

Urban Bus Reform Models - Australasian Practice and Experience

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Abstract:

This paper provides a summary and assessment of the experience with regulatory and associated reforms in the provision of urban bus services in Australia and New Zealand since the early 1990's. It focuses on the different regulatory reform models adopted, the progress on their implementation, their impacts, the major issues arising and the lessons learnt that are relevant to the continuing reform process in Australasia and internationally. A variety of regulatory reform models have been and are being adopted in Australasia. In New Zealand, the urban bus sector underwent fundamental reforms in 1991, with the introduction of a "semi-deregulated" system but with most services being subject to competitive tendering on a route-by-route basis. In South Australia and Western Australia, a system of competitive tendering for area franchises is being progressively implemented, with operator payments including incentive elements to encourage patronage. In NSW and Queensland, area franchises have been granted to existing operators, without a full competitive process. In Victoria, the government is negotiating area franchise contracts with "grandfather" private operators based on estimates of "efficient benchmark" costs and with a large proportion of payments related to passengers carried. In a number of other situations, the threat of competition has been used as the main spur to improving efficiency, rather than competition itself. The paper describes the various reform models adopted, assesses their impacts to date and attempts to draw conclusions on the success of the various approaches in different political, market and operating environments. It draws out lessons and conclusions relevant both to the ongoing reform process in Australasia and to the reform process in other countries internationally.

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Introduction

The urban bus industry in both Australia and New Zealand has been undergoing major changes since the early 1990s, with the introduction of regulatory, institutional and associated reforms

Considerable reforms have taken place to date, but with different emphasis, with different timings and at different rates in New Zealand and the various Australian states. In many respects New Zealand has set the pace and the Australian states are following after, although adopting different reform models.

In Australia, the pace of reform has accelerated over the last few years and looks set to continue at a relatively rapid rate for the next few years. In 1996, a substantial proportion of the urban bus services in two states (South Australia, Western Australia) were competitively tendered, while contracts for the majority of services in Victoria are currently under negotiation with incumbent operators, based on best practice benchmarks. There have been further moves towards competitive tendering, corporatisation and/or privatisation in other states. In New Zealand, the legislation has remained unchanged, but operators and regulators have continued to adapt to it in different ways in different centres

This paper reports on the recent reform developments in the two countries, with its prime emphasis being on the Australian situation and particularly the competitive tendering and contracting (CTC) systems being implemented.

The paper first describes the various possible approaches to regulatory reform, in terms of productive and allocate efficiency aspects, and the categories of reform models that emerge. It then summarises the various reform approaches being adopted in Australasia and categorises these against these models. The key features and issues relating to the Australasian approaches are discussed. An assessment is then attempted of the key impacts of the Australasian approaches and conclusions drawn where possible.

Regulatory reform objectives and approaches

Governments in many situations intervene in the urban transport market because they believe that the market situation is either not optimal or not appropriate or both. Different governments place different emphasis on the requirements for intervention and on the various measures by which intervention might be achieved. As a result, different regulatory systems have emerged.

The system of economic regulation adopted is concerned with the issues of **allocative efficiency** (the type, level and price of service provided) - often characterised as "doing the right thing"; and **productive efficiency** (minimising the costs of a given level of service) - characterised as "doing the thing right".

Allocative efficiency is about ensuring the services provided maximise national benefit in some sense (i.e. are optimal). One of the requirements for the free market to produce a (pareto) optimum is that price equals marginal social cost. For public transport, the marginal social cost is less than the average cost, i.e. increasing public transport use reduces the average cost (operating cost plus user cost) per person. It is this significant

divergence between average cost and marginal cost which means that the free market does not achieve allocative efficiency for urban transport, and provides the primary **economic** justification for Government intervention. Economic regulation of transport in the 1960s and 1970s was supposedly all about co-ordination and regulatorily imposed 'allocative efficiency' (refer Wallis 1995 for further discussion).

