen by 40 percent, and

³⁸ Yeong-II Kang. 1995. “The Development of Urban Bus Regulatory Policy in Korea Reviewed.” *Transport Reviews* 15 (4) 357-370.

³⁹ Kennedy, D., S. Glaister and T. Travers. *London Bus Tendering* Greater London Group. L.S.E. 1995.

subsidy by 75 percent in real terms. Intermodal integration had been strengthened and despite real fare increases of 30 percent patronage remained approximately constant.

LESSONS: *Comprehensive competitive tendering can yield the cost reduction benefits of on the road competition while retaining stability of supply and the possibility of multimodal system integration.*

BUENOS AIRES: Overlapping Route Monopoly Franchises With Fare Control⁴⁰

PERCEIVED PROBLEM: Fiscal unsustainability of public monopoly. In 1962, following a period of increasing operational inefficiency and cost, public operation of bus services in Buenos Aires was abandoned.

REGULATORY REFORM: Vehicles were transferred to owner operators. Licenses to operate routes, often overlapping, were granted to legal associations, though vehicles could remain in fragmented ownership with control over operation assigned to the society.

CONSEQUENCES: . The network is dense and service very frequent. There are no subsidies, though fares are controlled, albeit at a relatively high level by Latin American standards due to relatively low occupancy levels. Many associations have now been converted into companies. The number of staff per bus is very low (about 3); vehicles operate up to 100,000 kms per annum, but vehicles are generally well maintained. The licensing authority CONTA monitors performance and sometimes withdraws licenses

LESSONS: *Small scale operation can be organized in a disciplined way so long as there is effective regulatory control on behavior and performance. Multiple route monopoly franchises can be designed to overlap to reconcile incentives to disciplined service provision with effective competitive pressure.*

HONG KONG: Integration Of Para-Transit In Competition Between Regulated Modes⁴¹

PERCEIVED PROBLEM: Need to provide increased variety of service within a regulated regime. Taxis and dual purpose vans entered the market in the late 60's in response to deficient public transport supply.

REGULATORY REFORM: In 1969 green minibuses were licensed to run scheduled services on planned routes subject to maximum fare control with rights and obligations of a Passenger Service License holder. Their services are now planned to act as rail feeders, to serve routes which are inaccessible or unprofitable for larger vehicles, and to offer a premium public transport alternative to the private car. Red minibuses have no route or price controls, and have neither the rights (entry to prohibited zones, use of public terminals) nor obligations of a PSL, but operate on broadly fixed routes. Both are subject to quota limits. In 1982 the approved size of PLBs was increased; and since 1988 they are allowed to carry up to 16 passengers.

⁴⁰ Economic Commission for Latin America and the Caribbean. 1992. *The Impacts of Subsidies, Regulation and Different Forms of Ownership on the Service Quality and Operational Efficiency of Urban Bus Systems in Latin America*. 28-29, 107-110.

⁴¹ Lee, E.S.W. "Planning and control of paratransit services in Hong Kong" *Transport Reviews* 9 (4) 279-303

CONSEQUENCES: Initially PLBs competed with conventional buses. Although they have lost market share with the development of the metro system together they now have a market share of between 15 and 20 percent.

LESSONS: *The informal sector can be advantageously harnessed to supplement basic public transport services in dense cities.*

DAKAR: Competitive Tendering With Vehicle Leasing

PERCEIVED PROBLEM: Decline of finances and service level of parastatal operator under contract plan arrangement

REGULATORY REFORM: Associated with the decline of the market share of SOTRAC from 65 percent to 33 percent between 1980 and 1990, and increasing financial cost of the contract arrangement was a growth of the unsubsidized licensed services of small operators -Cars Rapides. These are now suffering from inability to renew fleet.. In a new regulatory framework SOTRAC will be privatized and a competitive tendering system introduced for urban services. A coordinating body is to be established with an urban transport development fund. A vehicle leasing scheme will be put in place open to all operators.

CONSEQUENCES: The new scheme will create a financial basis for the sustainability of a competitively operated but coordinated urban transport service.

LESSONS: *Subsidy can be more allocated more efficiently between operators in a competitive tendering regime.*