

URBAN BUS REFORM "DOWN UNDER": SIX YEARS OF WORDS, ACTIONS AND ACHIEVEMENTS?

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INTRODUCTION

1. The first conference in this series (T1) was held in Thredbo, Australia in 1989. At that time the urban bus industry in both Australia and New Zealand essentially comprised a series of area monopoly operators. Publicly-owned operators provided the majority of services and, in some Australian state capitals, effectively provided all the services (as they had taken over any private operator services in the period 1950-1980). The public operator was also largely responsible for determining appropriate service levels and fares, but would negotiate with the relevant state Department of Transport and Minister about changes to these and to funding levels. All public operators were heavily subsidised, with typical fare-box cost recovery levels around 30-40%. Private operators provided substantial services in the two largest Australian cities (Sydney and Melbourne) and in some New Zealand centres. However these operators also held area monopolies, through long-established "grandfather rights". Competition, or even the threat of competition, hardly existed.
2. It is against this background that the Thredbo conference was held. One of its major themes was the international experience with exposing the bus industry to competition, and perhaps particularly the experience from Great Britain, which was seen as leading the way in this regard. The conference was attended by a considerable number of bus operators and representatives of policy/regulatory authorities from both Australia and New Zealand. It may be seen, coincidentally or otherwise, as something of a seminal event in terms of the introduction of regulatory reform and particularly contestability, into the urban bus sector in Australia and New Zealand.
3. Since 1989, the industry in both countries has seen major changes, 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 pace 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 not following the same reform model. In Australia, the pace of reform has accelerated over the last two years

and the anticipated pace of change over the next two years seems likely to be even more rapid.

4. The paper attempts a "mid-term review" of the reforms - to appraise what changes have occurred, what further changes are imminent, and in particular what the effect of the changes have been. It tries to look beyond some of the broad policy statements and rhetoric, to assess what has been achieved to date and whether the reforms are on the right track.
5. The paper focuses primarily on regulatory reforms, and in particular on the key thrust of the reforms to introduce greater contestability in the industry in order to improve the productive (cost) efficiency in the provision of urban bus services. A second major issue in reform is that of allocative efficiency, ie. the provision of the 'right' services at the 'right' price. Generally rather less progress has been made on this aspect, but the paper also comments on the issues arising in this regard. The paper also contains briefer discussion on the institutional reforms which have occurred or are contemplated, recognising that these are an integral part of the overall reform process. It finally speculates briefly on the influence of research and conferences such as this on the reform process.
6. The paper attempted to cover a wide and complex field, and inevitably cannot cover all the details of the reform progress in each state of Australia: it concentrates on the larger States/Territories and those in which the reform process is furthest advanced (with particular apologies to Tasmania, Australian Capital Territory and Northern Territory).

THE REFORM PROCESS TO DATE - OVERVIEW

NEW ZEALAND

7. Major structural and regulatory reforms in the land transport sector in New Zealand occurred throughout the 1980's, paralleling reforms in many other Government sectors in New Zealand (mostly under a Labour Government).
8. By the late 1980's, it could reasonably be claimed that the NZ local passenger transport industry was ripe for reform:
 - Patronage had been declining rapidly for some years (partly as a result of the economic recession, but exacerbated by cuts in services and fare increases).
 - Subsidy levels had been increasing, although the earlier rate of increase was already being contained by government funding restrictions.
 - Cost levels of the public sector operators (which provided the bulk of services in the main cities) were substantially higher than their private sector counterparts, as a result of inefficient management and work practices, centralised award conditions and a general lack of pressure for financial restraint.
 - There had been a general lack of innovation in the industry for many years, with long-established operators enjoying their grandfather rights and having little incentive to adopt a consumer orientation.
 - The previous national wage arrangements were being replaced by local agreements, and the introduction of the Employment Contracts Act (1990) further extended the flexibility of the local enterprise bargaining system.

(Many of these conditions were similar to those applying in the United Kingdom prior to the 1986 deregulation there.)

9. The major reforms of local passenger transport services were contained in the Transport Law Reform Bill, which was passed by the NZ Parliament in September 1989. This introduced what is often called 'deregulation' of the passenger transport sector - but has been referred to a 're-regulation' by many involved in trying to understand all the ramifications of the legislation and translate it into practice.
10. The NZ legislation was based in many respects on the UK bus 'deregulation' legislation (the UK 1985 Transport Act), but with a number of very significant differences. This paper does not attempt to describe all the important facets of the legislation (see Knight, 1991 for more details), but the following are some of the key features of most relevance to the subsequent sections of the paper:
 - The legislation was comprehensive, covering all passenger transport modes on a similar basis. (The UK legislation covered bus services only: the NZ attempt to treat urban rail services in particular on the same basis as bus services has in practice run into substantial problems.)
 - Regional councils (14 covering NZ) were made be responsible for public transport policy, funding and procurement of services.
 - A clear separation of policy/funding from operations was introduced. Regional councils are not permitted to own any passenger transport operation (either directly or indirectly).
 - Local authorities are not permitted to engage in passenger transport operations, except indirectly through Local Authority Trading Enterprises. Thus the previous municipal bus companies had to be either corporatised or privatised.
 - Any licensed operator could notify its intention to provide any service on a commercial (non-subsidised) basis; and such notification could only be rejected by the regional council on certain specified grounds. (However, the NZ legislation gives regional councils significantly more powers to frustrate such commercial services than is the case in the UK.)
 - Regional councils may contract for (subsidised) services, subject to following competitive pricing (tendering) procedures. These procedures are laid down by Transit New Zealand and have to be followed by regional councils in developing their tendering rules.
11. The key date for implementation of the new legislation was 1 July 1991 ('D'-day): in the 6-9 months prior to that there was frantic activity as commercial services were declared and the remainder of the network was subject to competitive tendering. (This 'big bang' approach is akin to that adopted in the UK: it contrasts with that being adopted in both South Australia and Western Australia, where the new tendering regime is being phased in over a 2-3 year period.)
12. Other aspects of the NZ system which has emerged and which are perhaps of most interest in view of developments in Australia are as follows:

- Only about 20-30% of NZ services are provided commercially, the remainder being subsidised through the competitive tendering process.
- Most contracts are for between 3 and 5 years (the maximum period allowed is 5 years).
- The maximum size of individual tenders has been limited to about 12 buses (although 'group' tenders are often permitted). This means that individual tenders relate to a route or corridor, rather than a wider area.
- Most contracts have been of the net subsidy type (where the operator retains and takes the risk on revenue); but contracts of the gross cost type (where revenue is returned to the regional council) are also used. Contracts with payments based entirely on outputs (ie. patronage) have not been tried, but are possible under the legislation.
- Tender evaluation has in many cases involved trade-offs between price and service quality features, using weightings developed by individual regional councils. However, there has been a tendency to revert to a 'lowest price conforming tender' evaluation approach, but with minimum standards set for vehicle age, vehicle features etc.

AUSTRALIA - FEDERAL DEVELOPMENTS

13. Under the Australian system of government, responsibility for urban public transport is primarily a State/Territory matter, with the Federal (Commonwealth) Government having very limited direct influence. However, its indirect influence is not insignificant, and the following notes some of these influences over the last few years.

Industry Commission Report

14. In 1993-94, the Federal Government's Industry Commission concluded a major inquiry into the urban transport sector. Its main findings and conclusions relating to the urban bus sector are summarised in Table 1 (Industry Commission, 1994).
15. The main conclusions and recommendations worth highlighting here, in terms of their relevance to policies being adopted by the states, are as follows:
 - Contestability (competition or the threat of it) is the fundamental requirement to improve the performance of the Australian urban bus industry
 - Contestability should be introduced, as a high priority, through a system of area franchises awarded through a competitive tendering system. Open access (deregulation) should be considered as a possible subsequent development.
 - The regulatory reforms should be accompanied by institutional reforms - including the separation of regulatory functions into a different organisation from the operating authorities; the establishment of public sector operators as statutory corporations; and the separation of these operators into commercially autonomous business units.
16. It is not clear how influential the Industry Commission report has been on the policies of the individual states, as most of the state reforms now being implemented were developed before the IC report was completed. However, it is fair to say that the state reforms now taking place are largely, but not entirely, consistent with the IC's recommendations. It may be that the IC report will have further influence on reforms still to be developed.