Different regulatory systems are primarily distinguished by the extent to which fares and service levels are determined by the operator, subject to commercial market pressures, as against the extent to which they are set by the regulatory authorities. One approach (in the absence of a fully commercial market) is for the regulatory authority to be entirely responsible for the specification of services, even down to the detailed level. However, such authorities do not face appropriate incentive signals to optimise services. An alternative approach is for the regulator to set appropriate rules and incentive structures; but to leave service planning responsibility to the operator within this regulatory framework, such that the operator has the incentive to define services and fares to produce an optimum outcome.

Thus the allocative efficiency aspect of any regulatory system is concerned with:

- The responsibility for the specification of services and fares, and in particular its division between the operator and the regulator.
- The structures of operator payments and the basis of bidding, including particularly the incentives to the operator to attract extra passengers and hence to provide market-oriented services.

Productive efficiency is concerned with minimising the costs of the defined level (and quality) of services. World-wide experience is that **competition**, or the threat of it, is the key feature needed to help achieve productive efficiency.

Regulatory reform in the bus industry in Australasia, as in most other countries, has been primarily about achieving productive efficiency. Initial evidence suggests that the loss of productive efficiency associated with the former regulatory environment was significant compared with any gain in allocative efficiency.

In terms of **productive efficiency**, systems generally involve one (or more) of the following:

- **Competition in the market ("deregulation")** This occurs when operators provide (or are able to provide) competing services on the road, directly competing for passengers.
- **Competition for the market.** This is when operators compete, normally through a competitive tendering process, for some sort of contract to provide services
- **Threatened (or indirect) competition** This is when (usually incumbent) operators are required to meet industry standards or benchmarks (sometimes known as 'benchmark contestability'), generally accompanied by the threat of tendering if these are not achieved.
- **Non-competitive monopoly provision.** Situation of non-competitive provision of services in an area (or route), with little pressure on costs and often with deficit funding.

Table 1 summarises the main categories of regulatory reform models, with an emphasis on the productive efficiency dimension.

Australasian reform models - overview

Urban bus reform in Australasia is very much an ongoing process, and is by no means complete. In New Zealand, the key “deregulation” reforms were largely implemented in 1991, and the system and the market responses have gradually evolved since then.

In Australia, passenger transport is largely the responsibility of state (rather than federal) governments, and each state has pursued reform at its own pace and in its own way. The Australian reforms have been proceeding for (arguably) around 10 years, but with the greatest pace of reform over the last 5 years. The reforms in all states have been heavily influenced by a number of wider political and policy developments in Australia. These include, in summary (refer Wallis 1995 for further detail):

- Widespread changes in views as to the roles of government and how best to achieve these - towards corporatisation and/or privatisation of government business enterprises, and towards improving efficiency through the introduction of competitive disciplines and the contracting out of services. These changes in approach are of course shared by many other developed countries.
- Changes in Australian industrial relations legislation, which have facilitated local enterprise agreements in place of uniform state or national awards.
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- The report on Urban Transport by the Australian Federal Government (Industry Commission, 1994), which highlighted the importance of introducing competitive pressure to improve the performance of the Australian urban bus industry, and also recommended accompanying institutional reforms.
- The development of National Competition Policy, which (inter alia) requires state governments to review all existing legislation that restricts competition, and only allows such restrictions to be retained if they can be shown to be in the public interest.

Against this background, the regulatory reform approaches being adopted in each Australian state and New Zealand (and including the United Kingdom for comparative purposes) are summarised in Table 1, categorised against the reform models described above.

