

AN ANALYSIS OF THE LONG DISTANCE BUS INDUSTRY IN
QUEENSLAND

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Abstract:

The paper reviews the role of long distance bus service in Queensland by a comparative analysis with rail and to a lesser extent air services. The systems are compared by a review of route coverage, journey times, service frequency and fares. The characteristics of the bus industry are discussed and a profile of existing passengers and their trips is presented. This review sets the scene for discussion of the future role of the long distance bus industry.

LONG DISTANCE BUS INDUSTRY

INTRODUCTION

The research supporting the material contained in this paper was sponsored by the Queensland Department of Transport. Their assistance in the project and consent to the preparation of this paper is gratefully acknowledged.

The Department of Transport commissioned a study of long distance bus transport in 1970 and since that time a number of changes have occurred in the operating environment for bus services. These have included:-

- o a rapid escalation in the real price of liquid fuels particularly in the last two years
- o a change in the priority associated with rail projects
- o population shifts which have resulted in development patterns that were not previously anticipated (influenced somewhat by large scale mineral developments)

As we enter the 1980's there are indications that fuel prices will continue to remain high and (somewhat paradoxically) the demand for long distance travel is likely to grow as tourism becomes a major industry in the state.

The Department commissioned this study in an attempt to anticipate the likely changes in the industry over the next decade and to review its own role in relation to the operators and the travelling public.

This paper presents a summary of the major findings of the research and provides a comparative analysis of long distance bus service and the other major modes (air, rail and motor vehicle). The first detailed analysis of the existing passenger market is also presented. The paper concludes with a review of the market share captured by the bus industry and discusses its future role vis-a-vis other modes.

THE LONG DISTANCE BUS AND RAIL NETWORKS

For the purpose of this study long distance bus routes were defined generally as those longer than 100 km and not providing a commuter type service. (Hence the exclusion of Brisbane-Gold Coast Services). Those services included in the study are listed in Table 1 where it can be seen that seven operators provide the intra-state long distance services. These routes are illustrated in Figure 1.

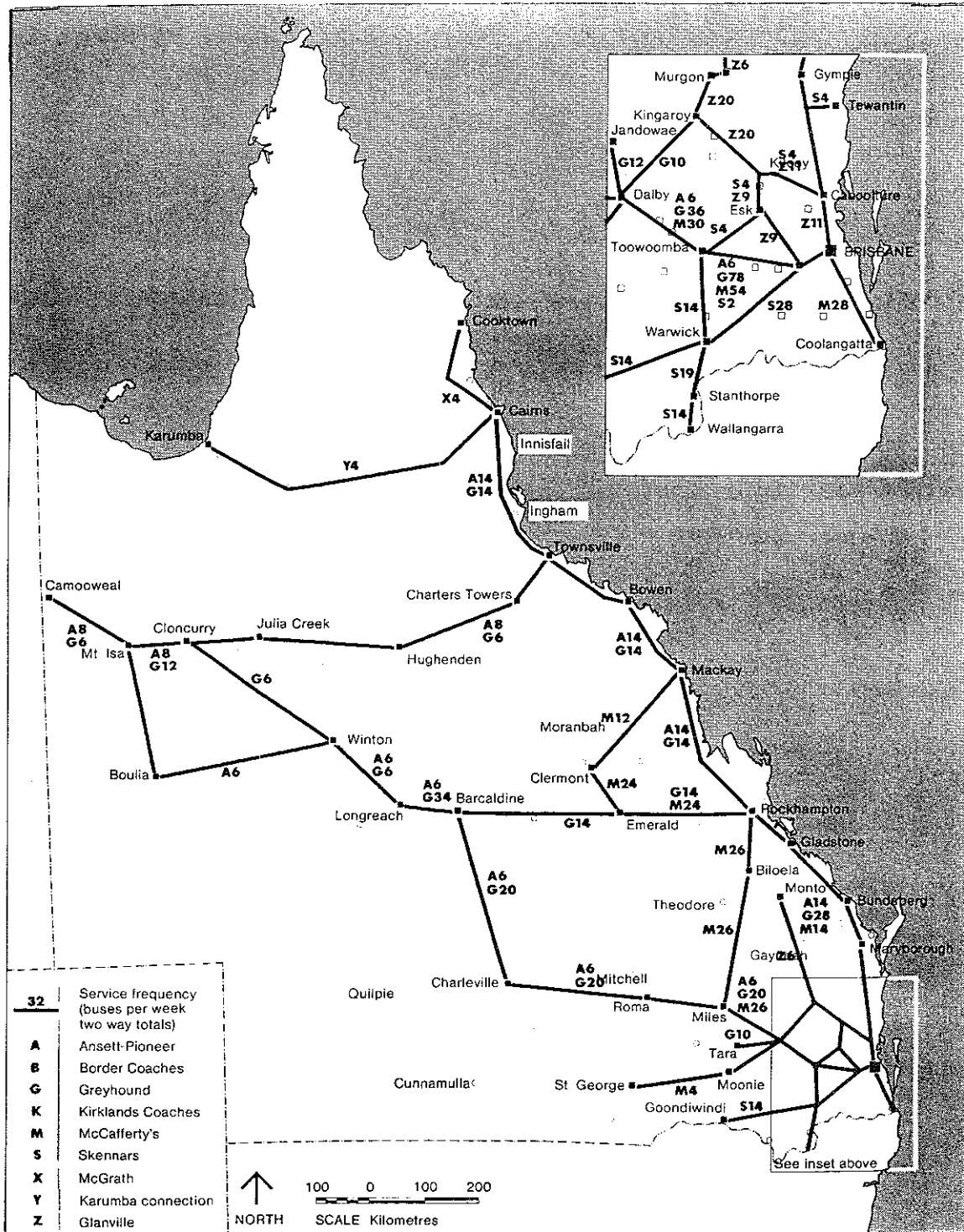
Examination of the companies which held these same licenses in 1970 indicates that there has been a considerable change in the industry over the last decade. The industry has consolidated over the decade to the point where the three major operators, Greyhound, Ansett-Pioneer and McCafferty's now provide over 95% of the service kilometres operated. In addition to intrastate services, six operators provide regular route interstate services.