TABLE 1: INDUSTRY COMMISSION⁽¹⁾ CONCLUSIONS ON BUS REGULATORY REFORM

Issue	Findings/Conclusions
Importance of Competition	<p>“The fundamental ingredient to improving the performance of the Australian urban bus industry is to open it up to competition or the threat of competition”.</p> <p>“The provision of transport services (should be) made as contestable as possible both within and between modes. Regulatory and subsidy arrangements should ensure that every operator, both public and private, is subject to competition or the threat of competition”.</p>
Management of Competition	<p>“Introducing competition into public transport needs to be carefully conceived and implemented. Governments can retain control over matters such as social objectives, coordination, promotion, and safety. Rather than a ‘free-for-all’, the Commission sees advantages in commencing with a structured approach which marries the advantages of coordination and integration with the benefits of competition.”</p>
Competitive Models Considered	<p>Three options considered in detail:</p> <p>(A) Open access (deregulation) supplemented by guaranteed minimum services levels</p> <p>(B) Exclusive area franchise to provide a minimum level of service - awarded through CT procedure based on minimum subsidy required.</p> <p>(C) Exclusive area franchise to operate within a given subsidy - awarded through CT procedure based on maximum level of service offered.</p>
Recommended Model	<ul style="list-style-type: none"> • Recommends progressive introduction of an exclusive area franchise system, through CT. Franchises for periods of up to 7 years. • Suggests a series of demonstration projects allowing open access (deregulation) in specific areas. Depending on the results, open access could be considered to replace the area franchise system.
Institutional Reforms - Recommendations	<ul style="list-style-type: none"> • “The efficiency of urban transport GTE’s would be enhanced if they were exposed to the same incentives, rules and regulations as private enterprise.” This means placing them in a ‘corporate’ environment”. • Recommends that urban transport GTE’s “be constituted as statutory corporations, which are separate from the departmental structure of government”. • Recommends that regulatory functions should be separated from the operating functions of the GTEs. • Recommends that “each government-owned bus operator should be separated into commercially autonomous units, say, on a depot by depot basis”. • Recommends that all CSOs should be clearly specified and funded separately by Government.

Notes: (1) Taken from Industry Commission ‘Urban Transport’. Report No. 37, February 1994.
CT = competitive tendering

NATIONAL COMPETITION POLICY

- In 1992, the Australian Federal Government, supported by the States, set up a Committee headed by Professor Hilmer to review competition policy in Australia. This initiative was based on the recognition that large parts of the Australian economy are not exposed to competition, including many commercial activities undertaken by Commonwealth, State and local governments. It recognised that competition introduced to a marketplace could be, in itself, sufficient to improve performance.
- The Hilmer Committee reported in August 1993 and called for a national approach to competition policy and universal application of the Trade Practices Act to all market participants regardless of the form of business ownership. The principles espoused in the

report were given broad acceptance by the Council of Australian Governments (COAG) in February and August 1994 and final acceptance in April 1995.

19. The Federal legislation to put into effect the recommendations of the Hilmer Committee and COAG is the Competition Policy Reform Bill, which was tabled in the Australian Senate on 29 March 1995. Associated legislation is in the process of being introduced into the various State/Territory Parliaments, so that all the necessary legislation should be in place later this year.
20. The Competition Principles Agreement identifies five reform elements:
 - Legislation review - which includes review of regulations that restrict competition, against a test of public benefits.
 - Structural reform - process for restructuring of public monopolies where there is an intention to encourage competition.
 - Third party access to essential infrastructure - the development of processes and guidelines to allow external access to public monopoly infrastructure essential to competition.
 - Prices oversight - institutional measures for oversight of prices for services supplied by a public monopoly.
 - Competitive neutrality principles - measures to establish as near as possible to a "level playing field" between public and private sector organisations in situations where competition is introduced.
21. The Legislation Review requires governments to develop a timetable (by June 1996) for the review of all existing legislation that restricts competition and, where appropriate, to introduce reforms by year 2000. Legislative restrictions on competition can only be retained where it can be demonstrated that the benefits of the restrictions to the community as a whole outweighs the costs, and that the objective of the legislation can only be achieved by restricting competition.
22. It is too early to judge how the impending legislation will affect the reform process which is already on-going in the urban bus industry. It seems likely to encourage and probably hasten the process, rather than lead to any radical change in direction (it may well bring greater changes in the railway and taxi sectors). In particular:
 - The legislation introduces a presumption of open competition in activities provided by the public sector. Any restrictions on competition will need to be demonstrated as in the public interest. (This suggests that the public interest case for systems of competitive tendering rather than deregulation will need to be demonstrated).
 - The legislation is likely to focus attention on the need for restructuring of public monopolies, for establishing a "level playing field", and for making public buses and depots available to all competitors when competition is introduced.
 - The legislation is also likely to lead to gradual pricing reform, in particular re-examining the rationale for the low fares and cost recovery levels applying on several of the Australian public bus systems.

National Economic and Industrial Relations Environment

23. There are many similarities between the environment in which regulatory reform is taking place in Australia and that in which it took place in New Zealand. In particular, mention might be made of:
- The high cost levels of the public sector operators, relative to private operators,
 - Changes in industrial relations legislation, which have facilitated the introduction of Enterprise Bargaining Agreements in place of (or supplementing) the previous industry-wide awards.
24. In both Australia and New Zealand, the reforms in the bus industry may be regarded as just one component of broader changes in the role of governments - towards corporatisation and/or privatisation of government business enterprises, and towards improving efficiency through the introduction of competitive disciplines and contracting out through competitive tendering.

AUSTRALIA - STATE DEVELOPMENTS

25. The reforms (actual or intended) in the individual Australian States have largely been initiated following changes in State Governments - in most cases to Liberal/Coalition Governments, although it is clear that they do not have a monopoly on reform. This has been the case in the last few years in Victoria, South Australia and Western Australia: it looks like also being the case in the Australian Capital Territory (ACT), where the new Territory Government is currently considering its approach to the reform of Canberra's bus services.
26. There is not space in this paper to set out the background to the reforms in the individual states or all the details of the reform policies being adopted: this would require a separate paper for each state.
27. However key features of the Western Australia 'Public Transport Reform Plan' may be quoted, as an example of the approach being adopted (see Middleton, 1995 for more details):
- The Reform Plan is to pursue:
 - competition in the provision of public transport services
 - separation of policy and planning functions from operations
 - greater use of other modes, including community transport
 - coordinated planning of urban development and transport services.
 - The reforms will focus on cost-effectiveness, quality service provision and service development (not merely cost-efficiency).

- The new system is to be designed to be:
 - seamless
 - complete
 - self-correcting
 - self-administered.
- Competition will be through competitive tendering: there will be no deregulation (open access) and the government operators will not be privatised.

28. The South Australian reforms follow along generally similar lines.

REGULATORY SYSTEMS - THE THEORY

WHY REGULATE?

29. Governments (at all levels) intervene in the transport market because they believe that the market solution is either not optimal or not appropriate or both.

- The conditions for a free market equilibrium to be optimal are:
 - no barriers to entry and exit
 - numerous buyers and sellers
 - homogenous products
 - costless access to information for both buyers and sellers
 - linear returns to scale
 - absence of externalities.

30. There are few markets where all these conditions are fulfilled at one time, and yet 'workable' competition exists for most products with minimal government intervention. The main difference between urban public transport and other products for which markets appear to work adequately is the existence of "externalities". Externalities occur when decisions by one person affects the cost of services available to others. Another economic argument for intervention is the theory of the second best: this argument is based on using public transport subsidies to correct for distortions in the pricing of private vehicle travel in the absence of proper road pricing mechanisms.

31. Governments have traditionally associated with public transport a number of social policy objectives which are not addressed by the market (a market optimum says nothing about the distribution of gains and losses). In particular, governments have often assumed responsibility for ensuring that all citizens in major cities have access to a certain level of mobility which enables them to participate in the economic, social and recreational life of the city. This responsibility may be evidenced in a desire to ensure:

- a comprehensive coverage of public passenger services throughout the city and at all times;
- that pensioners and other low income groups can afford these services.

32. While most governments of medium to large cities see a need to intervene in the public transport market, different governments will place different emphasis on the various measures for intervention. As a result, different regulatory systems have emerged.

ALLOCATIVE EFFICIENCY AND PRODUCTIVE EFFICIENCY

33. The system of economic regulation adopted is concerned with the issues of **allocative efficiency** (the type and level 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”.
34. **Allocative efficiency** requires the price signals in the market to be right. The economist’s prescription for pricing is to set prices as equal to short run marginal cost. For most consumer products, economists conveniently assume that marginal cost = average cost and that optimal pricing is achieved by competitive market prices.
35. In urban transport this convenient assumption does not apply. The main reason it does not apply is because of the externalities, through travel decisions interacting with each other. For example, additional road vehicles incur not only the time and operating costs for their occupants, but also impose costs on all other traffic. Hence the increasing interest in congestion charging for the use of roads. For public transport, additional patronage can lead to increased frequency - or conversely, reducing patronage can lead to higher fares, reduced services, and a vicious spiral of cut-backs.
36. For both roads and public transport, to get the social optimum, we need to set
price = short run marginal social cost,
where the addition of the word ‘social’ emphasises that we are talking about the costs to society as a whole, not just the immediate players.
37. For public transport, the marginal social cost is less than the average cost, ie. increasing public transport use reduces the average cost (operating cost plus user costs) per person. This is the primary **economic** justification for public transport subsidy. 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. Economic regulation of transport in the 1960’s and 1970’s was supposedly all about coordination and regulatorily imposed ‘allocative efficiency’.
38. **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.
39. Competition may occur through either or both of the following approaches:
- Competition in the market (on the road). This occurs when operators provide competing services on the road, directly competing for passengers. Such services would normally be provided on a commercial basis, but this is not essential. The UK (outside London) provides the major example of such a policy. In practice, the extent of direct “head-to-head” competition in UK has been modest, but there is always a threat of competition under this “deregulated” system.