TABLE 1: REGULATORY REFORM MODELS - OVERVIEW OF AUSTRALASIAN PRACTICE

	Title	Description	Examples
A.	'Deregulation' - Competition in the Market	Operators able to provide any services (at any fares) they choose, subject to quality/safety licensing etc. Such services normally provided on a commercial basis (but this is not essential). In practice 'head-to-head' competition does not often occur, but the threat is always present. The pure 'free market' approach usually supplemented by 'gap filling' contracted services where socially desirable.	<ul style="list-style-type: none"> • UK (outside London) - c.15% of services are contracted.
B.	Contract Model with Commercial Opportunities	Desired service levels and fares set by regulatory authority, and most services are contracted (CTC). Operators may provide services commercially (as in A), but these are the exception rather than the norm.	<ul style="list-style-type: none"> • New Zealand - c.70% of services are contracted, remainder commercial.
C.	Competitive Tendering/Franchising - Competition for the Market.	All services subject to CTC procedures (no commercial services). Contracts may be positive (subsidised by the regulatory authority) or negative (operator pays the regulatory authority). Contracts may be route-based , with service planning largely the responsibility of the regulatory authority; or area-based (area franchise), with greater planning role for the operator.	<ul style="list-style-type: none"> • SA (c.50%, progressive implementation) - area contracts. • WA (c.50%, progressive implementation) - area contracts. • Vic (some services) - area/route contracts • UK - London (most services) - route contracts.
D.	Threatened or Indirect Competition	Range of approaches involving negotiation of contracts with preferred (incumbent) operator, usually with threat of CTC in absence of agreement. Sub-models characterised by various bases of negotiation/contracts: <ul style="list-style-type: none"> • Benchmark ('best practice') cost levels • Negotiated cost levels • Minimum service levels/standards and maximum fares ('benchmark contestability') • Yardstick competition (peer pressure) - based on standards of other operators. 	<ul style="list-style-type: none"> • Vic (most services) - benchmark cost approach (under negotiation). • SA, WA (other services) - based on cost levels achieved for CTC services. • NSW, Qld private operator services - 'benchmark contestability' approach.
E.	Monopoly Provision - non-competitive	Perpetuation of area monopoly provision by incumbent operator, usually with deficit funding and limited pressure on cost efficiency etc. Usually provided by public sector operator.	<ul style="list-style-type: none"> • Was the norm in most Aust/NZ cities until last 10 years. • Remaining services in this category in Australia being reformed (to models D or C).

Key features of this appraisal included the following:

- Competition in the market only occurs in NZ and UK, not Australia. However, there are some significant differences between the extent and manner of 'deregulation' in the two former countries. While the NZ legislation permits the 'free market' approach, in practice regional councils have tended to adopt fares and service levels which limit the scope for commercial services. Partly for this reason, around 70% of NZ services are provided through competitive tendering, as against some 15% in the UK. Thus NZ has been characterised as a "Contract model with commercial opportunities" rather than pure "Deregulation". The NZ approach potentially is able to address allocative efficiency issues, through intervention by the regional councils, e.g. optimal fare and service levels, bus-rail integration.
- The range of policies in Australia varies between competitive tendering/franchising and monopoly provision without competition (direct or indirect). For the reasons discussed above, over the last 5-10 years, the general direction of regulatory policy has been towards increasing competition, either through competitive tendering and contracting (CTC) or through indirect competition.
- Two states, South Australia (SA) and Western Australia (WA) have adopted CTC as their preferred model and have been progressively implementing CTC policies; while Victoria has adopted CTC for some services. However, interestingly both SA and WA have called moratoria on further CTC, having tendered about half of their metropolitan networks. It is most likely that the CTC process in each state will resume within a year or so; or it may be that negotiated contracts with the incumbent (public sector) operator will be continued, with prices based on benchmarks determined from the CTC process. In both cases the issue is "under review".
- In Victoria, 10 year non-competitive "area franchise" contracts are currently being negotiated with the incumbent (private sector) operators in most areas - with CTC being threatened only if the negotiations are unsuccessful. Overall contract payment levels are to be based on the results from a major 'best practice' benchmarking exercise of operators throughout Australia; while payments are to be structured so that the majority of operators' income will be dependent on the number of passengers carried (allowing for their trip lengths), thus giving operators the incentive to maximise the attractiveness of services (and fares) provided. This is the first major example in Australia of the "indirect competition" model based on cost benchmarks, and it will be watched with interest in other states (refer SA, WA above).
- Both NSW and Queensland have adopted indirect competition models with 'benchmark contestability' in the form of minimum service levels, service quality (including vehicle age) standards and maximum fares, along with a defined system of "community service obligation" (CSO) payments. In the NSW case, this system (in place since about 1990) is now under review, particularly in the light of the requirements of National Competition Policy: options are being considered which would either introduce some form of CTC, or would toughen up the various service level and quality standards, with the threat of CTC if these were not met. In Queensland, the adoption of a model similar