Although there has been major changes in the ownership of licenses there has in fact been very little change in the service provided. Three new licenses have been issued since 1970 and two have been withdrawn. Of the twenty four licensed services operating in both 1970 and 1980, fourteen are operating at the same service frequency, five have increased and five have decreased. In total, the aggregate number of bus kilometres operated per year has increased by less than one percent.

TABLE 1
Licensed Long Distance Operators

Name of Operator	License No.	Description of Service	Services per week
McCafferty's	186	Brisbane-Rockhampton (inland)	26
	183	" - " (coastal)	14
	191	Clermont-Emerald-Rockhampton	24
	200	Clermont-Mackay	12
	182	Toowoomba-Gold Coast	28
	119	Toowoomba-Bollon	4
C.B. Skennar	110	Toowoomba-Maroochydore	4
	120	Toowoomba-Wallangara	14
	123	Brisbane-Stanthorpe	19
	124	Brisbane-Goondiwindi	14
Greyhound Coaches Pty Ltd.	98	Toowoomba-Jandowae-Dalby-Tara	12
	99	Kingaroy-Dalby	10
	150	Brisbane-Toowoomba	58
	161	Brisbane-Cairns	14
	166	Brisbane-Mt. Isa	6
	170	Brisbane-Longreach	14
	184	Brisbane-Rockhampton	14
	174	Townsville-Mt. Isa-Border	6
		Rockhampton-Longreach	14
		Brisbane-Murgon via Caboolture	12
Glanvilles Passenger Service	96	Brisbane-Gayndah via Ipswich	27
	97	Brisbane-Cairns	14
Ansett-Pioneer	160	Brisbane-Queensland Northern	14
	164	Territory Border via Mt. Isa	16
	171	Brisbane-Longreach	6
	173	Townsville-Queensland Northern	6
		Territory Border via Mt. Isa	8
Karumba Connection J.F. & V.F. McGrath	205	Cairns-Karumba	4
	141	Cairns-Cooktown	4