- Competition for the market. This is when operators compete for some sort of contract to provide services. Such competition would normally be through a competitive tendering process, although in some cases productive efficiency has been sought more through the application of industry standards or benchmarks (sometimes known as 'benchmark contestability'), maybe accompanied by the threat of tendering, rather than through an actual competitive tendering process.
40. Regulatory reform in the bus industry has been primarily about achieving productive efficiency (doing the thing right). The results have shown, almost universally, that the gains from improving the efficiency of the operation are considerable. I am not sure, but I suspect that they swamp the allocative efficiency issue in most cases. If this is true, going for operating efficiency and ignoring the niceties of economic theory was the right thing to do.
41. But it is not necessarily a case of one or the other. We have now developed the structures, such as the separation of planning from operations, which can enable the focus to return to allocative efficiency - doing the right thing, knowing that we have the implementation tools to also do the right thing right.

ALTERNATIVE SYSTEMS

42. Alternative regulatory systems are characterised by the two prime dimensions just described, ie. productive efficiency and allocative efficiency. In terms of productive efficiency, systems involve one (or more) of the following:
- Competition in the market ("deregulation")
 - Competition for the market (competitive tendering)
 - Threat of competition, in various forms
 - Monopoly provision.
43. In terms of allocative efficiency, different systems are primarily distinguished by the extent to which fares and service levels are determined by the operator, in the free market, as against the extent to which they are set by the regulatory authorities.
44. I would argue that it is inappropriate for the regulatory authority to be responsible for the specification of services, certainly at the detailed level. Such authorities do not face appropriate incentive signals to optimise services. The alternative approach is to give responsibility for service planning to the operator, and to ensure the operator is faced with appropriate incentive structures (in the absence of fully commercial market) so as to influence their service planning decisions.
45. Thus the allocative efficiency aspect of any regulatory system will need to be concerned with:
- The responsibility for the specification of services, and in particular its division between the operator and the regulator.
 - The structure 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.

46. I now look at some of the alternative regulatory systems which have been adopted in Australasia and internationally, and the approach they take towards both the productive efficiency and allocative efficiency dimensions.

(A) Free market systems

47. The competitive model promotes productive efficiency and encourages ongoing innovation. Allocative efficiency may be reduced because competing modes are not correctly priced, or where there are significant costs to third parties, but the proponents of this model believe that the economic loss from these factors are outweighed by the efficiency and dynamism of a free market. They see regulatory failure as potentially at least as serious a problem as market failure.

(B) Free-market systems with gap filling

48. This is free market with a safety net. The main thrust of the system is to maximise the extent of 'commercial' services so that the system is 'market driven', but with contracted services to meet perceived social obligations. This is the UK (except London) model. The New Zealand legislation permits this approach, but regional councils have, in the main, adopted fare and service levels which have left little room for the free market. Again the allocative efficiency issues are subservient to productive efficiency.

(C) Contract systems with commercial opportunities

49. This is the New Zealand version of the UK model, in which the regional councils set fares and services. Commercial registrations can and do occur but are the exception rather than the rule. Competition is thus primarily for the market (ie. between tenderers) rather than in the market (on the road). This approach has the capability of addressing allocative efficiency issues, eg the optimal level of services and fares, and the issue of bus-rail competition.

(D) All contract systems

50. All contract systems abolish the concept of commercial services and make all services subject to tendering/contracting procedures. Contracts could be negative (ie. the operator pays a fee to the tendering authority) or positive (ie. subsidised). Contracts may be route based or area based.

51. Under a **route based system**, service planning is generally the responsibility of tendering authorities, although greater or lesser latitude can be given to operators. The present London model is an example of this: it has hitherto involved gross cost contracts, but is converting to net subsidy contracts.)

52. The '**area franchise**' system brings a number of geographically adjacent services together into a single area contract. Establishment of an area monopoly for a specified operator gives more scope for the operator to plan services in the area in an integrated manner. Typically area franchise systems are characterised by longer duration contracts than route-based systems and maybe a lesser degree of contestability, although this does not have to be so. (The present Sydney private operator system is of this area franchise type, but with a very limited degree of contestability.)

53. An argument for area franchising is that the operator, who is arguably closer to the customer, can have a greater role in service planning.
54. The all contract systems emphasise social goals and transport coordination at the expense of market driven efficiency and dynamism. Productive efficiency is the result of periodic competitive tender rounds. This approach provides the opportunity to promote allocative efficiency, through setting of optimum fares and service levels, although it is not clear that this is in fact done.

(E) Other variations

55. In practice, a considerable range of systems is possible, combining features of the different models.
56. I have presented these models as if they form a one-dimensional spectrum, but in practice there is a multi-dimensional mix of features including:
- competition on the road vs tenders for services
 - tenderer vs operator determined services
 - area franchise vs route franchise
 - commercial tender vs negotiated contract
 - gross vs net contracts
 - fixed vs variable (ie output driven) contracts.
57. A preliminary appraisal undertaken as part of a recent NZ review was sufficient to highlight that no one system is clearly superior to any of the others: the "best" solution will depend on the trade-off considered appropriate between the range of policy objectives relevant to the particular situation.

REGULATORY SYSTEMS - AUSTRALASIAN DEVELOPMENTS

REGULATORY POLICY DEVELOPMENTS

58. As noted earlier, there have been rapid developments in urban bus regulatory policies in Australia and New Zealand over the last five years - in New Zealand focused on the reforms implemented in 1991, in Australia most particularly over the last two years and still proceeding rapidly.
59. Table 2 attempts a summary of the present regulatory policy position for New Zealand and each of the Australian mainland states (with apologies to ACT, Northern Territory and Tasmania). It covers:
- Identification of the regulatory authorities and the main groups of operators.
 - Summary of responsibilities and policies for determination of service levels and fares (which influences allocative efficiency, as discussed in earlier).
 - Summary of policies towards contestability/competition (which influences productive efficiency).
60. The following discussion focuses on the competition/productive efficiency aspect: the organisational/institutional issues and the allocative efficiency issues are the subject of further comment in later sections.

EXTENT OF CONTESTABILITY

61. As noted by the Industry Commission: "*the fundamental ingredient to improving the performance of the Australian urban bus industry is to open it up to competition or the threat of competition*". In the light of this view (which I would support), Table 3 summarises for New Zealand and each Australian state the extent of contestability and the manner by which this contestability, or other pressures on efficiency, are achieved.
62. In terms of the extent of contestability, three groups emerge:
- 'Fully' contestable states - involving competitive tendering, with partial deregulation in one case:
 - New Zealand (since 1991)
 - South Australia (in process of implementation)
 - Western Australia (in process of implementation)
 - Victoria - ex Met services (since 1993).
 - Partially contestable states - involving the threat of competition rather than actual competition, with the threat being relatively weak in some cases:
 - New South Wales
 - Queensland (generally).
 - Little contestability - involving little or no threat of competition:
 - Victoria, private operator services.
63. One issue that is open to debate here is whether the policies of partial contestability can result in similar levels of efficiency to those involving 'full' contestability, and whether they have any advantages in other respects (stability of services, improved allocative efficiency etc). In the light of the Australian Competition Principles Agreement (Para 21), it is apparent that the restrictions on competition involved in the partial contestability situations will need to be demonstrated as being in the public interest.

