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Opinion

Wanted - An Ambitious Vision for Public Transport

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Momentous issues lie behind the apparently dry choices facing the experts now reviewing Singapore's public transport arrangements. As a large, compact city, Singapore is approaching limits to road capacity expansion and faces a traffic-clogged future unless public transport's role can be widened. Public transport will increasingly be called upon to compete with cars for customers who have a choice. This will be impossible without a vision that is more ambitious than currently.

This has implications for how public transport is organised and regulated. Existing arrangements are almost certainly not up to the task and fine-tuning will not be enough. This article discusses a more ambitious, yet still eminently feasible, vision for public transport. This alternative is the emerging state-of-the-art approach, and involves introducing real competition to the public transport market, but at the same time, requires a stronger role for the public sector in planning a highly-attractive, comprehensive and well-integrated system.

Success So Far Despite Humble Aspirations for Public Transport

Singapore' public transport has done quite well even without a very ambitious vision. It has aimed to be a basic utility for no-fuss mobility to the masses who do not own cars. Since the 1970s, this modest ambition combined very well with efforts to contain car ownership and usage. In the process, a steady stream of improvements, including the expanding MRT network, were successfully delivered to an increasingly middle-class, but mostly non-car-owning, customer base.

However, this approach will soon face growing tensions. Social and economic changes and shifts in vehicle tax policy are reducing the number of captives to public transport. For example, as car usage costs go up but the cost barriers to car ownership go down we are likely to see larger numbers of relatively low-income car-owning households. But at the same time, larger numbers of relatively high-income households may remain car-free, encouraged

by the expanding rail network and by the boom in centrally-located premium housing that serves an increasingly attractive 'cosmopolitan' inner-city lifestyle. These, and other, 'choice' users of public transport will have high expectations of services. Recent declining satisfaction with bus waiting times is a foretaste of things to come.

The authorities have already expressed concern that public transport needs to improve, but do not seem to be contemplating any fundamental change of approach. This article argues that public transport in Singapore does need a much more ambitious vision. This in turn will require significant changes to institutional and regulatory arrangements to support it.

International Role Models for Ambitious Public Transport?

Where should we look for models? Certainly not to automobile-dependent cities in North America or Australia, where public transport has largely admitted defeat and retreated to 'niches', such as serving radial work trips and providing welfare service for people without alternatives.

Public transport 'paradises', such as Hong Kong and Japan's large cities, certainly provide various lessons but, surprisingly perhaps, not when it comes to the challenge of competing with private cars. The huge rail systems and tiny endowment of road space in Japan and the congestion and extreme urban density of Hong Kong (it has triple Singapore's population per urbanized hectare) limit the appeal of cars and help to protect public transport's role. Strenuous public transport promotion efforts are less necessary in such places than they will be here.

It is in places where the private car is indeed a real threat but where public transport nevertheless refuses to accept defeat that we find the most intense public transport innovation efforts. Some of the most energetic efforts have been in the inner cities of central and northern Europe, but Seoul (Box 1) and certain Latin American cities, such as Bogotá have also taken dramatic steps. The best of these aim to make public transport a real competitor for cars in order to halt its losses of market share.

BOX #1: Seoul's 2004 Bus System Reforms

Seoul in South Korea has a large subway and until 2004 had a bus network run by numerous private operators with poor coordination. Since the mid-1980s it has faced the challenge of rapid increases in car ownership. Pucher et al. (2005) describe reforms in 2004 that reorganised Seoul's bus services.

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> Inspired by integrated urban public transport systems in Scandinavia, Germany and Switzerland, the changes focused on improved, more customer-oriented service, integration and a shift to a hub-and-spoke network structure. Regulatory reforms were also a key feature.
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> > 'The Seoul Metropolitan Government greatly increased its control over bus routes, schedules, fares, and overall system design. It introduced what it calls a "semi-public operation system" that retains private bus firms but leaves route, schedule, and fare decisions to the Seoul Metropolitan Government. Moreover, it now reimburses bus firms on the basis of vehicle km of service instead of passenger trips…' (p.48)
>
> The necessary monitoring and coordination is handled with an advanced application of Intelligent Transport System (ITS) technology, using GPS. Benefits claimed so far include impressive increases in bus speeds (especially on new Bus Rapid Transit corridors) and an upward trend in bus passenger numbers without a drop in subway use.