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1 INTRASTATE COACH SERVICES

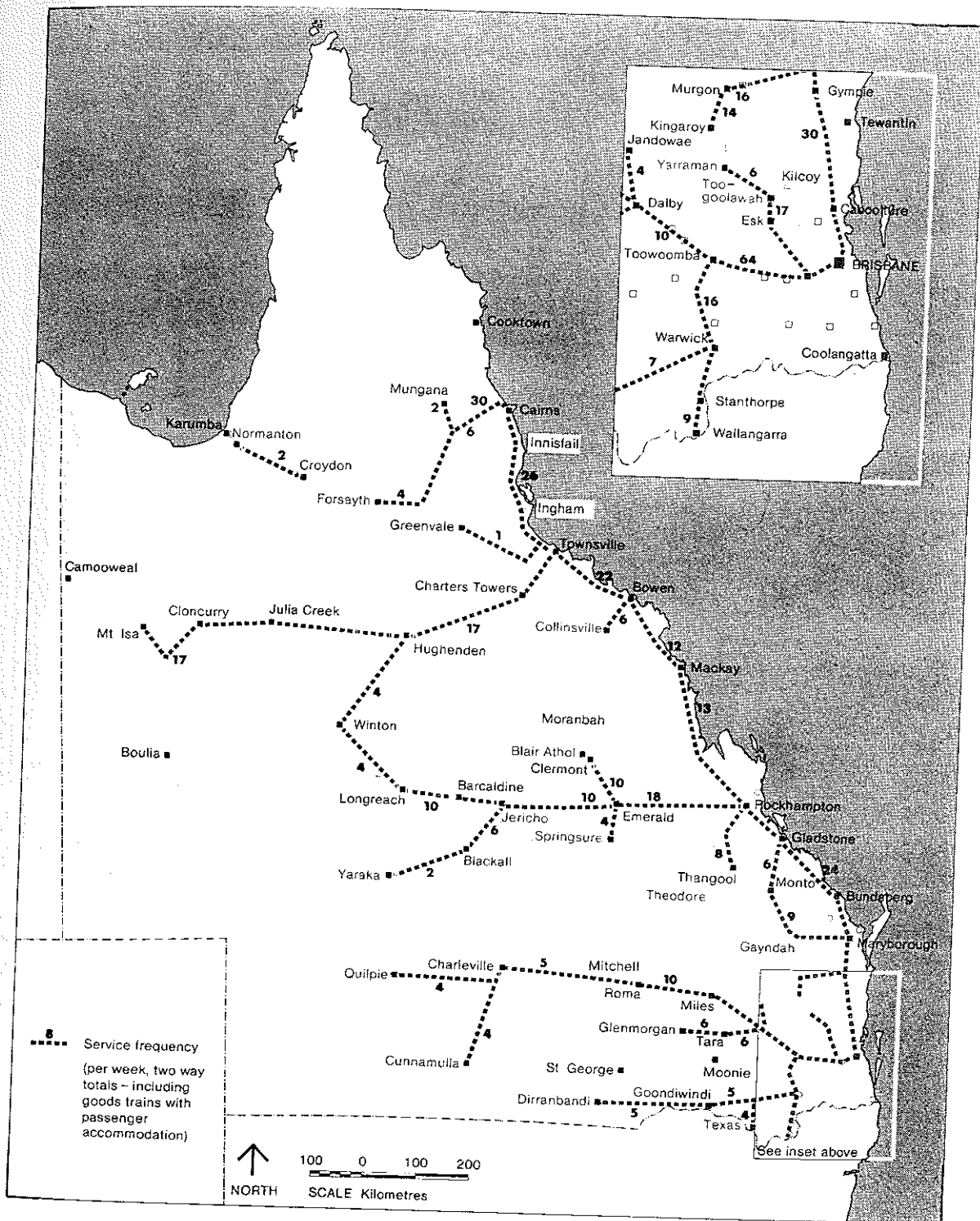
Route Coverage

By comparison with the state rail network (Figure 2) it is clear that the route coverage provided by the two systems is very similar. The major differences occur in the west of the state between Charleville, Longreach and Mt. Isa. Figure 3. shows all of the urban centres which had a population of 1000 or more at the time of the 1976 Census and it identifies those which are not served by the long distance bus system and those which are not on the State's railway network.