TABLE 2: AUSTRALIAN REGULATORY POLICIES BY COUNTRY/STATE

Country/State	Regulatory Authority	Operators	Determination of Service Levels and Fares (Allocative Efficiency)	Competition Policies (Productive Efficiency)
New Zealand	Regional Councils (14), within Central Govt policy guidelines.	<ul style="list-style-type: none"> Local Govt Corporatised (3) Private 	<ul style="list-style-type: none"> Non-subsidised services - deregulated Subsidised services - largely determined by regulatory authority 	<ul style="list-style-type: none"> Non-subsidised services - provision deregulated (open competition in the market) Subsidised services - CT system: <ul style="list-style-type: none"> route based limits on contract size maximum 5 years duration gross cost or net subsidy contracts
New South Wales	State DoT	<ul style="list-style-type: none"> State Transit Authority (Statutory Authority) Private (numerous) 	<p>Private Operators:</p> <ul style="list-style-type: none"> Services - responsibility of operators provided meet the minimum service standards specified by DoT. Fares - standard fare scale set by DoT. <p>State Transit</p> <ul style="list-style-type: none"> Services - to meet same minimum standards as private operators, and eligible for CSO payments where DoT requires higher service standards Fares - minimum fares set by Government Pricing Tribunal. <p>Private operators: Moving towards the NSW private operator model (see above)</p> <p>Brisbane Transport: Also moving towards NSW model, with minimum service levels set by DoT but with actual service levels (higher) generally set by BCC, with CSO payments from DoT/BCC to be established for the higher service levels. Major network and service review currently in progress, with significant cost savings already identified.</p>	<p>Private Operators: System of area franchises with no direct competition but 'benchmark contestability' (retain traditional area monopoly if can operate minimum service levels without general subsidies; otherwise may be open to CT).</p> <p>State Transit: No direct competition, but several policies to put downward pressures on costs:</p> <ol style="list-style-type: none"> required to operate on a commercial basis, after various CSO payments potential threat of privatisation/competition if fail to perform
O'Sland	State DoT	<ul style="list-style-type: none"> Brisbane Transport (Local Govt Dept) Private (numerous) 	<p>Private operators: Adopting similar model to NSW (see above), but with operators being selected through CT process in cases where existing local operators do not agree to area rationalisation and improved service levels proposed by DoT.</p> <p>Brisbane Transport: No direct competitive pressure, but a reform deal agreed between DoT and BCC: involving 30% efficiency gains/unit cost reductions over 3 years together with targets for increased patronage. If this is not achieved, then introduction of CT to be considered further.</p>	<ul style="list-style-type: none"> Competitive tendering of whole metropolitan bus system is just starting, to be completed over a 2-3 year period System being divided into 13 contract areas Operator payments to incorporate a substantial patronage-related proportion, as incentive to provide improved and more attractive services Tenders being evaluated by trade-off between price, various service level and quality features, operator credentials etc.
South Australia	Passenger Transport Board	<ul style="list-style-type: none"> TransAdelaide (Statutory Authority) Private - likely to be introduced through CT process 	<p>Service levels: Hitherto set by T/A within its own service standards. For CT services, to be largely determined by the operator, but subject to minimum service standards set by PTB and with operator proposals subject to PTB approval.</p> <p>Fares: Integrated fare system, with fares set by PTB (subject to Government approval). Under CT system, all revenue to be returned to PTB.</p>	<ul style="list-style-type: none"> Operator payments to incorporate a substantial patronage-related proportion, as incentive to provide improved and more attractive services Tenders being evaluated by trade-off between price, various service level and quality features, operator credentials etc.
Victoria	State DoT (functions transferred from PTC)	<ul style="list-style-type: none"> PTC Metrobus (proposed for corporatisation) Private (numerous) 	<p>Ex-MET services:</p> <ul style="list-style-type: none"> Services - set by operators, subject to minimum service standards specified by DoT. Fares - MET fare system retained, but bus-only fares also available. <p>Other private services:</p> <ul style="list-style-type: none"> Services - largely by DoT (change by agreement) Fares - integrated MET fare system. 	<p>Ex-MET services: Operators selected through CT process (late 1993), on basis of maximum service levels and minimum fares offered without general subsidy (but with reimbursement up to price of bus-only fares for all passengers).</p> <p>Other private services: No direct competitive pressures (traditional area monopoly with grandfather rights). Operators paid on basis of industry standard/average costs, adjusted for inflation. All revenue returned to DoT (no revenue incentive). (Current contracts expire in 1997. Proposals may be before Parliament offer operators a new negotiated 5-7 year contract, or introduction of CT from 1997.)</p>
Western Australia	State DoT	<ul style="list-style-type: none"> Metrobus (Statutory Authority) Private - likely to be introduced through CT process. 	<p>Service levels: Hitherto set by Metrobus. For CT services, to be largely set by DoT, but with any subsequent changes to be negotiated between operator and DoT.</p> <p>Fares: Integrated fare system, with fares set by DoT. Under CT system, all revenue collected is to be returned to DoT.</p>	<ul style="list-style-type: none"> Competitive tendering of whole metropolitan bus system is just starting, with about 50% of bus services to be tendered out by early 1996 and the remainder expected by end 1997. System being divided into contract areas Operator payments to incorporate fixed component, service-related component and patronage-related component. Tenders being evaluated by trade-off between price, operational ability/experience and innovative service proposals.

TABLE 3: AUSTRALIAN REGULATORY POLICIES - OVERVIEW OF CONTESTABILITY⁽¹⁾

Country/State	Extent of Contestability	Manner of Contestability/Other Influences on Efficiency - Key Features
New Zealand	<ul style="list-style-type: none"> Fully contestable (since 1991) 	<ul style="list-style-type: none"> Commercial services - deregulated Subsidised services - CT system, on a route basis
New South Wales	<ul style="list-style-type: none"> Weakly contestable - mainly through threat of competition if minimum standards not achieved ("benchmark contestability") 	<ul style="list-style-type: none"> State Transit required to operate on a commercial basis (after CSO payments)
Queensland	<ul style="list-style-type: none"> Similar to NSW; except that selected private operator areas are being opened to CT. 	<ul style="list-style-type: none"> Private operator services - some subject to CT process Brisbane Transport - given certain efficiency and patronage targets, with threat of competition if not achieved.
South Australia	<ul style="list-style-type: none"> Full contestability being progressively introduced (1995-97) 	<ul style="list-style-type: none"> CT on an area franchise basis
Victoria	<ul style="list-style-type: none"> Ex- Met Services - fully contestable (since 1993) Other (private) services - not yet contestable, but proposals before Parliament to negotiate improved contracts or introduce CT (in 1997) 	<ul style="list-style-type: none"> Ex-Met services - CT on an area franchise basis Other services - currently cost-based contracts with no revenue incentive
Western Australia	<ul style="list-style-type: none"> Full contestability being progressively introduced (1995-97) 	<ul style="list-style-type: none"> CT on an area franchise basis

Note: (1) CT = competitive tendering

FORM OF CONTESTABILITY: COMPETITIVE TENDERING FEATURES

64. For the fully contestable situations, contestability is in every case largely through a competitive tendering system ('competition for the market'). Contracts are generally for an exclusive area franchise (although often also involving 'line of routes'). New Zealand is distinguished by being the only case involving an element of deregulation ('competition in the market'), although even here most services are determined through a competitive tendering process, but on a route/corridor rather than area basis.
65. Table 4 summarises key features of the competitive tendering/contracting process followed (or to be followed) in the four 'fully' contestable situations noted above. It is seen that there are considerable differences between the policies for each feature in the four situations, although South Australia and Western Australia are generally adopting similar policies.
66. The features covered together have substantial effects on:
- The contestability of the market - the ease of operator entry/exit, the rules for bidding, the sharing of risks between operator and regulatory authority, etc.
 - The incentives for operators - in terms of adjusting services and attracting passengers, and hence on the overall service quality.

67. Further comment is provided later in the paper on the importance of the key features in assisting contestability and productive efficiency in particular, and on the lessons learned from experience so far.

INSTITUTIONAL REFORM DEVELOPMENTS

INSTITUTIONAL AND REGULATORY REFORM

68. I believe there would be general acceptance of the proposition that institutional reform needs to be considered as an integral component of regulatory reform: public sector authorities will be unable to compete on a proper basis with private operators unless they are given appropriate freedom to adopt commercial practices.
69. In my view it is usually more appropriate for institutional reform to precede, rather than occur concurrently with, regulatory reform. Typically, a public sector operator (GTE) would need 2-3 years leading up to the introduction of competition, in which to adopt commercial principles, re-negotiate its labour agreements, upgrade its management systems, restructure its management etc - in short to be in a position to be competitive. This viewpoint now seems to have been accepted by the UK Government in its approach to regulatory reform in London: it first corporatised and then privatised the divisions of London Buses Ltd some time before attempting regulatory reform.
70. I believe there would also now be general acceptance of the proposition that regulatory/policy functions should be in a separate organisation from service delivery/operations functions. This policy has been strictly adopted in the NZ reforms, has been or is being adopted in the reforms in the Australian States (Table 2) and was a strong recommendation of the Industry Commission.

