

Session 4c

PASSENGER TRANSPORT - REFORMS

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**THE MINI-BUS EXPERIENCE IN PALMERSTON NORTH
- LESSONS TO BE LEARNED**

Brian Baxter

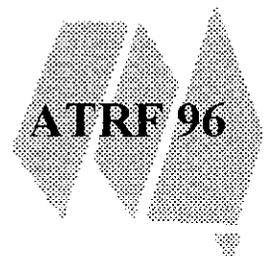
**COMPETITION BETWEEN BUSES AND MINIBUSES -
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**THE MINI-BUS EXPERIENCE IN PALMERSTON
NORTH - LESSONS TO BE LEARNED**

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ABSTRACT

Mini-buses, in the form of 10 seater vans, replaced big buses as the provider of scheduled passenger services in Palmerston North, New Zealand, in 1991. The unsubsidised mini-buses were operated by the local taxi company and backed up by the rest of the taxi fleet where demand warranted.

Despite many predictions to the contrary, the taxis proved they were able to cope with the demands of a scheduled bus service. The result has been a large reduction in subsidy payments and general acceptance of the new service by passengers. However passengers have indicated that there are problems relating to the size of the vehicle, and in particular difficulties getting in and out. This led to the decision to seek a larger vehicle that would overcome these difficulties. This decision however created its own difficulties, such as how the small taxi company could finance such a purchase, the role of the regional council (the local authority responsible for ensuring appropriate services are provided) and how the council could influence the quality of a commercial service.

This paper reviews the history of the mini-buses in Palmerston North. It looks at how the taxi company coped, and the issues faced by a commercial service using small vehicles. The paper discusses the passenger reaction to the service and in particular to the vehicles used. And it looks at how eventually the taxi company 10 seaters were replaced by a new operator with 20 seaters, now protected by a 5 year contract. It examines the success of the mini-buses, and suggests some lessons that can be learned.

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Introduction

In 1991 the local taxi company won the right to provide scheduled bus services within Palmerston North. It used predominantly 10 seater mini-buses which were operated by owner drivers from the local taxi company and which doubled as taxis. Many predicted that the taxi company would not cope with demand levels and that the service would soon fail. Five years on, and with the service still operating, this paper looks at the service, at passenger reaction to it, at the problems it has faced, and what lessons might be learned.

Background

Palmerston North

Palmerston North is a city of 70,000 in the lower half of the North Island of New Zealand. The city is flat and compact, and parking space is relatively plentiful. Only 3% of work journeys are by bus (1991 census). The majority of commuters travel by car or bike. Schools are evenly distributed throughout the city and most school students either walk or bike. Those people that use the bus tend to be the true "transport disadvantaged" - they use the bus because they have no other options.

Up until 1991 the bus service had been operated by the city council owned bus company with standard size vehicles. The service was protected from competition and received substantial subsidy support. In 1991 Palmerston North had one taxi company, with 50 licensees.

Public Transport Deregulation

The impetus for the move to a bus service using small vehicles came from the deregulation of the passenger transport industry in New Zealand in 1989. There were two parts to the deregulation. Firstly the taxi industry was deregulated and the distinction between taxi services and bus services was largely removed. This allowed taxis to undertake scheduled services. The maximum size of a taxi vehicle was also increased to 12 seats.

Secondly, the provision of scheduled services was opened to competition. Operators were no longer restricted by licences to operate only on particular routes. And subsidies were to be contestable. These changes took effect on 1 July 1991.

Administration

Regional councils, which were also created in 1989, were given the role of administering the new regime. This role was to initially decide what services were considered necessary by their communities. If these services could not be provided commercially, regional councils were able to procure the services through the tender process. All services were required to be registered with the regional councils. Regional councils could not own buses or operate a service themselves. The ongoing role of the regional council was to ensure that the public received the quality and quantity of bus service they required

Subsidy Payments

The new legislation provided for operators to identify "commercial services". These are services that the operator is prepared to undertake without subsidy. These were required to be registered with the regional council. If further services were needed, these could be subsidised. The legislation prescribed that any subsidy payments to operators had to be made in accordance with "competitive pricing procedures" to be set by Transit New Zealand. Transit New Zealand's role, as the distributor of centrally collected roading taxes, was to prescribe the rules under which subsidies could be paid to transport operators. The subsidies themselves were provided by regional councils (60%) from their rating sources, and Transit New Zealand (40%) from diesel and petrol taxes. Essentially these competitive pricing procedures stated that all subsidy monies had to be tendered to determine the amount and the recipient.