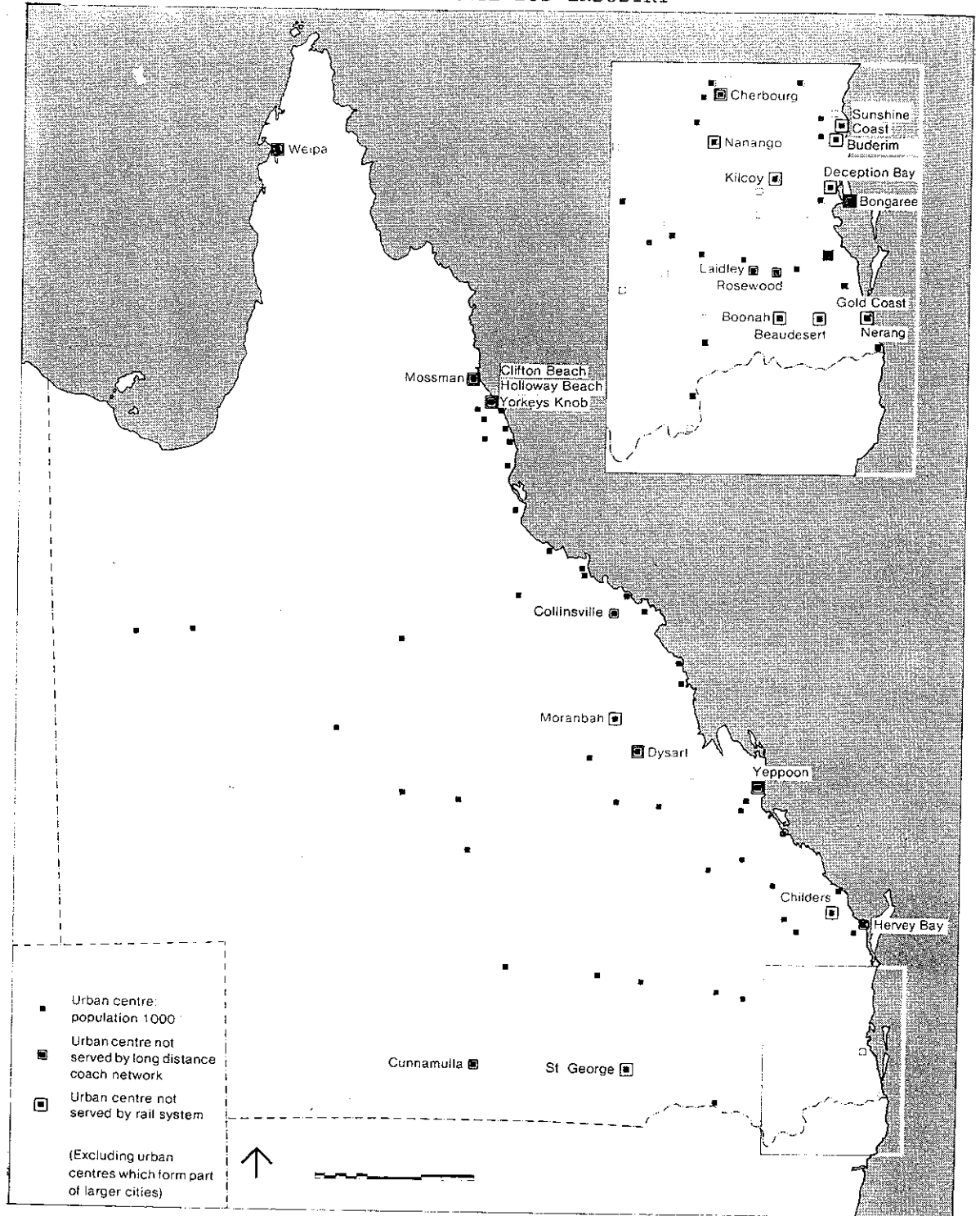
The centres shown on this map contain in total some 1.63 million people, or 80 percent of the state's 1976 population. The illustration immediately shows that there are few urban centres in any parts of the state which are not served either by bus or rail, and that in fact most of them are served by both bus and rail. Paradoxically the only obvious concentration of centres which lack bus or rail services is centred on Brisbane, and made up of small townships which while not on railway lines or major roads are generally close to both and in many cases probably connected to both by local bus services. Hence in the south-eastern part of the State many of the centres which are shown as lacking service are within fairly easy reach of service.

The long distance bus services are more effective in providing transport to small population centres than the rail network. Of the 96 Urban centres in Queensland which had a population of 1000 or more in 1976, 85 percent are served by the long distance bus system while only 75 percent are served by rail. Some of the rail services to small centres are by goods trains (with passenger accommodation attached) which travel at low speeds and at inconvenient hours, so that the convenience of coach travel is generally far better. Of the population resident in the 95 centres other than Brisbane, 95 percent are served by bus, and only 78 percent by rail.

In summary, it can be legitimately claimed that the long distance bus system offers passenger services to a significantly larger proportion of the state's population and area than the railway network. Because the coach system operates along all the major rail routes and along some other routes as well, it can provide more direct service between many origin destination combinations and as is shown elsewhere in this section, its services are invariably faster than rail services, often by a wide margin.



LONG DISTANCE BUS INDUSTRY



3 URBAN CENTRES NOT SERVED BY COACH OR RAIL NETWORKS

Journey Times

Figure 4. shows a comparison of journey times from Brisbane by coach and rail to major centres of the state which are served by the long distance coach and/or the railway network. These times represent travelling times by the fastest available services and include stops for refreshments and to pick up or set down passengers. They do not include the waiting times required to transfer at interchange points. The inclusion of interchange waiting times would increase some of the times shown by several hours and would affect rail times more severely than bus times.

Times by coach are invariably faster than those by rail and the ratio of bus time to rail time ranges between about 0.80 and 0.40. For medium length and short trips from Brisbane (up to 500km), the bus journey time is typically about 60 percent of the rail time, and bus travellers might save up to 6 hours on their journey. Examples include Dalby (3½ hours from Brisbane by coach; rail 5½ hours), Mitchell (8 hours by coach; rail 13 hours), Bundaberg (5½ hours by bus, rail 8 hours). For longer trips to coastal cities north of Brisbane bus journey times are in the range of 0.70 to 0.80 times the rail journey time. However to the west of the state this ratio again drops to approximately 0.60. For example Longreach can be reached in 17½ hours by bus but 30½ by train. For Mt. Isa the figures are 27½ hours by bus and 50½ hours by train (not including transfer times).