to that in NSW has run into a number of problems, primarily because the regulatory authority has attempted to rationalise operator franchise areas at the same time, forcing many operators to sell out

- The Australian Capital Territory (ACT) and Tasmania have hitherto been the principal states where non-competitive public sector monopoly operators have remained. However, in both cases they are now pursuing agreed deficit reduction targets with the threat of indirect competition if these targets are not achieved. In Tasmania, the Government is also considering contracting all services (in total or split up) to the private sector.

Australasian tendering/contracting issues and features

As is evident from Table 1, competitive tendering and contracting has become a major feature of the regulatory reforms in both Australia and New Zealand since 1991. The design of the CTC procedures and process is critical to the success of the reforms. It is as much an art as a science and there are no universal answers: systems need to be designed having regard to local transport system objectives, local funding approaches and the structure of the supplier market.

The following paragraphs provide brief commentary on the key features and issues arising in the design of CTC systems in Australasia. The comments focus primarily on the four “states” in which CTC has been introduced most widely (SA, WA, Victoria and New Zealand).

Service planning responsibilities

On balance, there appears to be advantages for service planning to be primarily an operator responsibility, provided clear service objectives and standards are first defined. Operators have the closest contact with the travelling public, and should know the market best. In addition, they are the only party with the knowledge to organise optimum deployment of their resources. Operators can have responsibility for service planning under a subsidised regime, provided the funding authority has clear objectives which are translatable into appropriate operator incentives. Funding based on outputs (see below) enables the operator to make commercial decisions on how the outputs are best achieved.

In practice, some funding authorities tend to be nervous about giving this authority to the operator, perhaps fearing the decisions will be “too rational” and may have political consequences.

Area franchises v route contracts

Area franchises give greater scope for optimised service planning by the franchisee, including integrated service design, opportunities for innovation, etc. They are most appropriately accompanied by output-based funding to give the right incentives: it could be argued that output funding can only achieve its full potential where the operator has the flexibility of an area monopoly. Area franchises also enable a close relationship between the planning/funding authority and the operator, which can lead to co-operative ventures to develop new routes and services. However, the relationship should not be too cosy: a monopoly can also be a disincentive to innovation.

The Australian states have all adopted area franchises with some 'lines of route' for longer distance services through the areas of other operators. New Zealand contracts are on a route or corridor basis.

It is too early to assess the relative merits of these different approaches. In New Zealand, operators have used the opportunity to register commercial services as one means of introducing innovative services. Other service improvements have been introduced in co-operation with regional councils.

Contract size

There is a need to provide opportunities relevant to the range of interests of potential bidders (e.g. small local vs large interstate operators). This suggests a range of contract sizes. In terms of encouraging a competitive market, it appears preferable to err towards smaller rather than larger contract sizes, and to allow group tendering as a means of combining several contracts. However, area franchises inevitably require larger contract sizes, on average, than a route-based approach.

Typical Australian contracts are around 50 buses (ranging from 10 to 100). In New Zealand individual (route-based) contracts are up to 15 buses, but are often grouped into larger combined contracts.