Mini-Buses in Palmerston North

The Introduction of Bus-Taxis

The new de-regulated regime meant that the provision of the bus service in Palmerston North, as with elsewhere in New Zealand, was, for the first time, open to competition. The local taxi company decided that if it replaced some of its cars with vans it would be able to provide the service on a commercial basis. It therefore registered the complete urban network with the regional council. No other registrations were received. The council was required to decide if the service proposed by the taxis would meet the needs of the community. There was some debate over this, as many people (particularly those associated with the previous bus operator) doubted the ability of the taxis to handle the expected passenger numbers.

If the council had doubted the ability of the taxis to provide an effective service, it could have tendered the service and contracted another operator to provide the service it needed (although the taxis would still have had the right, by virtue of their initial registration, to also provide a service). However the regional council decided the service proposed by the taxis did meet the needs of the community and thus there was no need to look elsewhere. However, as the taxis' service was to be a commercial one, it could receive no protection from competition. A contracted service on the other hand, would have been able to be protected by the regional council from competition for the duration of the contract.

On 1 July 1991 the taxis' mini-bus service, known as "Bus-Taxis", began.

How Bus-Taxis Worked

The mini-bus service operated to a time table, over a fixed route, and with set fares like most bus services. However the vehicle was a 10 or 11 seater van which could do taxi work when not required for bus work. The taxis knew, from their observations of the big bus service, that at most times of the day a 10 seater van had sufficient capacity to cope with demand. If the vehicle became full, a second vehicle would be called up from within the taxi fleet to continue the route. This second vehicle might be a car rather than a mini-bus. The vans carried full sets of destination signs and when operating as a bus had a large "BUS" sign on the front of the vehicle. On the one busy route in the city, out to Massey University, the taxis realised that mini-buses would not be big enough to carry the expected passengers. They purchased 3 large buses which operated solely on that route. Drivers were employed for these buses. A photo of the Bus-Taxis is shown in Figure 1.

Figure 1: Bus-Taxis in Palmerston North



How Effective Have The Bus-Taxis Been

The Bus-Taxis have now been operating for over 5 years. They have been free from competition during that time and fares have remained at the 1991 levels. How effective have they been and what has been the passenger reaction?

Passenger Numbers

Complete passenger numbers for the Bus-Taxis are not available because of the commercial nature of the service. Comparisons with the previous big bus service are also difficult because of the unreliable figures that are available from the big bus company. However the regional council operates a concession fare scheme on the Bus-Taxis and comparisons can be made of the numbers of concessions tickets used. The concessionary fare scheme provides for children, the elderly, beneficiaries, students and people with disabilities to travel at less than the full fare. The regional council makes up the difference between the discounted fare and the full fare to the taxi company. Figure 2 shows the numbers of concession tickets used on the mini-buses over the last 5 years. The tickets used on the larger Massey buses, as far as is possible, have been excluded.