The Importance of Public Transport Integration

Infrastructure, such as urban rail systems and Bus Rapid Transit (BRT), is part of many efforts to improve public transport but the most ambitious also involve excellent integration. Integration serves an ambitious vision well by being highly customer-oriented. In an integrated public transport system, the private car is seen as the primary rival, not other public transport operators. Highly integrated public transport systems are planned and marketed as a unified whole and present a single brand image to the general public. Stockholm pioneered this approach in the 1960s and Zurich is among those to have taken it furthest (see for example, Mees, 2000).

Aiming to become a comprehensive mobility tool, in competition with cars, requires strenuous efforts to ensure transfers are simple, quick and reliable. Easier transfers are vital if the full range of destinations is to be served, not just the city centre. This requires either high-frequency, regular service on all services or (in lower density areas) a carefully coordinated, 'timed pulse' approach to scheduling.

Another connection between integration and improving frequencies runs the other way. One way to increase frequencies at low cost is via a shift to a more thoroughly 'hub and spoke' network layout. However, this obviously requires more transfers, which must therefore be made as easy as possible, requiring excellent integration.

Unified marketing also seeks customer loyalty to the system as a whole, often with the help of heavily-discounted season passes. Information for trip planning is unified for the whole

system. Integrated systems generally make available high-quality, comprehensive maps of the entire public transport network.

Singapore's system falls short in several of these respects. In the 1990s, Singapore's transport planners proclaimed integration (or 'seamlessness') to be a key goal in the improvement of public transport. Significant progress was made, especially on physical integration of bus and MRT and on common ticketing. However, integration improvements seem to have stalled.

Existing Arrangements Limit Integration and the Ambition of Public Transport Improvements

Singapore's existing public transport regulatory arrangements involve two operators facing fare regulation and service standards overseen by the Public Transport Council (PTC), a public agency at 'arm's length' from government. Each operator has a permanent monopoly within its own zone. The operators have considerable autonomy over the details of their routes and schedules, since the service standards do not specify these in minute detail. Having two operators makes the PTC's regulation task slightly easier by allowing their performance to be benchmarked against each other. This is so-called 'benchmark competition', although it is not really competition at all. In addition, numerous charter, school and shuttle services fall beyond the main system, each with their own information, payments and marketing.

This arrangement has delivered a good basic system. But it presents important barriers to customer-oriented improvements. Firstly, it would hamper the creation of a more fully integrated system. In fact, rivalry between the two companies seems to be undermining existing integration, especially in information and marketing. Attractive season passes that cover the whole system seem unlikely to be possible. The operators each run independent websites and telephone service and neither provides substantial useful information about the services of the other.

Secondly, the existing arrangement allows only incremental steps to 'raise the bar' and require enhanced service levels. Under the existing system, the government cannot impose innovations, except indirectly via the service standards. With only indirect tools available it

would be difficult to be ambitious on the creation of a more attractive and customer-oriented public transport system.

This problem of limited direct influence goes further because we may need to pursue cooperation beyond the public transport system. Public transport alone, even if truly excellent and highly integrated, may not be enough to seriously dent the appeal of private cars. Cooperation efforts need to be extended to all of the alternatives to private cars. Since the late 1990s, in German cities such as Bremen and Hanover, and Swiss cities such as Zurich, cooperation has been expanding between public transport and its natural allies, namely car-sharing together with car-rental, taxis, home delivery services, car-free housing developments, and the humble modes of walking and bicycles. At its most ambitious, such cooperation creates an 'alternative mobility package' with the aim of making a non-car owning lifestyle an attractive alternative to the car-owning lifestyle. Such efforts would be difficult to encourage under Singapore's current public transport regulatory system.

Is Competition Compatible with More Ambitious and Highly Integrated Public Transport?

If the existing regulated monopoly arrangement with 'benchmarking' competition limits integration and discourages more ambitious reforms does this mean that any increase in competition would be even worse? Certainly, the 'free-for-all' approach of open entry to the public transport industry or 'competition in the market' would destroy integration and be disastrous.

Nevertheless, there is a way to enhance competition that is compatible with improved integration and ambitious, customer-oriented, improvements. It requires 'competition for the market', which involves competitive tendering for the right to operate sets of public transport routes (see Box 2 for three main types).