Contract duration

The need here is to balance investment/market development requirements against providing regular competitive opportunities. Shorter contracts tend to encourage operators to take a 'cash cow' approach, and limit the incentive to develop their market, invest in new vehicles and trial innovative services. On the other hand, longer contracts may reduce the flexibility for the regulatory authority to make policy changes (e.g. fare levels and structures), and will reduce frequency of competitive opportunities. It is argued by some that the contract life should match the life of the main assets, but with a tradable asset such as a bus, this is not strictly necessary.

The initial SA contracts were for periods of 2.5 to 4 years only, but with a rollover option. Other Australian contracts are mostly for 5 to 7 years, with a further rollover option in WA. In NZ, most contracts are shorter, at 3 to 5 years. The general consensus view that has emerged, to an extent a compromise between operator desires and regulator desires, is that a contract life of 5 to 7 years is optimum; while it is premature to reach a judgement on the issue of rollovers.

A further point to be considered is the spreading of contract start dates so as to provide reasonably frequent competitive opportunities, to avoid an excessive proportion of an operator's services being put at risk at any one time, and to smooth the CTC workload of both operators and regulators. The Australasian practice that has developed is for a tendering round at 6-monthly intervals.

Service levels

If farebox revenue is insufficient to cover operating costs, there is, a priori, an incentive for operators to cut back services. This can be countered by specifying minimum service

levels and by providing financial incentives other than farebox revenue for increasing service or patronage.

In almost all cases in Australasia, RFT's have specified minimum service levels based on the pre-existing services. However operators are given various degrees of flexibility to cut back some services provided the resources are redeployed to other services.

The formulae adopted for operator payments in SA and Victoria give financial incentives for operators to maintain and expand services, where by doing so patronage will significantly increase (see below).

Service and fares integration

While competitive tendering tends to bring overall cost efficiencies through the introduction of competitive pressures, if the system is not carefully planned, diseconomies and disadvantages may arise in terms of cost efficiency and service effectiveness.

One difficulty that may arise, particularly with area-based franchises, is the treatment of routes which cross area boundaries: this is potentially a major problem in metropolitan areas, where travel patterns are diverse, and many trips are over long distances. Artificial cutting of routes to avoid crossing area boundaries is likely to be very sub-optimal in terms of operating efficiencies and potentially unpopular with passengers. One other solution adopted (as in Adelaide and Melbourne) is to grant 'line of route' rights to an operator outside their exclusive region of operation: these 'line of route' services may or may not be subject to pick up/set down restrictions outside the exclusive region. This solution may be reasonably acceptable if the routes concerned are only a small proportion of all routes. However, if they are a substantial proportion of the total (as may occur in a complex metropolitan area), the concept of exclusive franchise areas is lost.

Just as there are advantages in operators being responsible for service planning, there are advantages in their being able to determine their own fare levels, fare structures and ticketing methods. In a commercial environment, this usually results in an emphasis on distance-based fare structures with single vehicle ticketing.

If it is desired to retain and/or increase the emphasis on integrated, multi-modal ticketing, this considerably reduces the scope for operator initiatives relating to fares. It means that fares and ticketing aspects will largely be imposed by the regulatory authority.

SA and WA both have integrated multi-modal fare/ticketing systems, which they were keen to retain. Fares and ticketing aspects have remained the responsibility of the regulatory authorities in these cases, with operators returning all revenues collected. In Victoria, an integrated multi-modal fares/ticketing system is also operated, but operators may additionally offer their own 'bus only' fares.

The presence of multiple operators and the split between commercial and contracted services has delayed plans to introduce integrated ticketing in several New Zealand cities. Christchurch has just introduced inter-operator transfer tickets, while Auckland proposes to introduce an 'electronic purse' system.