Figure 2: Number of Concession Tickets (Excluding Student Tickets) Used

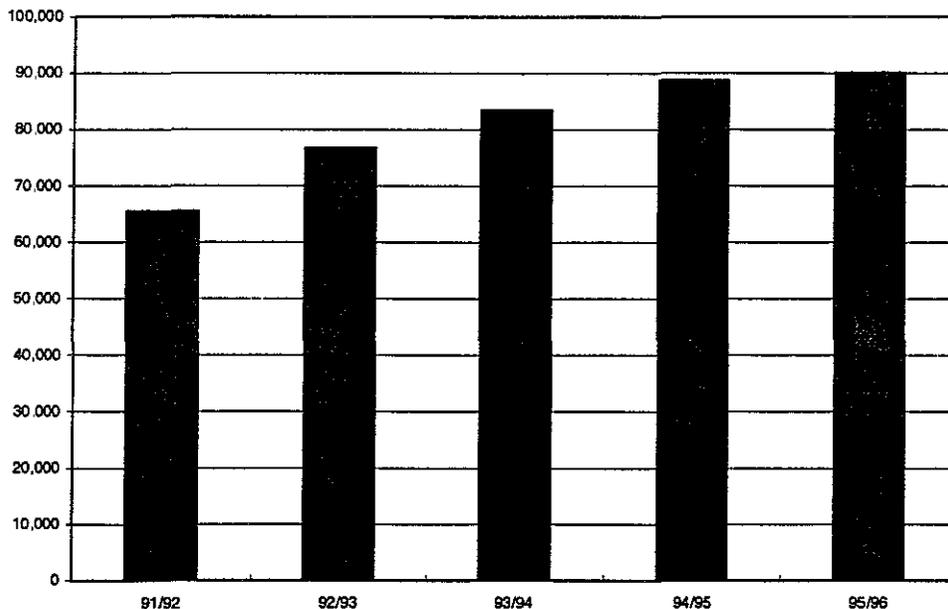


Figure 2 shows that concession ticket numbers have increased by approximately 35% over the five years the Bus-Taxis have been operating. The rate of increase however has slowed.

A breakdown of tickets used by type shows that ticket numbers for the elderly and for people with disabilities have declined over the 5 years. Possible reasons for this decline are discussed below.

Subsidy Payments

The cost to the community of a bus service can be shown by the amount of subsidy paid for that service. The Taxi-Bus service itself receives no subsidy. However as discussed above certain users of the service are eligible for concession fares which are subsidised by the regional council. How does this level of subsidy compare to the subsidy paid to the previous big bus service? Subsidy levels for the last year of the big bus service (1990/91) and the five years of the Bus-Taxis are shown in Table 1.

Table 1: Subsidy Levels

Year	Subsidy (\$)
90/91	1,400,000
91/92	49,753
92/93	60,381
93/94	69,990
94/95	84,426
95/96	102,489

Table 1 shows that the subsidy levels in 1990/91 were \$1.4 million. Subsidies in previous years were at a similar level. Subsidies in the subsequent 5 years (including the Massey route) have been substantially below this level. Clearly the Bus-Taxi service has substantially reduced the wider community cost of providing the service. This is a significant issue for the regional council because of the relatively low public use of the service and the political pressure to minimise expenditure.

Passenger Reaction

In order to ensure services are meeting the demands of users and potential users, the regional council regularly monitors passenger services in the city. Several passenger surveys of the Bus-Taxis have been carried out by the council during the past 5 years. Face-to-face surveys were carried out of all Bus-Taxi passengers in December 1992 (18 months after the Bus-Taxis began operating) and again in December 1994. These surveys were designed to identify any problems passengers had with the service, as well as providing an indication of who is using the bus service and why. The results from the two surveys were very similar. Some of the results from the 1994 survey are shown in Table 2.

Table 2: 1994 Survey Results

Statement	Response (%)				
	SA	A	DBM	D	SD
The vehicles are comfortable	17	51	21	10	1
The drivers are helpful	39	51	6	3	1
The vehicles are reliable	34	51	11	3	1
The vehicles are easy to get in and out of	7	22	16	42	13
The doors are easy to open	13	48	17	19	3
The roof height does not cause any problems for me	13	33	18	27	9
If the vehicle is full, the back-up always arrives quickly	18	45	14	19	4

Notes: SA = Strongly agree
A = Agree
DBM = Doesn't bother me
D = Disagree
SD = Strongly disagree

Table 2 shows both positive and negative reactions. On the positive side:

- 89% of respondents found the Taxi-Buses comfortable;
- 96% found the drivers helpful;
- 93 % found the buses easy to recognise; and
- 94% found the Bus-Taxis reliable.

On the negative side:

- 55% stated that the Taxi-Buses were not easy to get in or out of. The age of the respondent was significant in the response to this question - the older the respondent, the more likely the respondent indicated a difficulty in getting in or out of the vehicle;
- 36 % had problems with the roof height;
- 22% found the doors difficult to open and close (the passengers are required to open and close the doors for themselves); and
- 23% stated that the back-up vehicle does not always arrive quickly.

The surveys indicated that while overall satisfaction levels with the mini-buses was high, there were a number of problems associated with the size of the vehicle. These problems were more of a concern to the elderly than to the young. When considered alongside the 14% decline over the 5 years in the use of concession tickets for the elderly, and the 25% decline in the use of concession tickets for the disabled, an interpretation of these indicators was that the elderly and disabled (and possibly others) were not using the mini-buses because of difficulties associated with the size of the vehicle.