Service Frequency

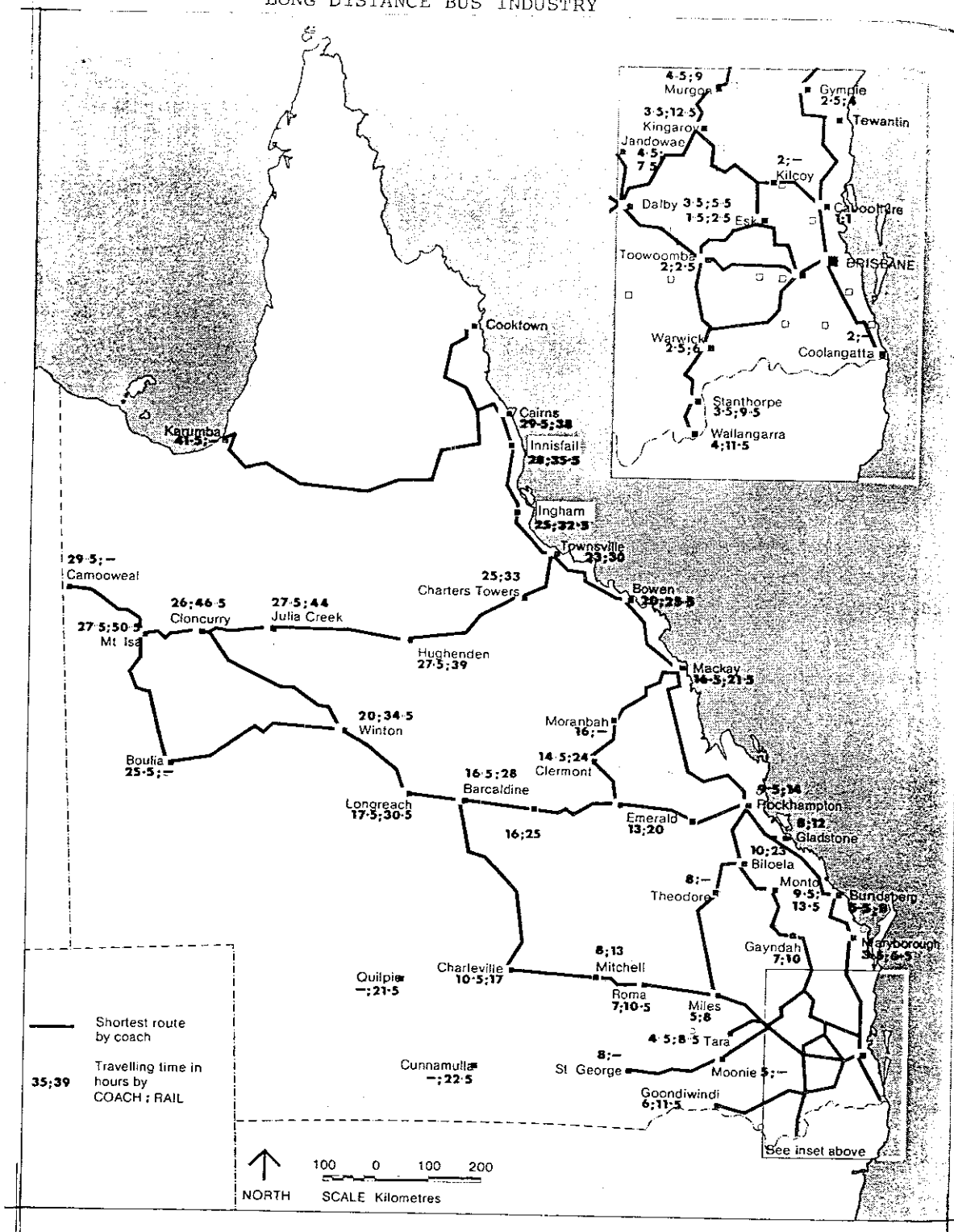
Bus service frequencies are also generally well in excess of rail frequencies (even including the passenger services provided by goods trains). The total weekly two way services are shown on the route maps in Figures 1 and 3.

Bus Service Co-ordination

Brisbane is the hub of all the state's bus activity - it is here that the vast majority of bus - bus transfers are made. The multiplicity of services to and from Brisbane provides some degree of co-ordination however the potential for many of these possibilities is lessened because of physical distance between the various terminals and lack of inter-company ticketing and a common interchange point.

Outside Brisbane, where bus services are much less frequent, the picture is much worse with the notable exception of Toowoomba. Toowoomba is a major crossroads of inter-city coaching activity with direct service to and from New South Wales and Victoria, Rockhampton, Charleville, Mt. Isa, Darwin and the Gold and Sunshine Coasts.

LONG DISTANCE BUS INDUSTRY



4 TRAVELLING TIMES FROM BRISBANE BY COACH AND RAIL

(fastest scheduled service not including waiting time at interchange points)

Fares

Figure 5 shows a comparison of cheapest available fares from Brisbane to other major centres of Queensland by bus and by first class rail (for adult one-way travel without sleeper accommodation) and by air economy class.