Vehicles

The urban bus business is generally regarded as having low barriers to entry, but experience in Australasia (and elsewhere) suggests that new entrants are rare. One way of reducing the economic costs associated with change of operator, making entry easier, and at the same time ensuring the provision of quality vehicles, is to set up a separate leasing company to own the vehicles etc. However the use of leased vehicles should not be a mandatory requirement, or one potential avenue for increasing efficiency and innovation would be lost.

In both SA and WA, the bus fleets were transferred from the previous public operator to the regulatory authority (Department of Transport) and offered for lease to successful bidders. Similar policies were adopted with depots where practical. There is little doubt that this approach has helped to increase the level of competition (as operators can enter the market with very limited assets), and to speed up the introduction of the contracted services. In WA, the Government is about to take the further step of privatising the ownership and management of the bus fleet.

In New Zealand provision of buses and depots is an operator responsibility: there is certainly evidence that a number of aspiring operators may have been deterred from bidding by the lack of resources.

Contract financial structure: basis of operator payments

I indicated above that a financial incentive is desirable to encourage operators to increase services and patronage. In both SA and Vic, payments to operators are essentially based on a defined "commercial" fare scale (which differs from the multi-modal fare scale actually charged) plus a lump sum component (which reflects that the minimum service levels required in the area are not "commercially" viable). Thus operators have a strong incentive to maximise patronage, or rather profit, by adjusting services and improving service quality where these generate sufficient extra patronage to cover any extra costs. The evidence to date is that these payment structures have been successful in this regard.

In NZ, most contracts are on a "net subsidy" basis, where the operator retains the revenue. These have been somewhat less successful in generating additional patronage - in part because the incentive rate is generally lower (given a typical cost recovery in the order of 50%), and in part because the route-based contracts allow less flexibility for varying services.

Basis of tender evaluation

While the tender evaluation procedures are quite complex, somewhat similar approaches are adopted in the four areas where CTC has been adopted. First, all bids have to satisfy minimum mandatory criteria (competence, financial capacity etc.) Second, price is then traded-off against other non-price criteria (suitably scored and weighted) to determine the preferred tender. In SA, the evaluation includes a "whole of Government" assessment, which includes implications for existing public sector employees (redundancy costs etc.) and for local economic/business development. In Victoria, the evaluation focused on the "commercial" fare level bid to provide at least the minimum level of service. The topic of tender evaluation could warrant a paper on its own!

Supplier market structure

Experience in NZ and elsewhere would tend to suggest that it is harder to achieve an effective competitive market when there is one dominant operator in an area (particularly where the area is isolated from other areas with substantial bus operators): the dominant operator is likely to use (or threaten to use) its market power to deter and/or retaliate against other (actual or potential) entrants. In the UK, the government legislated to break up previous dominant operators (National Bus Company, and more recently London Buses) prior to deregulation. No such legislation has been applied in New Zealand or Australia. Both SA (Adelaide) and WA (Perth) are situations where a competitive market could arguably have been more readily created if the existing public operators had been split up (e.g. into separate depot-based companies): in neither city did this occur. However a reasonably competitive market (both in quality and quantity) emerged in the bidding for franchise contracts, with bidders of four types: the previous (public sector) operator; other local private (generally small) operators; large interstate operators; and several international (mainly UK-based) operators.

'Level playing field' for public operators

If public operators are to compete for contracts alongside private operators, it is essential that this competition is on a 'level playing field'. This principle of **competitive neutrality** is a fundamental part of National Competition Policy in Australia. It is important to ensure that both the advantages and disadvantages of public ownership are neutralised in the tendering process.

This has been a substantial issue in the CTC process in both SA and WA. In both states, a set of costing guidelines has been established to ensure that the public operator bids are appropriately costed (using a full cost allocation basis), and bids have been audited for compliance with these guidelines.

In New Zealand the legislation forced local authorities either to sell their bus operations or to set them up as separate companies with no recourse to subsidy funding except through the CTC process. This is obviously the cleanest approach. All but three of the original ten corporatised operations have subsequently been sold; and the largest of the three remaining (Yellow Bus Company, Auckland) is currently going through the sale process.