This interpretation was tested in a follow-up survey carried out in January 1996. The survey was of elderly Bus-Taxi passengers. It confirmed previous survey results that the elderly had difficulties getting in and out of the mini-buses, and in moving around when inside. Difficulties included the narrowness of the steps up to the vehicle, low door height, the low ceiling height, and difficulty moving inside the vehicle because of the seating configuration. Comments were made that the two mini-buses in the Bus-Taxi fleet with higher ceilings were an improvement on the lower ceiling vehicles. Both these vehicles had been imported from Japan. 7% of those surveyed said that these problems stopped them from using the service as often as they would like. Of particular concern to the regional council was the 19% that said they knew of people who had previously used the Bus-Taxi service, but did not do so now because of the difficulties of getting in and out of the vehicles.

As part of the 1996 survey, the correlation between the drop in the number of elderly using the Bus-Taxis and the increase in the number of people using the "Total Mobility" scheme was investigated. The Total Mobility scheme provides a 50% discount on private taxi fares to those who, because of a disability, cannot use public transport. The scheme is administered and funded by regional councils throughout New Zealand. The average subsidy per trip on Total Mobility in Palmerston North (\$3.21 in 1994/95) is high in comparison to the average cost of a subsidised trip on the Bus-Taxis (53 cents).

The number of trips assisted by the Total Mobility scheme in Palmerston North more than doubled from 1991 to 1996, with each year experiencing a substantial increase. As the cost of subsidising the scheme is directly related to the number of trips, the cost to the regional council also more than doubled. These increases were occurring nationally and were not just in Palmerston North. The survey results however indicated that some elderly Bus-Taxi passengers were switching to the Total Mobility scheme because of difficulties associated with access to the Bus-Taxis. This resulted in a higher cost to the regional council (and the passenger) as a result. At the same time the regional council was looking to restrict use of the Total Mobility scheme because of budgetary problems resulting from the increase in use of the scheme.

Back-up Service

In addition to the passenger surveys, further investigations in 1995 indicated that 22% of bus runs required back-up vehicles. Of these back-ups, 53% were for 3 or less passengers and 80% were for 6 or less passengers. This indicates that one in five trips requires a back-up vehicle, but that most of their extra trips are for relatively few passengers. With a slightly bigger vehicle most of the back-up trips could be eliminated.

Larger Vehicles

While most factors suggested the Bus-Taxi system was generally working well, the council's research indicated it could be improved with a slightly larger vehicle. However obtaining such a vehicle posed problems in terms of:

- finding a suitable vehicle;
- financing the purchase;
- legal requirements (a taxi can have no more than 12 seats, including the driver); and
- the ability of the regional council to compel a commercial operator to make any changes to their service.

Finding a Suitable Vehicle

Finding a suitable vehicle was a problem. The New Zealand vehicle industry produces numerous 9-10 seater mini-buses and these are readily available. The cost per seat is approximately \$3500. Larger vehicles are not only more expensive on a per seat basis but they are also difficult to obtain in New Zealand. Almost every vehicle with more than 11 seats needs to be imported. If a bigger vehicle was to be obtained, importing appeared to be the only alternative.

Financing

A perennial problem facing bus operators is how to finance vehicle replacement, especially if looking for relatively new vehicles. This is particularly so for small commercial operators. The taxi company, for instance, was looking at paying at least \$50,000 and probably more for suitable larger vehicles. Importing a new 18 seater would cost almost \$100,000. These vehicles would not be suitable for taxi work, and at any time a competitor could start up in competition with them. Fare rises were discussed as a possible source of finance. But the taxis were reluctant to purchase new vehicles on the likelihood of increased future income. And there could be no guarantee to the regional council that the proceeds from any fare increase would be used for purchasing a new vehicle sometime in the future. The regional council was also reluctant to have fares increase.

Maximum Taxi Size

The 1989 legislation effectively removed the distinction between a bus licence and a taxi licence. It only distinguishes between small (12 seats or less) and large passenger vehicles. Scheduled services could be provided by either vehicle, however taxis were restricted to small vehicles. One of the advantages of the Bus-Taxi system was the dual nature of the vehicle. The mini-bus could operate as a bus and as a taxi. This enabled

the vehicles to work as taxis during the evenings and weekends when the buses did not run. At any one time five vans were needed to provide the core bus services. The taxi fleet had 10 vans that were equipped for the bus runs - so they alternated weekly between bus and taxi work.