TABLE 4: KEY FEATURES OF AUSTRALIAN COMPETITIVE TENDERING/CONTRACTING SYSTEMS⁽¹⁾

Feature	New Zealand		South Australia		Victoria (ex-Met Services)	
	(Non-commercial services)					
A. Contract Nature/ Size	<ul style="list-style-type: none"> Route/corridor basis Normal max tender size approx 12 buses 	<ul style="list-style-type: none"> Area basis 10-85 buses (mostly 60-80 buses) c.10-c.100 buses 	<ul style="list-style-type: none"> Area basis Varied (6 contract areas for c.270 buses) 	<ul style="list-style-type: none"> Area basis Varied (6 contract areas for c.270 buses) 	<ul style="list-style-type: none"> Area basis Varied (6 contract areas for c.270 buses) 	<ul style="list-style-type: none"> Area basis Varied (6 contract areas for c.270 buses)
B. Contract Duration	<ul style="list-style-type: none"> 1-5 years (mostly 3-5 years), with no renewal provisions 	<ul style="list-style-type: none"> Initially 2.5-5 years, with possibility of 5 year renewal 	<ul style="list-style-type: none"> Initially 5 years, with possibility of 5 year renewal 	<ul style="list-style-type: none"> Initially 5 years, with possibility of 5 year renewal 	<ul style="list-style-type: none"> 7 years, with option of renewal kept open 	<ul style="list-style-type: none"> 7 years, with option of renewal kept open
C. Manner of Service Specification in RTT ⁽²⁾	<ul style="list-style-type: none"> Detailed routes and frequencies 	<ul style="list-style-type: none"> To meet at least minimum service standards. Additional services at operator discretion (subject to approval) 	<ul style="list-style-type: none"> Detailed routes and frequencies, with changes subject to negotiation 	<ul style="list-style-type: none"> To meet at least minimum service standards. Increased services at operator discretion 	<ul style="list-style-type: none"> To meet at least minimum service standards. Increased services at operator discretion 	<ul style="list-style-type: none"> To meet at least minimum service standards. Increased services at operator discretion
D. Treatment of Fares and Revenue	<ul style="list-style-type: none"> Fares set by RA Most contracts net (revenue kept by operator) 	<ul style="list-style-type: none"> Fares set by RA Revenue returned to RA 	<ul style="list-style-type: none"> Fares set by RA Revenue returned to RA 	<ul style="list-style-type: none"> Fares set by RA Revenue returned to RA 	<ul style="list-style-type: none"> Bus only fares determined as part of tender bid (Net fares set by RA) Contractor funded through fare revenue (including make-up to bus-only fares) 	<ul style="list-style-type: none"> Bus only fares determined as part of tender bid (Net fares set by RA) Contractor funded through fare revenue (including make-up to bus-only fares)
E. Availability of Public Assets	<ul style="list-style-type: none"> Contractor arranges own assets 	<ul style="list-style-type: none"> Buses and depots available for lease 	<ul style="list-style-type: none"> Buses available for lease (lept situation being resolved) 	<ul style="list-style-type: none"> Buses and depots available for lease 	<ul style="list-style-type: none"> Buses and depots available for lease 	<ul style="list-style-type: none"> Buses and depots available for lease
F. Basis of Contractor Funding	<ul style="list-style-type: none"> Mostly net revenue contracts. Some gross contracts 	<ul style="list-style-type: none"> Fixed (bid) component plus patronage-related component 	<ul style="list-style-type: none"> Fixed (gross) price for first year; thereafter some adjustment for patronage changes 	<ul style="list-style-type: none"> Fixed (gross) price for first year; thereafter some adjustment for patronage changes 	<ul style="list-style-type: none"> Fare revenue, plus make-up from Met fares to bus-only fares 	<ul style="list-style-type: none"> Fare revenue, plus make-up from Met fares to bus-only fares
G. Evaluation Criteria	<ul style="list-style-type: none"> Either trade-off between price and quality etc features; or lowest-price conforming tender 	<ul style="list-style-type: none"> Trade-off between fixed bid price, quality etc features, experience/truck record etc 	<ul style="list-style-type: none"> Trade-off between price, operational ability/experience and service innovation proposals 	<ul style="list-style-type: none"> Trade-off between price, frequency, fleet profile, financial capacity and operating experience/ability 	<ul style="list-style-type: none"> Trade-off between fares, frequency, fleet profile, financial capacity and operating experience/ability 	<ul style="list-style-type: none"> Trade-off between fares, frequency, fleet profile, financial capacity and operating experience/ability
H. Treatment of Public Sector Operator	<ul style="list-style-type: none"> All operators corporatised or privatised In general no special treatment (exception was Auckland initially, where existing operator allowed 25% price advantage) 	<ul style="list-style-type: none"> Treasury established costing guidelines for T/A bids. Based on full cost allocation, but excluding defined "input cost disabilities" 	<ul style="list-style-type: none"> Treasury established costing guidelines for Metrobus bids, based on full cost allocation. Some issues still to be resolved 	<ul style="list-style-type: none"> Treasury established costing guidelines for Metrobus bids, based on full cost allocation. Some issues still to be resolved 	<ul style="list-style-type: none"> PTC required to price tenders on full cost basis 	<ul style="list-style-type: none"> PTC required to price tenders on full cost basis

Notes

(1) R.A. = Regulatory Authority

(2) RTT = Request for Tender document.

NEW ZEALAND

71. In New Zealand, the institutional and regulatory reforms occurred almost simultaneously. All the (10) former municipal operators were required to be corporatised or privatised. While most were initially corporatised, only three now remain in the public sector: the others have been sold or wound up. While initially the local authorities concerned generally favoured corporatisation (rather than privatisation), a number of them rapidly modified this view when it became apparent that a corporatised, commercial bus undertaking could no longer be used as an arm of local council social and transport policy. In Wellington, for instance, there is little sign that the council considers itself worse off because its former bus company is now owned by the Stagecoach Group rather than the City Council itself.

AUSTRALIA

72. The present status of the public bus operators in each Australian state is noted in Table 2. In most cases, the operator is a statutory authority, already adopting commercial principles or working towards 'commercialisation'. I believe only in Victoria are there current proposals for corporatisation (of MetBus).
73. Within these commercialised authorities, the trend is to split the business into semi-autonomous business units (as recommended by the Industry Commission), typically with a relatively small corporate office. The NSW State Transit Authority exemplifies this approach. Operators such as MetroBus (Perth), faced with competitive tendering, are going further in splitting the organisation up into 'self-empowered units' at a sub-depot level, with management and financial responsibility being delegated to such units. The large public sector operator will look very like a host of semi-independent small operators, each on the private sector model.

SOME OUTCOMES TO DATE -PRODUCTIVE EFFICIENCY

NEW ZEALAND

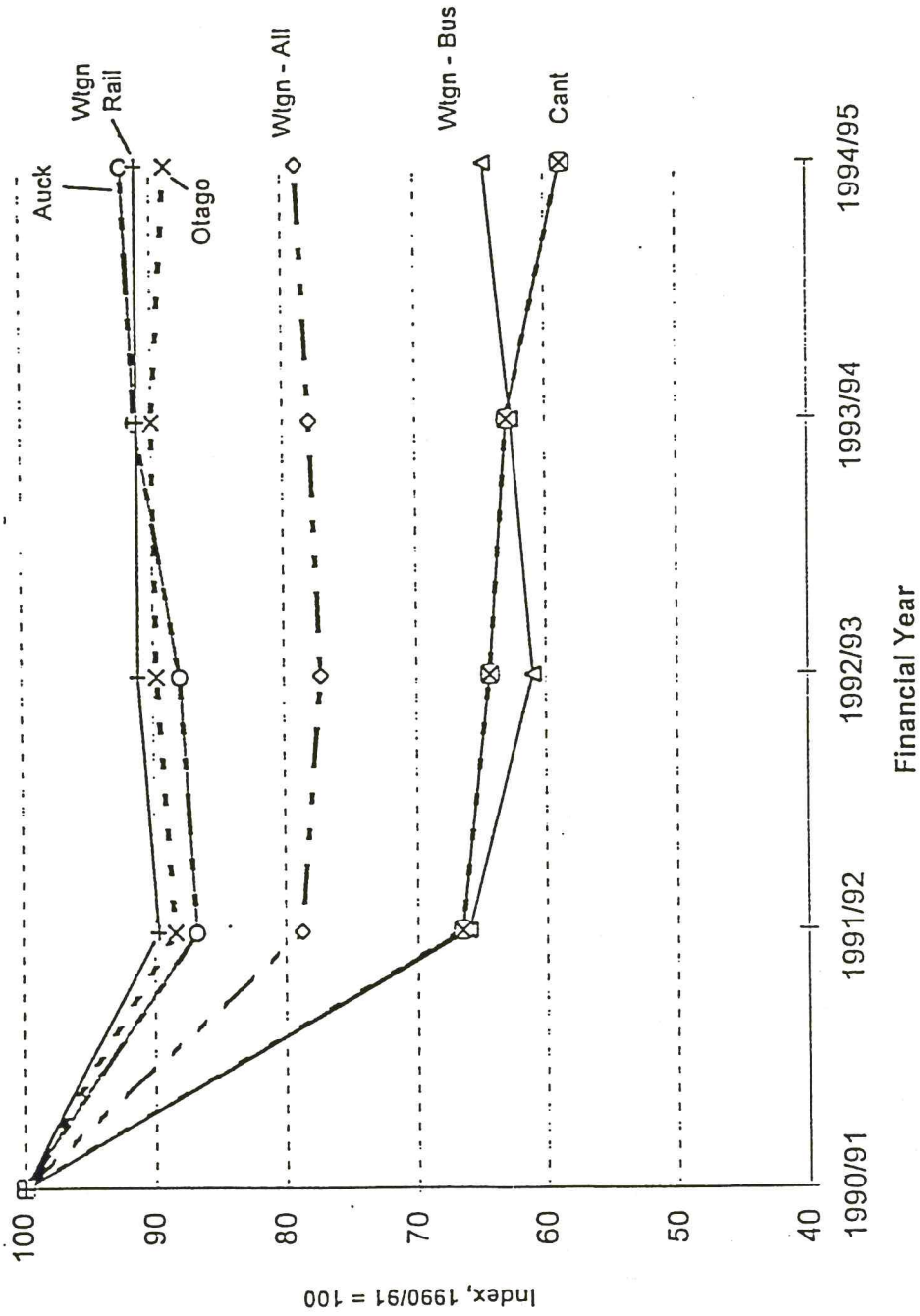
74. This section summarises evidence from New Zealand on changes in operator productive efficiency (unit costs) and in public funding levels over the period 1990/91 - 1993/94 (and 1994/95 where available), ie. covering the effects of the July 1991 reforms (refer Travers Morgan 1995 for further details).

Operator Productive Efficiency

75. Regulatory reform has had major impacts on the practices, efficiency and cost levels of New Zealand's municipal (or ex-municipal)-operators, while private operator practices and costs have been little affected.
76. The (ex) municipal operators have all experienced substantial staff reductions, introduction of new awards (enterprise agreements, with much simpler structures than hitherto), changed management practices etc. Typical impacts on staff numbers and unit costs over the period 1989/90 - 1993/94 have been:

Figure 1: Trends in Funding Levels, 1990/91 - 1994/95

(All figures in money terms, relative to 1990/91 = 100)



- Staffing levels - overall reduction of over 40% in total staff/bus kilometre
 - proportionate reductions broadly similar for drivers and other staff
- Unit costs - c.35% reduction (real terms) in working expenses/bus kilometre.

77. It is perhaps worthy of note that these staff and cost reductions are very comparable with those experienced by the municipal/PTE sector in United Kingdom following deregulation there.