Assessment of Australasian CTC impacts

This section provides a summary of the evidence available to date on the impacts of CTC and related reforms in Australasia, focusing on the same four "states" areas as discussed above, i.e.:

- South Australia - c.50% of the Adelaide bus network was subject to CTC in 1996.
- Western Australia - c.50% of the Perth bus network was subject to CTC in 1996.
- Victoria - public sector services in Melbourne were subject to CTC in 1993.
- New Zealand - most services (i.e. other than commercial ones) have been subject to CTC since 1991, with many now in their third contract round.

In order to evaluate the impacts we need to look back to the original objectives of public transport reform.

Essentially the reform process was predicated on the assumption that there was a better way - that we could get better value for the money spent on public transport. The Treasury representatives wanted to reduce the financial burden, while the transport planners and politicians wanted more and better services, and increased patronage. It is therefore useful to look at what has happened and is happening in the areas of:

- costs and funding
- service aspects
- fleet aspects
- fares
- patronage.

Before summarising the main impacts (below), I should make several important comments on the interpretation of the evidence:

- There has been very limited systematic research into the impacts of regulatory and institutional reforms in any of the Australian states or in New Zealand. Thus the data obtainable is incomplete in a number of aspects, and is largely from unpublished sources. (The UK bus reforms have been much more comprehensively monitored.)
- It is, in any event, difficult if not impossible to separate out the effects of the specific CTC-related reforms from other policy developments happening over the same period; or to assess what would have happened over the period if the CTC reforms had not been implemented.
- In all four cases, the major cost savings (and some of the other benefits) have arisen through the exposure to competition of previous public sector monopoly operators. Comparable savings should not necessarily be expected in different situations (e.g. in areas now served by private operators).
- In the absence of some form of direct competition, public and private sector operators are being affected by the wider reforms in the passenger transport sector in Australasia. For instance, the efficiency levels of State Transit NSW (Australia's largest bus operator) have improved substantially over the last 5-10 years. In other states where CTC is not currently contemplated (e.g. Queensland, ACT), the public operators are also now making significant efficiency gains.

Overall costs and funding requirements

In all cases, levels of public funding have reduced as a result of CTC, by between 10% and 40%. These savings may be interpreted as a one-off adjustment through previously high cost (inefficient) public sector operators being replaced by more efficient private or, in some cases, corporatised operators. While this was essentially a one-off adjustment, the on-going benefits are substantial.

Most of the cost reductions have been in the labour area, primarily through reduction in the number of staff employed (allowing for more use of part-time labour) rather than in gross costs/staff member. However, awards have been restructured, particularly for drivers, with more flexibility of hours, less overtime and penalty payments, and some increase in worked

hours to achieve the previous gross pay levels. Further details of the cost and efficiency changes involved are given elsewhere (Wallis 1995)

In some areas substantial one-off costs (redundancy, transition payments etc.) were incurred.

Regulatory costs for administration of the CTC system appear to be typically around 1% of annual operating costs, i.e. only a small offset to the savings in operator funding.

Service aspects

In both SA and WA, the regulatory authorities specified provision of at least the previous levels of service, and the new operators have to date made very limited service improvements or innovations: however it is still early days for these contracts. In Victoria, there have been overall service increases of around 15%, principally in the off-peak and associated with the introduction of midi-buses on selected routes (National Bus Company). New Zealand has seen gradual increases in service levels, principally off-peak, in a number of centres, particularly more recently as demand has grown.

Service quality (reliability, cleanliness etc.) appears to have generally improved or, at worst, remained unchanged.

One difficulty that has arisen in some areas is the splitting of what were hitherto through CBD routes: the result has been some additional running and some passenger inconvenience. This aspect should clearly be given attention in the specification of franchise areas.