Any move to a larger vehicle would mean the new vehicle could not work as a taxi. This meant that if for any reason the bus work no longer existed, there was no readily available alternative as there was with the smaller vehicle. And only five vehicles (and presumable owners) would be required - the other five would have to return to taxi work. All this contributed to the reluctance on the part of the taxis to move to a bigger vehicle.

In addition to the problems for passengers discussed previously, the dual nature of the vehicles did appear to cause confusion as to whether at a particular time the vehicle was a bus or a taxi. And because of their dual nature, the vehicles could not be painted in a distinctive livery. This meant the bus service had a relatively low profile. A dedicated (and larger vehicle) would have a higher profile. The importance of the profile was highlighted by a survey carried out in 1996 on a new big bus route to Massey. When asked "how did you find out about this service?", 35% said "I saw the bus driving around".

Role of the Regional Council

The regional council recognised the need for a larger vehicle. But the council had no contract with the taxis and had no way of insisting on a change. It could only work with them and encourage them to change. The council also recognised and was sympathetic to the difficulties that the taxis faced in obtaining the larger vehicles. But the council could only provide financial assistance through the tendering process. And the taxis were reluctant to participate in such a process because of the risk of not winning the contract. As the regional council already had a commercial operator providing a service it could not guarantee the successful tenderer (unless it was the taxi company) sole rights to the service. The contract situation had some appeal however. For the taxis it would provide both the necessary funds to purchase new vehicles and protection from competition. For the regional council it could be the means by which the improvements in the bus service could be achieved.

The Tender

After analysis of passenger survey results and passenger trends over the past five years the regional council decided at the beginning of 1996 that the mini-bus service provided by the taxis was not meeting the transport needs of the people of Palmerston North, especially those of the elderly. The only way to get an improved service was for the council to buy it through the tender process. However whether or not the city was to

get an improved service depended on the price. The regional council was not prepared to return to the high levels of subsidy experienced with the big buses, but it was prepared to pay a cost higher than the existing one in order to obtain a better service. The council would have to make a trade-off between the low cost Bus-Taxis and what presumably would be a higher cost new service.

The council therefore tendered a service based on the same routes, timetables and fares as the existing service. It also included a minimum vehicle specification. These specifications included minimum door and ceiling height, automatic doors, and minimum seat number (18).

The tender proposed that the concession fare scheme remain in existence and be available to the successful tenderer.

The Tenders

Eleven tenders were received from 5 companies. These included the local taxi company and local and non-local bus companies. Most tenders were priced at between \$100,000 and \$200,000. Most intended to import used vehicles from Japan.

The successful tenderer was the lowest priced. The tenderer proposed the use owner-drivers using imported used English mini-buses each seating about 20 passengers. The vehicles have a high door, high roof, room for standees, radio communication and will have a computer aided vehicle control system. The system can be upgraded to provide a number of additional features including flexible routing. The tender also proposed doubling the frequency in the off-peak period. The contract price was \$1 per year for the 5 year contract. At this price it was clear that the tenderer considered the service to be commercially viable but only with the protection from competition offered by the contract.

The successful tenderer was not the taxi company. It was interesting to note that the price tendered by the taxis was similar to that of the other (bus company) tenders. That was presumably because what they proposed in their tender was in fact a bus service. The advantage of the small dual purpose vehicle was lost.

Despite not winning the contract, the Bus-Taxis were still able to carry on their existing Bus-Taxi service. Their 1991 registration was still valid and, even though the regional council had decided that the Bus-Taxis were no longer suitable, the council could not stop them from operating. The taxis decided to carry on and compete with the new service.

The Likely Outcome

On the face of it having two competing services appears good for the passengers, bringing the competition the new deregulated regime had envisaged. Passengers will have a choice of service, perhaps even a fare war. But in the long run, and not too long at that, it is the passengers who are likely to lose. It is unlikely that there is sufficient demand in Palmerston North to sustain two bus services. Competition, while initially bringing some benefits, is likely to eventually lead to the demise of one of the competitors. And it will probably hurt the other as well. If the taxis win the battle, the customers are likely to be no better off than they were before in terms of suitable vehicles. If the new operator wins, the cost of victory may mean the innovations that are planned may not be implemented.

The regional council is powerless to prevent the unsuitable service continuing, and powerless to protect its own contractor. Because of the net contract situation, the regional council will not lose any money. But its contractor, on a fixed price contract and relying on good passenger loadings to survive, is at risk.