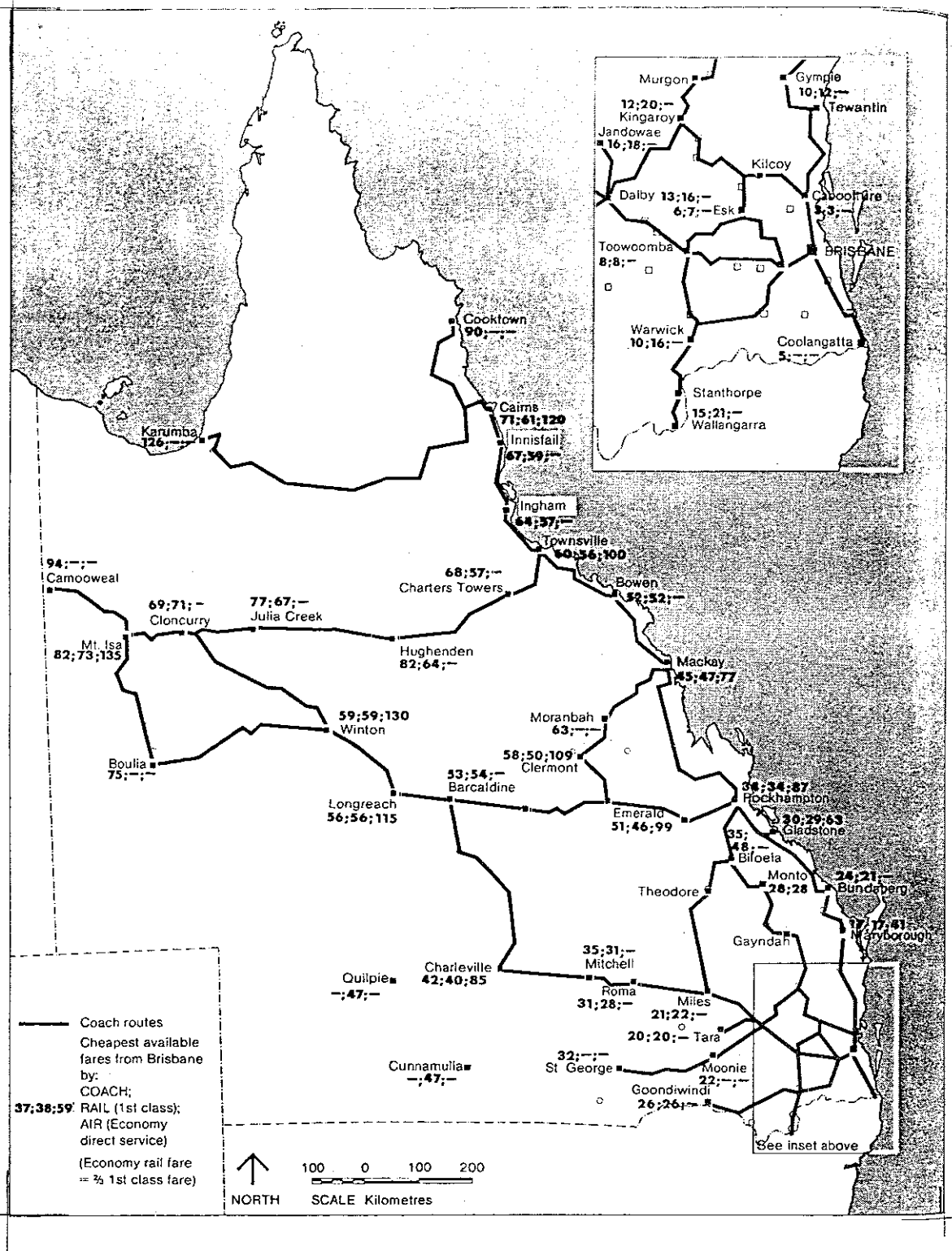
The rail fares are generally lower than the coach fares, though rarely by more than 15 percent, but in some cases they are almost the same as the coach fares or little higher, where the rail route is considerably longer than the route used by the bus.

Thus the coach and rail fares from Brisbane to Cairns are \$71.00 and \$61.00 respectively, to Mount Isa \$82.00 and \$73.00, to Charleville \$42.00 and \$40.00. In contrast, the fares to Warwick are \$10.00 by coach and \$16.00 by rail, the rail fare being high because the trip must be made through Toowoomba, covering a much longer distance than the coach route.