Public Funding

78. Over the period since 1991, fare and service levels have generally changed very little in New Zealand. There has been some continuing decline in patronage, but with stabilisation or some slight increases over the last 1-2 years, with the growth of the economy.

79. Figure 1 shows trends in public funding levels for the main NZ centres over the period 1990/91 - 1994/95 (figures in money terms). Substantial reductions in funding occurred between 1990/91 and 1991/92 and were clearly associated with the effects of the reforms: there has been relatively little change since 1991/92. The funding reductions vary between around 10% and around 40% in the different centres. The overall average reduction had been around 20% in real terms (this average is heavily influenced by the Auckland figure, as Auckland dominates in terms of total funding).

80. We would expect some further fall in public funding, probably equivalent to an additional 10% nationally, over the next few years, as services in the Auckland region are progressively retendered. (The savings in Auckland in 1991 were modest, partly as a result of the policy of giving preference to the incumbent operator in the tender evaluation process). As against this, it is not clear whether the funding reductions which have occurred in Wellington and Canterbury in particular are sustainable in the longer term, as operators cannot postpone fleet replacement indefinitely.

AUSTRALIA

81. As most Australian states are only part-way through the urban bus reform process, there is less comprehensive data on efficiency gains and cost savings than is the case for New Zealand. The following provides some statistics for the gains achieved to date and for the targets set by some states for the ongoing process. (The information is incomplete: any additions or corrections would be welcome.)

Operator Productive Efficiency

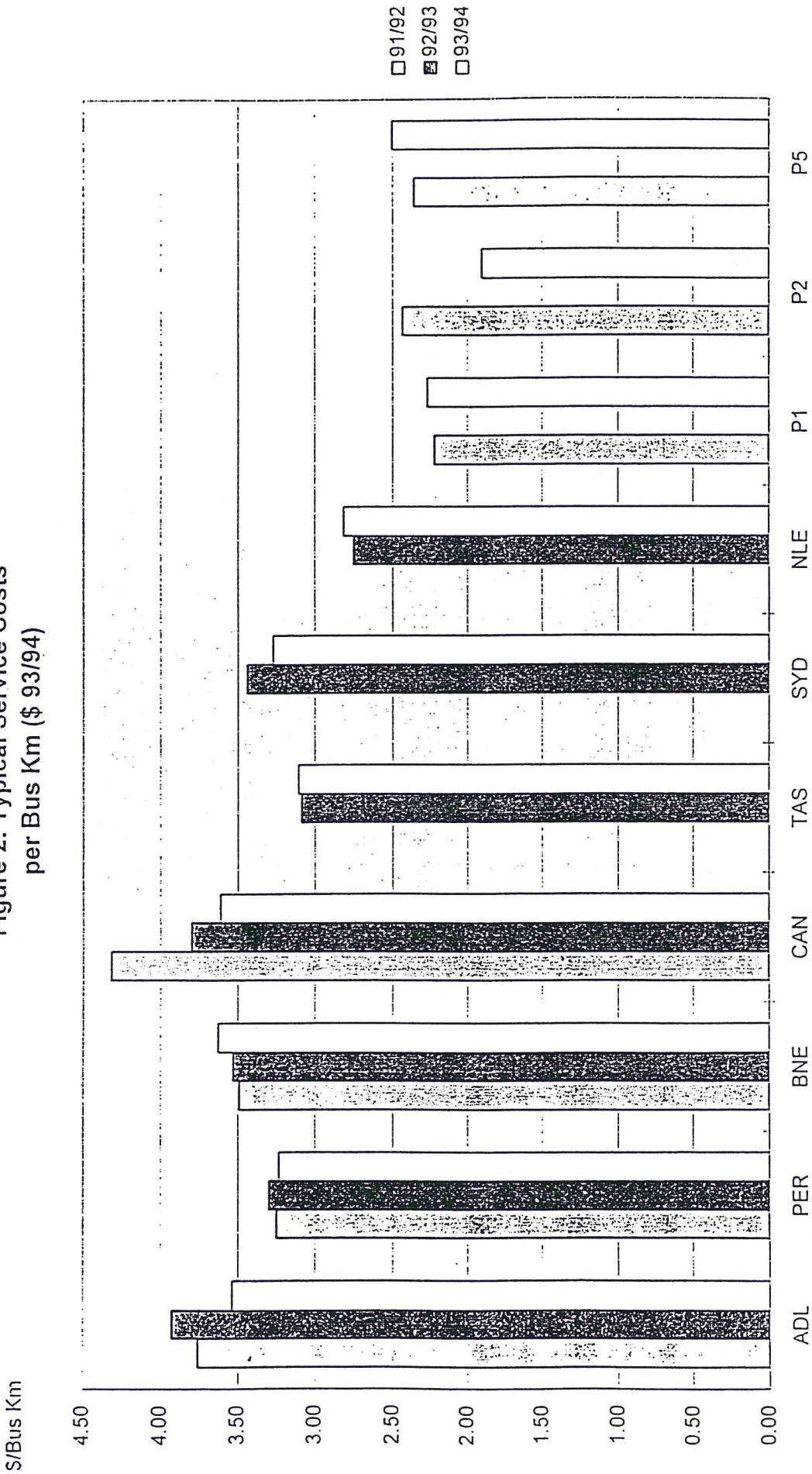
82. Through the 1980s, the productive efficiency levels of the main public sector bus operators in Australia (as measured by total operating expenditure/bus kilometre) changed little in real terms. Over this period a number of studies found that the unit cost levels of private operators of urban route services were typically 30-40% lower than those of the public operators.

83. In general, as the reform process in Australia has yet to achieve its main impact in most states, improvements in the productive efficiency of the public operators to date have been modest. Figure 2 illustrates some trends over the last three years (up to 1993/94) for major public and private operators: while some public operators have improved their performance significantly, on average their unit costs still need to reduce by in the order of 30% to match the private sector cost levels.
84. The following provides brief comment on recent and targeted changes in productive efficiency in selected states.
85. **New South Wales.** Reform of the State Transit Authority has been ongoing since the late 1980s, principally in the form of 'commercialisation' rather than through the introduction of direct contestability. Significant efficiency gains have been made, as exemplified by the following figures:
- Employees/bus km, change 1989/90 - 1993/94:

Sydney Bus	- 34%
Newcastle Bus	- 31%
 - Expenditure/bus km (real terms), change 1989/90 - 1993/94:

Sydney Bus	- 15%
Newcastle Bus	+ 3%.
86. **Queensland.** The target recently set for Brisbane Transport (by the State DoT and Brisbane City Council) is for a 30% reduction in gross operating costs (essentially in unit costs) over 3 years. It is too early to assess progress towards this, as the substantial savings will only start to emerge in 1995/96.
87. **Western Australia.** MetroBus has a target to reduce its gross operating expenditure by 30% (\$49M pa) from its 1993/94 level over the next 2-3 years. It was noted recently by the Chief Executive that costs have already been reduced by \$17M pa 'through the threat of competitive tendering' (Wadsworth 1995).
88. MetroBus is perhaps a good example of the public operator response to regulatory reform and the introduction of competitive tendering. It has developed a comprehensive Cost Reduction Plan, involving the following initiatives:
- Internal efficiencies - involving critical examination of processes and systems in all areas and the contracting-out of non-core activities.
 - Labour flexibility - involving the conclusion of Enterprise Agreements at individual depots, prior to them being subject to competitive tendering. Also involves the creation of small 'self-empowered' work teams, to operate and manage small groups of services on a 'sub-depot' basis.
 - Restructuring - review of the organisation and management structure to deliver best practice costs for support functions. Staff reductions have been achieved of around 45% in the corporate/administrative areas and 35% in the maintenance area (Wadsworth, 1995).

Figure 2: Typical Service Costs
per Bus Km (\$ 93/94)



Note: Figures as derived by Travers Morgan for the Australian Bus Benchmarking Project.
Relate to a 'Standardised operation, to maximise comparability between operators

Public Funding

89. **South Australia.** The State Government has set a target to reduce the costs of all Adelaide's public transport services by 25% of present net funding, representing \$34M pa. About \$27M of this is expected to come from bus services, equivalent to a reduction in TransAdelaide's gross bus operating costs of 20%. Results from the initial bus tender rounds over the next few months should give an indication whether this will be achievable: the signs so far are promising in terms of reductions in TransAdelaide's own budget in 1994/95 and 1995/96.
90. **Victoria.** The State Government estimates a saving of a round \$10M pa in public funding has been achieved as a result of the competitive tendering of the ex-Met bus services, while at the same time services have increased by around 15%. This saving may be compared with previous gross costs of around \$64M pa (1991/92) or net costs of around \$45M pa.
91. **Western Australia.** The WA Government target is to reduce net government expenditure (all modes) by \$47M by 1995/96 relative to the 'no-reform' expected funding level of \$237M, ie. about 20%. It appears \$41M of this is expected through the bus services (Middleton, 1995). Judging by progress to date, it appears likely that the cost saving components at least of these targets will be achieved, although perhaps a year or so later than specified.