Lessons to be learned

The current situation in Palmerston North is that the new service is due to commence in September 1996. The Bus-Taxis intend to carry on as well. Experience would indicate that only one of the services will survive. From a regional council perspective it is hoped it will be the new service. And hopefully the new service will not be too hurt by the period of competition it faces and will remain strong enough to implement the innovations it has planned. So what has been learned in the last five years of Bus-Taxis in Palmerston North?

Small Vehicles Can Work

Small vehicles are able to provide bus services in areas of relatively low demand, and are a low cost option for this. These low costs often allow services to be commercial rather than contracted ones. Passenger reaction is generally positive to small vehicles.

Owner-Drivers Have Been Successful

Owner-drivers seem to have been a success, with the surveys reporting very high levels of satisfaction with the (owner) drivers. The benefits of providing a good service have been quickly recognised by most drivers. This has led to them providing a number of enhancements to their standard service, such as dropping passengers off at points convenient to their destinations rather than at the nearest bus-stop.

Taxis Can Provide Bus Services

Taxi fleets have great capacity, especially if they have several vans in the fleet. The use of vans backed up by cars in the high demand periods is a great example of maximising vehicle utilisation. It rejects the principle that the size of a bus fleet must be determined by the maximum demand. In addition, a bus services can be provided by taxis at no detriment to the service provided by the taxi side of the operation. In fact it can increase the work (and the returns) to the taxi drivers by removing, in the Palmerston North case, five vehicles from the taxi fleet during the day.

Ideal Vehicle Size

Ten-eleven seater vans are relatively cheap and readily available. They provide a suitable service for those without mobility restrictions. However they do cause problems for the elderly and people with physical disabilities. To meet the needs of these groups of public transport users vehicles should have easy access, which should allow the passenger to stand upright when entering and exiting the vehicle. The roof height should also allow for passengers to stand upright.

Automatic doors are also important, as the surveys indicated that many passengers had difficulty opening and closing the sliding doors on the Bus-Taxis. The Palmerston North situation indicated that suitable vehicles (albeit second-hand) are available at approximately the same price as a new 10-11 seater.

Legal Framework

The 1989 moves to deregulate passenger transport in New Zealand provided the impetus for major changes in bus service provision in Palmerston North. It allowed an innovative move on the part of Palmerston North Taxis. It provided for substantial subsidy saving. But now it is providing a barrier to another innovative change. In a situation where a regional council is seeking to improve the level of service to the passengers, the legislation makes this difficult by allowing the incumbent operator to continue and forces the new and improved service to compete. At first glance this situation appears acceptable and even possibly desirable. Let the market decide. If the new service is better then presumably it will win most of the passengers. But many of the passengers will be happy to continue to use the Bus-Taxis. Those that have no problems getting in and out of the smaller vehicle are not likely to have a strong preference for vehicle type. It is only those that have difficulty that are likely to deliberately choose the bigger vehicle. Thus the market is likely to be split between the two services.

It is also likely that the costs of the competition will outweigh any of the benefits. There will be a cost to the operators. There may be a cost to the regional council through increased contract payments. And after all that the passengers may not end up with a

better service. There is a dis-incentive for regional councils to seek to improve a service where that service is being provided on a commercial basis.

The legislation contains provision for a contracted operator to be protected from competition. That provision is there because it is recognised that if the level of service that is required has to be paid for, then it is appropriate to protect that service from being undermined. That same principle can be applied to the only slightly different situation where the commercial service exists prior to the contracted one. The legislation could be changed to allow for the cancellation of a registration to provide a commercial passenger transport service. That cancellation would need to be restricted to certain circumstances. These might include having first to allow the commercial operator the opportunity of providing the higher level of service on a commercial basis.

Conclusions

The Palmerston North experience

- highlights the importance of monitoring;
- indicates that the taxi operated mini-buses provide a good service at a low price;
- indicates that passengers are generally happy with such a service;
- indicates that a slightly bigger vehicle, in the Palmerston North case about 20 seats, has the potential to provide a higher quality service, and possibly at no extra cost;
- shows that passenger transport deregulation enabled the changes to the smaller vehicle and resulted in huge cost savings;
- highlights that deregulation has not been of assistance in the move to the higher quality service.

The passenger reaction to the new service in September, when they will be faced with a choice of vehicles, will really indicate what they really think about vehicle size. And hopefully the outcome will be beneficial to the passengers. But that will be another story.