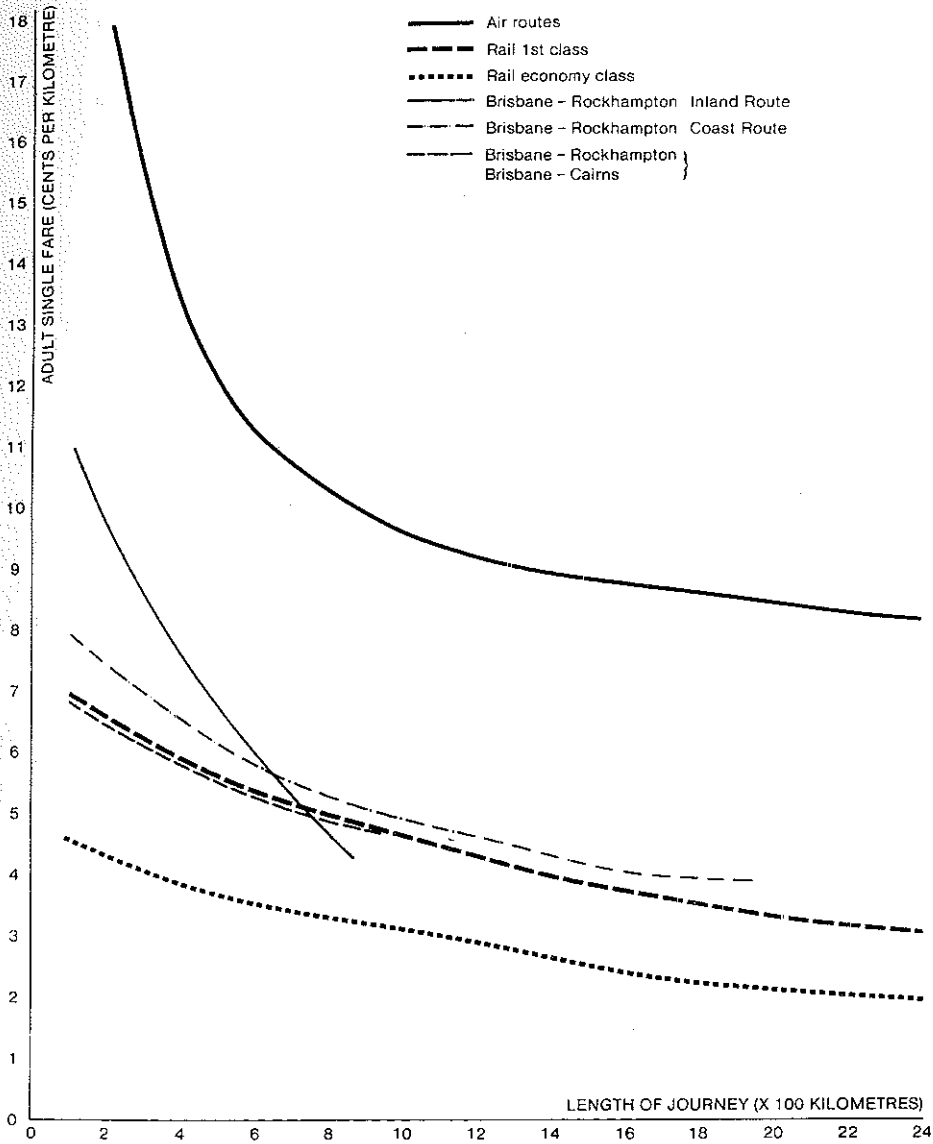
To any passenger who is concerned about journey time the extra cost of coach travel can gain him a considerable time saving at very low cost. Of course many tourists and some other passengers would not consider journey time to be of great importance, but this must be a factor influencing the choice of travel mode made by many passengers. On a trip from Brisbane to Cairns 8½ hours can be saved by using a coach instead of a train, at an additional cost of \$10.00. On a trip to Gladstone, 4 hours can be saved for \$1.00, to Roma 3½ hours for \$3.00. These comparisons become even more striking for travel to the towns of the far north-west. A trip to Mount Isa from Brisbane by bus is 23 hours faster than the rail trip, but costs only \$9.00 more than the first class rail fare.

Figure 6 shows the fare rates used on a sample of long distance coach services expressed as cents per kilometre travelled, compared with those adopted by Queensland Railways. It is apparent that on all of the very long distance services and on some others, coach fare rates are quite close to those of the railway. The only cases where the railway fare rates are significantly exceeded are on routes where there is no railway competition (or no effective competition) offered to the coach service.