SUMMARY

92. There is little doubt, from the experience in New Zealand, United Kingdom and elsewhere, that appropriate regulatory reform of the urban bus industry can result in major cost savings and efficiency improvements among public sector operators. Typically unit cost reductions in the range 25-35% are achievable. (This represents around \$200-250M pa for the 'big six' public bus operators in Australia).
93. Assuming no change in fares and service levels, this will translate directly into savings in public funding (subsidy).
94. In New Zealand, most of the expected efficiencies and financial savings have already been achieved, although some further savings are expected over the next two years.
95. In Australia, the reform process is at an earlier stage. Substantial gains have already been made in some states (particularly NSW and Victoria). In others the main gains are expected over the next 2-3 years (particularly Queensland, South Australia and Western Australia): unit costs need to be reduced by in the order of 30% to match private sector cost levels.

ACHIEVING CONTESTABILITY AND PRODUCTIVE EFFICIENCY - KEY ISSUES AND LESSONS

OVERVIEW

96. The urban bus reforms in both Australia and New Zealand have primarily been concerned with improving productive efficiency, ie. reducing the input costs to provide a given level of service. Earlier sections have described the various regulatory approaches being adopted in the two countries, and have provided some evidence on the effectiveness (actual or expected) of the reforms in terms of cost and subsidy levels.
97. This section attempts to highlight the key aspects of the regulatory reform systems which affect productive efficiency, and summarise some of the lessons which may be gleaned from experience to date. From New Zealand particularly, a lot of experience has now been accumulated in passenger transport tendering/contracting issues over the last few years, and much has been learned from various reviews of the process.

THE IMPORTANCE OF CONTESTABILITY

98. As noted earlier (by the Industry Commission and others), **increased contestability** (ie. actual competition or the threat of competition) is seen as the fundamental requirement to improve the efficiency of the urban bus industry.
99. There is plenty of evidence to support this hypothesis, both in Australasia and world-wide. In New Zealand, efforts throughout the 1980s to restrain costs met with very limited success, until the 1991 regulatory reforms introduced competition throughout the sector. In Australia, public operators such as the NSW State Transit Authority have had some modest success, over an extended period, in improving their productive efficiency in the absence of direct competition and with only mild threats of competition. However, the introduction of competitive tendering in South Australia and Western Australia appears to be having much more rapid and dramatic effects on the efficiency of the public operators there: MetroBus's over-arching theme in its present business planning is "Get Competitive", and its whole planning process is focussed on this.
100. As noted in Section 4, we are doubtful whether the partially contestable models being adopted by some states (particularly NSW and Queensland) will result in comparable efficiency gains, over comparable time periods, to the 'fully' contestable models being adopted elsewhere. In general, we believe 'benchmark contestability', with its rather weak threat of competition, is a poor second best to the periodic testing of the market through competitive tendering.
101. Given the fundamental importance of contestability to the achievement of productive efficiency, most of the issues discussed below are concerned with how to maximise or improve levels of contestability (allocative efficiency issues, covering services and fares, are discussed in a later section).

MARKET STRUCTURE

102. Efficiency gains will only be maximised where there are a reasonable number of players in (or threatening to be in) the market and where the market is not dominated by a single operator.
103. In New Zealand, there are dominant operators in established positions in both the Auckland and Wellington markets, and the smaller established operators have generally adopted defensive strategies. Any new entrant appear to have been either deterred from tendering by the presence of the dominant operators, or thwarted by tactical manoeuvres after success in the tendering process. However in Christchurch, where the former municipal operator lost a significant number of services in the first tender round, the subsequent tender rounds have seen keen competition and very keen prices.
104. In order to increase contestability, this suggests there is a good case for splitting up large public sector operators prior to the introduction of competitive tendering (ie, institutional reform before regulatory reform). This occurred in the United Kingdom (with the National Bus Company and more recently London Buses Ltd) but appears not to have been contemplated in either Australia or New Zealand. Certainly, in cities such as Adelaide and Perth, splitting up the public sector operators, probably on a depot-by-depot basis, would seem an obvious way to create a competitive market where there are no ready-made competitors currently operating within hundreds (or thousands) of kilometres.

OPERATOR OWNERSHIP

105. The establishment of policy/regulatory functions in a separate authority from the service operator appears to have been universally accepted as a component of institutional/regulatory reforms.
106. In New Zealand, the legislation required local governments to (at minimum) corporatise their bus undertakings. Although this was done with some reluctance initially, local councils rapidly realised that the merits of owning a corporatised, commercially-oriented bus company were limited (unless it was highly profitable). Consequently a number of councils quickly moved to disband or sell their corporatised company to the private sector. A view has emerged in several quarters that corporatised undertakings are an unsatisfactory halfway house: either direct control or privatisation would be preferred.
107. In Australia, the Industry Commission recommended that the public sector operators should be constituted as statutory corporations. As noted earlier (Table 2), some states to date show little sign of pursuing this path, but are adopting policies of 'commercialisation' rather than formal corporatisation.
108. In terms of achieving contestability and productive efficiency, ownership per se is not important. What is important is establishing a 'level playing field', between public and private operators, and removing any constraints which affect the ability of the public/corporatised operators to perform in the competitive market.

109. Once such constraints are removed, the public/corporatised operator will tend to develop and behave in the competitive market very much like the private operators with which it is in competition. Given this, it raises the question of whether there is any rationale for such an operator remaining in public ownership, when it is merely one among many competing service providers. The UK approach has been very much for the public operators to be progressively privatised: this has also occurred to a significant extent in New Zealand, but in general not so far in Australia.

FAIR COMPETITION - ESTABLISHING THE LEVEL PLAYING FIELD

110. In the competitive process, the public sector operators typically have a number of advantages over their competitors - in particular the advantage of being the incumbent operator (market knowledge, an established organisation etc). They also have disadvantages, associated with being government authorities (eg. public sector awards conditions, superannuation etc). If a competitive market is to be created, and seen to be created, there is a need for a broad parity of conditions and costs faced by public and private operators.

111. Two particular issues are highlighted:

- In the phasing-in period while services are being progressively tendered, a set of pricing/costing guidelines is needed for public operator bids, to prevent cross-subsidisation. Such guidelines have been adopted in both SA and WA (although it is as yet too early to judge their success).
- The imposition of regulatory reform before institutional reforms have been completed gives public operators insufficient time to become fully competitive by eliminating all the extra costs associated with government authorities. Thus there may be a good case for separate funding of defined 'input cost disabilities' of public operators, for a limited period only: this is the approach being adopted in Adelaide. However caution is needed to ensure this is not used as an excuse for not eliminating these costs.

ASSET OWNERSHIP - REDUCING BARRIERS TO ENTRY

112. While the urban bus business is generally regarded as having relatively low barriers to entry, these barriers are still quite substantial and new entrants are relatively rare.
113. Making a pool of vehicles available for lease by operators would reduce barriers to entry, would reduce the difficulties of changing contractors and would ensure that vehicle standards are maintained. This policy was pursued in Victoria (ex-Met buses) and is being pursued in South Australia and Western Australia. In each case, appropriate vehicles of the public operator are transferred to the regulatory authority (or other government department), which then makes them available on the same terms to all tenderers - but allows use of alternative vehicles if preferred. We consider this approach is desirable.

114. A similar issue arises with depots. In cases where one contract fills one depot, this is easily managed. In other cases, practical difficulties are likely to arise with two or more operators operating out of the same depot: this is less easily resolved.

CONTRACT SIZE

115. The optimum size of contracts (however measured) is always a difficult issue, with no one right answer: it is a matter of 'horses for courses'. Smaller contracts have advantages in encouraging smaller operators, and perhaps new entrants; and they also result in more frequent tendering opportunities. Larger contracts have advantages in encouraging new (larger) operators to set up in an area, and of course potentially allow operating economies and reduced administration costs.
116. In New Zealand, individual tenders were limited to a maximum of 12 buses, in order particularly to encourage smaller operators and new entrants: however there is also a provision which allows 'group bids' for adjoining contracts. In both South Australia and Western Australia, individual contracts range up to 80-90 buses, and (not unexpectedly) these larger contracts appear to be attracting more of the larger interstate and overseas operators. It may well be that both the NZ and the SA/WA policies are about right for their respective markets.

CONTRACT DURATION

117. This is another thorny issue. Shorter contracts provide more frequent competitive opportunities: however they may encourage operators to take a 'cash cow' approach and not develop the services. Longer contracts provide greater opportunity for contractors to develop the market and recoup their capital investment, and would thus be expected to result in lower prices. However, there is little evidence that prices are lower for contracts longer than 3-4 years. It is argued by some that the contract life should reflect the life of the asset; but with a tradeable and mobile asset such as a bus, this is not necessary.
118. In New Zealand, most contracts are 3-5 years, with a 5 year maximum limit. There are no rights of renewal/rollover. Both SA and WA are working to a 5 year standard contract life, but with the possibility of a further 5 year rollover. Victoria has a 7 year life for its ex-Met bus contracts, also with a possibility of rollover.
119. On balance, I believe a 4-6 year contract duration is probably about the optimum for bus services: any benefits of longer contracts are likely to be offset by the reduction in competitive opportunities that thereby arises.
120. I would have some reservations about rolling over initial 5 year contracts in SA and WA to total 10 year periods - although such decisions can be taken much nearer the time.

ALLOCATIVE EFFICIENCY ISSUES - SERVICE PLANNING

WHO SHOULD PLAN THE SERVICES (AND FARES)?