Fleet aspects

In SA and WA, the fleets remain in Government ownership and the CTC programme has had little if any impact on the vehicles deployed. In Victoria, the major new private operator (National Bus Company) has been progressively upgrading the previous run-down fleet, through refurbishment and purchase of new midi-buses. In NZ, fleet investment dried up in the two years before and two years after the introduction of the reforms (1991). Since then, investment has increased and vehicle standards are improving: this is in part a result of the specification of vehicle age and quality standards by regulatory authorities; and in part the commercial initiative of operators, who are experiencing a growing market and a reasonable level of stability in contracts.

Fare aspects

In SA and WA, the previous multi-modal integrated fare system was retained unchanged. In Victoria, operators were allowed to overlay the multi-modal fare with their own "bus-only" fares: this has resulted in fare reductions for short distance single-vehicle trips. NZ has seen a period of fare stability since 1991 (in a low inflationary climate). The regulatory authorities are the prime fare setters, with fares on commercial services generally being aligned to contract fares. However, the introduction of multiple operators appears to have impeded the trend towards integrated ticketing systems.

Patronage aspects

Patronage impacts have generally been positive or, at worst, neutral. In SA and WA it is rather early to judge, but initial signs are of modest patronage increases to date, in large part as a result of the improved customer focus by drivers. In **Victoria**, National Bus patronage increased by in the order of 10% over the first two years, principally in the off-peak: this resulted from increased frequencies, new vehicles and improvements in quality aspects. In **NZ**, there were initially some losses in patronage, principally because of public confusion and bad publicity. Over the last few years patronage has increased steadily in most centres, and is conjectured to be now higher than if the previous system had remained.

Conclusions

The assessment of reforms of the type discussed in this paper is fraught at the best of times: in this case the difficulties are exacerbated by the very limited research devoted to the monitoring and evaluation of the impacts.

Each Australian state has adopted its own approach to urban passenger transport reform over the last few years, although perhaps two main models emerge:

- Competitive tendering for area franchise contracts
- Negotiated contracts (based on 'best practice' standards or 'benchmark contestability'), with CTC as a fall-back threat.

New Zealand has adopted a different approach again, combining features of the UK 'deregulation' model and the CTC model.

All Australian states and New Zealand report substantial benefits from their reforms, in terms of reduced costs on an ongoing basis and generally improvements in services.

Not surprisingly, there is no clear 'winner' between the various approaches - in part because of the difficulties in evaluation, in part because the reform programme is still under way and impacts tend to develop over some years. However, a number of pointers have emerged regarding key reform factors and issues.

The strongest common factor driving the reform impacts in Australasia (as in other countries) has been actual or threatened competition. The real prospect that their jobs will be lost motivates management and staff to work together to overcome potential competitors.

The Australasian evidence to date is that real competition (whether through 'deregulation' or CTC) achieves greater cost savings and achieves these faster than the various forms of indirect or threatened competition. However, some commentators suggest that appropriate indirect competition models that include **real** threats of competition may be just as effective, achieving comparable levels of cost savings without some of the disruptive effects of CTC or deregulation approaches (refer Wadsworth, 1996). In this regard, it will be of interest to see the outcome of the current Victorian negotiations for 10 year contracts with incumbent (private sector) operators.

Within Australasia, only New Zealand allows commercial registrations. It will be interesting to see whether the emergence of a true competitive market in this situation promotes a further increase in productive efficiency, or (as some fear) merely a loss in allocative efficiency through the frustration of planned service integration and improvements.

The regulatory and institutional processes in both countries are still under way, and the outcomes are continually evolving rather than of a static nature. There will be a need for ongoing monitoring over the next few years before full conclusions can be drawn.

Acknowledgements

I would like to thank my colleague Dr David Lupton for his valued assistance in the preparation of this paper.

An earlier version of this paper was presented at the Fifth International Conference on Competition and Ownership in Land Passenger Transport (Leeds, UK, May 1997).

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