The simplest way to shift to competition for the market is unfortunately not the answer. Singapore could quite easily adopt the franchise system used for Hong Kong's mainline buses, which is very similar to Singapore's bus arrangement but has competitive tendering. In both places operators largely determine their own routes and schedules, in accordance with broad guidelines. Such a change could probably offer efficiency gains through competition. And it might also offer the opportunity to increase service standards substantially at

tendering times. Unfortunately, a shift to competitively tendered franchises would do little to improve integration. Franchisees would probably maintain separate public identities, information services and marketing approaches and would have little incentive to cooperate with each other. Hong Kong's level of integration is certainly not bad, but as a public transport 'paradise', it does not need to strive in this area, as Singapore probably does.

So Singapore should probably consider another kind of competition for the market, namely 'service contracts', and in particular, 'gross-cost' service contracts (see Box 2). This is the approach to introducing competition that is most compatible with both a high degree of system integration and with more ambitious, customer-oriented planning. Service contracts have been very widely applied but it is in Scandinavia that the combination of competitive tendering, excellent integration and ambitious targets for system improvements has been most notable (see for example, Hidson and Müller, 2003). This approach involves giving a single public agency responsibility for integrated planning of routes, timetables and pricing, in accordance with a unified vision for the role of the public transport system. Private operators compete via periodic tendering for the right to operate routes specified by the agency. The gross cost approach involves the central pooling of fare revenues and payment to operators on the basis of performance and services delivered.

This model requires much more 'hands on' public sector planning and monitoring which would mark a significant change from Singapore's existing, relatively hands-off approach. This is certainly a disadvantage of service contracts in countries that lack the necessary institutional capacity. Clearly Singapore could muster such capacity. The improved policy options opened up in the process should make the effort worthwhile.

Careful planning and preparation is also required for competitive tendering to work well. Singapore can easily muster the necessary institutional capacity but may be concerned about the size of its market. Singapore's public transport market is far from tiny because public transport plays such a significant role (with total demand comparable to that of the whole of Australia). Nevertheless, the need for sufficiently competitive tendering may eventually prompt a gradual opening of the local public transport market to international players. Fortunately there are now many precedents to learn from. Opening the local public transport market may cause concern, but is in line with Singapore's desire to encourage local operating

companies to venture into public transport markets internationally - a process already well underway.

Box 2. Three Forms of Competition for the Market in Public Transport (as explained by Halcrow Fox, 2000)

"Gross cost contracting has been used successfully for procuring bus services in a number of developed cities. It transfers the production risk to private operators but shields them from the full commercial risks. This has the advantage of facilitating integration and enlarging the pool of competition, which is particularly important in cities where there has been a long tradition of public provision and public transport markets are weak. Cost saving over public monopolies in the range of 20% to 30% is not uncommon with this type of competition.

Net cost contracts require the operator to bear most or all of the revenue risks and are also used in bus operations. They have the advantage of relieving the authorities of revenue risks and responsibilities and, in some circumstance can act as a spur to improving operator performance. This kind of contracting however does make integration more difficult to achieve and requires safeguards to prevent operators indulging in revenue-share competition, which may act against the passengers' interests, and to ensure that any loss making service that are required are not neglected.

Franchising can be used for routes or groups of routes over a contiguous area. In the latter case operators will usually have the freedom to plan services to maximise a combination of operational and passenger service efficiency. The role of the authority is limited to setting down the fares and service parameters and monitoring the performance of the franchisee. Like net cost contracts, franchises can involve payment in either direction between the authority and the operator depending on the strength of the public transport market and, given constraints on fares, how much unremunerative service the authority requires to be operated. Whilst taking fine control out of the hands of the authority, an exclusive franchise will encourage the operator to provide fares and service integration within the franchise domain."

Source: Halcrow Fox, 2000, p.3.

Conclusion

Singapore needs a more ambitious, customer-focused vision for public transport that aims to expand its appeal to everyone, including affluent people with choices, and to become a central part of a high-quality 'car free' lifestyle.

No regulatory system is a panacea, and all have their strengths and weaknesses. This article has suggested a model with a more intensive role for the public sector in planning public transport but with continued private sector operation and the introduction of real competition via competitively tendered gross-cost service contracts.

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I have argued that this could help Singapore achieve several important goals simultaneously. It should reap efficiency benefits from competition, while also enabling an accelerated effort towards a much more ambitious and highly integrated system. The suggested approach would seem to be well-suited to Singapore's current imperatives and strengths.

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