121. I noted earlier that the economic rationale for intervention in the public transport market was that the marginal social cost is less than the average cost. In plain English this means that the free market will result in less services or higher prices than is socially/economically optimal, as there is a benefit to the user from increased frequency which is not accounted for by the operator (this is sometimes described as user economies of scale). We all know that: that is why almost every country subsidises its public transport services. Assuming that we accept the need for a higher level of service (or lower fares, because the two are co-determined), the issue is then how this higher service level is to be achieved.
122. What we are dealing with is a case of market failure, and there are two ways market failure can be addressed:
- direct intervention through government operation or regulation
 - manipulation of the market to create the correct signals.
123. Direct intervention is the traditional approach, either by government agencies operating the services themselves, or through heavy regulation. Competitive tendering on the New Zealand model is still direct intervention, because the regulator set the fares and service levels. That part of the 'market economy', the feedback from consumer demand to the operator, is lost or diluted.
124. Area franchises are a form of direct intervention favoured by some operators and regulators because they enable the operator to bear a greater responsibility for service planning. However this is at the expense of lessened competitive pressures. Thus while an area franchise facilitates operator responsiveness to customer needs, it does not necessarily provide the incentives to ensure that changes happen.
125. If fares do not cover all costs (our original assumption), net cost contracts do not provide sufficient incentives for operators to improve services, and necessitate minimum service specifications to prevent operators reducing services. If the responsibility for service planning is to be left with operators, additional incentives are required, ie. the price signals must be right.
126. The alternative to direct intervention is to manipulate the market to provide the correct price signals. Thus if the optimum fare is x cents/passenger km, while the average industry cost is y cents/passenger km (x less than y), one method of ensuring allocative efficiency would be to provide an incentive or top-up of $(y-x)$ cents/passenger km.
127. Various variations on this theme have been introduced in the recent tender rounds in Perth, Adelaide and Melbourne. The 'purest' of these is perhaps Adelaide, where all fare-box revenue goes directly to the regulator, and operators are to be paid a fixed contract sum plus a sum per passenger and per passenger-kilometre.

128. However in all these cases, the incentive is provided in the context of an area franchise, with only limited freedom for the operator to vary the services offered. The question which needs to be asked is - if the prices (incentives) have been set correctly, do we need the intervention (of area monopolies imposed by regulation) as well?

SERVICE INTEGRATION AND COORDINATION

129. While a market system may provide the benefits of efficiency, dynamism and responsiveness, it is likely to be short on coordination and integration of services.
130. One important rationale for intervention is that the user benefits from scale in urban transport depend on coordination of services. That is, a user is better-off with two buses per hour than one bus per hour, but only if they are half an hour apart (and only if both buses accept the same multi-trip ticket). If benefits are great enough, there will be an incentive for the market to provide them (eg. with all system tickets). One of the initial problems with the UK deregulation was that such coordination was seen as anti-competitive and was disallowed.
131. Integration of bus and rail services is another area where intervention is seen by some as necessary. A major justification for the introduction of regulation of bus services in many parts of the world was the desire to protect investment in, and revenue from, the operation of rail passenger services. In economic terms this argument can be partly rationalised in terms of economies of scale in the provision of rail services, which make a single supplier the most productively efficient solution. This argument needs to be weighed against the allocative efficiency benefits which a choice of services and modes might provide to users, and the production efficiencies in the rail sector which might arise from competitive forces.
132. One solution to this conundrum is to again look to a pseudo-market to get the prices right and to then leave the market to decide the degree of competition and coordination which is appropriate.
133. Clearly there is much more work to be done in the area of allocative efficiency before we can conclude that we are doing the right thing. The reforms to date have put, or are putting, the right framework into place. The continuing challenge is to use this framework to achieve the right services for our communities.

THE CONTRIBUTION OF RESEARCH

134. Urban bus reform in Australasia cannot be considered in isolation. It is one manifestation of much wider and ongoing micro-economic reforms in both countries - and in particular of reforms directed at improving the efficiency of service provision in transport, utility and other sectors, through the introduction of competitive disciplines in what in many cases have hitherto been monopoly government business enterprises. In the urban bus sector, the developments in Australasia are part of a trend in many countries of the developed world (and in some less developed countries) towards regulatory reform, competitive tendering and privatisation of urban bus operations.

135. One might be tempted to suggest that these developments would have happened independent of and unaffected by the efforts of those involved in transport research and policy development, including those who attend conferences such as this. However I do not believe this is the case.
136. The Thredbo (T1) conference had a profound effect on many of the Australian and New Zealand delegates. Up until that time, the pace of reform in the urban bus market in both countries had been slow (if not non-existent). In many cases, the conference delegates were exposed for the first time to information and discussion on the regulatory reforms that had been occurring in the United Kingdom and elsewhere, and were presented with the opportunity to consider the place for such reforms in the Australasian market. There was heated debate (mostly behind closed doors or in front of the bar) about the regulatory reforms being considered in New South Wales: allegedly the present NSW Government policy relating to private bus operators was effectively determined at the conference. There is little doubt that the Thredbo Conference acted both as a focus and a catalyst for regulatory reform in Australasia.
137. The influence of the subsequent conferences (Tampere 1991 and Toronto 1993) on Australasian reform has undoubtedly been much less, as the initial impetus had already been established and the number of attendees from the two countries was very much fewer. However, there is no doubt that the selection of the reform models being adopted in Australasia owes a lot to the research evidence on the impacts of reforms elsewhere. Speaking personally, as a consultant who has advised a number of government regulatory authorities in the two countries, my advice has clearly been influenced by the international experience with regulatory reform - and this advice has, on at least some occasions, been translated into practice by the authorities concerned.
138. I would conclude that the transport research and policy development community has had a substantial impact (I believe for the better) on the direction and probably the pace of regulatory reform in the urban bus sector in Australasia. As in most such situations, more research would be desirable, and perhaps particularly research into the range of impacts of different regulatory approaches - not an easy task. Perhaps this conference should take a lead in setting an international research agenda for the next two years, and delegates should promote this agenda to make sure it is followed through. We can then look forward to hearing the findings at the T5 conference in 1997.

CONCLUSIONS

THE REFORMS TO DATE

139. The main reforms of the urban bus sector in New Zealand took place in 1991, and the new system ('deregulation' with competitive tendering) has now reached some broad equilibrium.
140. In Australia, the reform process is less advanced, and the position differs between states. Partial reforms have occurred in NSW and Victoria; reforms in SA, WA and Queensland

are only just getting seriously under way; while in ACT the new Government is currently contemplating the reform policies to be pursued.

141. So far, Victoria, SA and WA are largely adopting the competitive tendering approach to improve productive efficiency; while NSW and Queensland are generally pursuing weaker forms of contestability.

POTENTIAL BENEFITS AND ACHIEVEMENTS

142. The potential economic benefits of reforms in the urban bus sector are substantial. In terms of improvements in productive efficiency only, cost savings from the public sector bus operators of 25-35% might be expected: these would represent in the order of A\$300M pa between the two countries. The potential benefits from improvements in allocative efficiency, from adjusting fares and services to optimum levels, are more difficult to assess: they may be of similar order of magnitude to the potential gains in productive efficiency.
143. The New Zealand reforms have largely been successful in terms of productive efficiency: unit costs of the public operators have fallen some 35% since 1991, while public funding requirements have reduced by over 20%.
144. In Australia, significant cost savings have already been achieved in some states (eg. NSW and Victoria). In others (eg. SA and WA), significant savings are being achieved in the lead-up to the competitive tendering process. Typically unit cost reductions in the order of 30% might be expected from the public operators, to bring their costs down to levels comparable with the private sector.

KEY LESSONS

145. In terms of improving productive efficiency, perhaps the key point to be emphasised is the importance of contestability - whether through competition in the market (deregulation) or for the market (through competitive tendering). I am dubious whether the 'benchmark contestability' approach (as practised in NSW) is as effective in this regard as the open competition provided through competitive tendering.
146. Other key factors in helping to achieve a contestable market and contributing to productive efficiency are:
- Full separation of policy/regulatory functions from service provision.
 - Establishing a 'level playing field' between public and private sector operators. (Ownership itself is not important if this is achieved - and the logic of public ownership of selected operators in a competitive market appears questionable).
 - Minimising the dominance of any one operator in an area (which may involve splitting up dominant public operators).
 - Making public sector assets (vehicles and perhaps depots) available to all contractors, in order to reduce barriers to entry.
 - A range of contract sizes, appropriate to the local market situation and local industry structure.
 - Suitable contract durations (typically 4-6 years).

147. In addition, to achieve both allocative efficiency and productive efficiency, it is important that operators be given prime responsibilities for service planning and appropriate incentives to better match services to the market (albeit within broad guidelines laid down by the regulatory authority). This can be pursued through the way service requirements are specified at the tendering stage and through the basis of payments to operators (related to passengers carried).

THE VERDICT?

148. Regulatory reform in the urban bus sector in Australasia has come a long way since the 1989 Thredbo Conference.
149. The reforms in New Zealand have largely achieved their productive efficiency objectives, although perhaps not some of the other objectives set for them.
150. In Australia, it is too early to give the definitive verdict, although the signs of success are promising. By the time of the T5 Conference in 1997, I hope to be able to report back with firmer conclusions.

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153. An earlier version of this paper was presented at the IIR Urban Transport '95 Conference (Sydney, June 1995).

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