LONG DISTANCE BUS INDUSTRY



5 FARES FROM BRISBANE



6 DISTRIBUTION OF FARES PER KILOMETRE - COASTAL ROUTES

LONG DISTANCE BUS INDUSTRY

Future Passenger Volumes

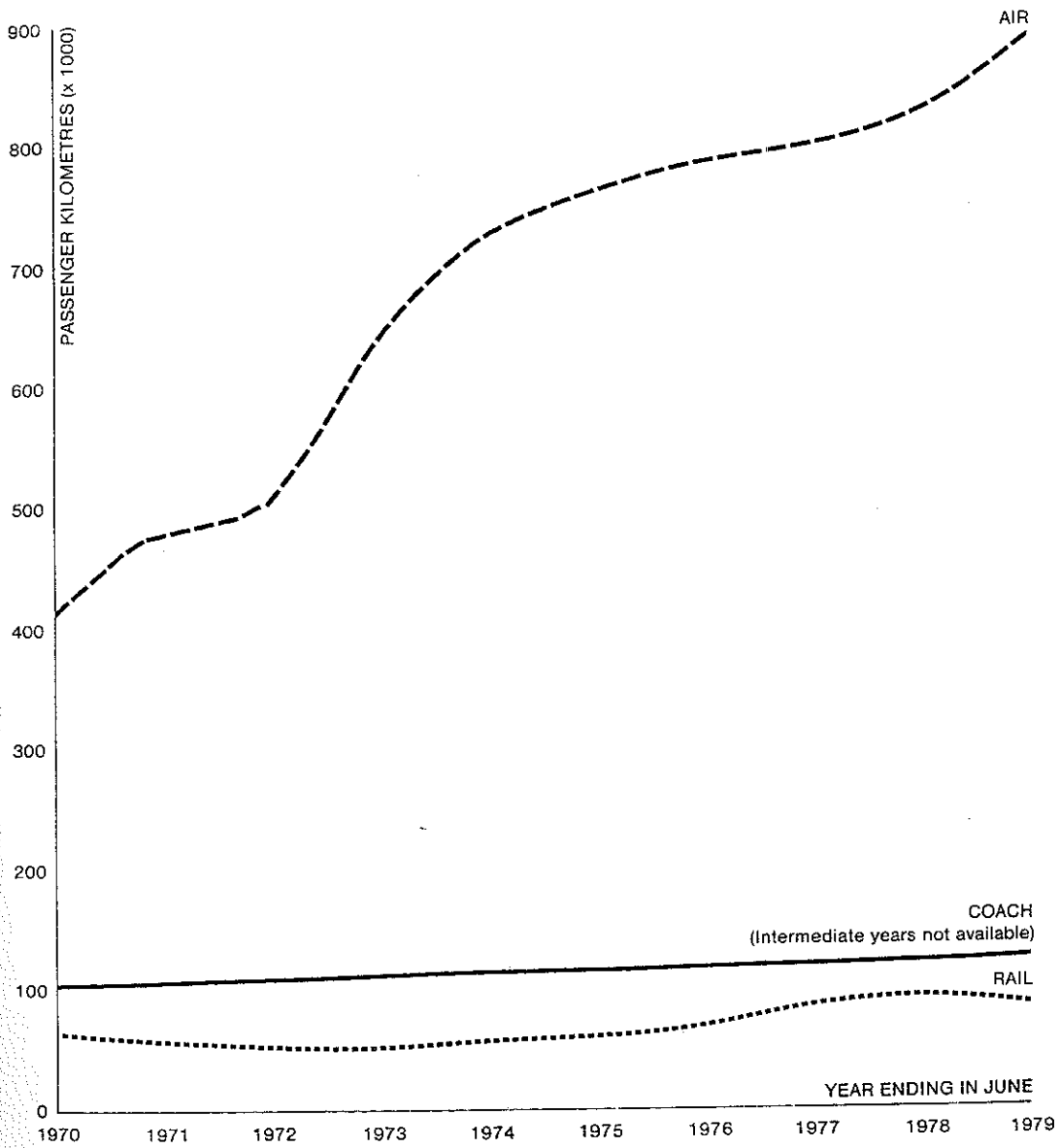
From the historical context established in the previous sections it is possible to look ahead to consider the likely changes in bus passenger volumes over the next decade. The major factors influencing the overall demand for long distance travel will be:-

- o the growth of available leisure time
- o the rate of growth of the tourist industry in Queensland.
- o the future cost of liquid petroleum and its impact on fares and the cost of operating a motor vehicle
- o the rate of future population growth and its distribution

The first two of these factors are extremely difficult to quantify although it is certain that they have contributed to the rapid growth in long distance travel illustrated in Figure 7. Predictions of the likely future cost of liquid fuels is also difficult although the rapid rise which has occurred over the last two years does not appear to have had a dramatic effect on total travel demand. However, Australian Statistics are difficult to compile and there is some evidence from the USA to suggest that both long distance bus and air travel have been increasing rapidly in the light of rapid petrol cost increases over the last two years. In the short run it is unlikely that in Australia fuel prices will maintain the present rate of increase as a reduction in the growth rate of world energy consumption has relieved the demand push on OPEC oil prices. In addition the self sufficiency of Australia in relation to oil production should continue to insulate us against large and unexpected cost increases.

The share of the overall long distance travel market to be captured by the bus industry has declined over the last ten years. In absolute terms, however the number of passenger kilometres travelled on buses has increased marginally. The bus's market share in the future will depend primarily upon the marketing strategies adopted by the industry and the actions of the major competitor - the airlines. Because of its greater fuel efficiency the bus industry is better placed than the airlines to hold down fares.

LONG DISTANCE BUS INDUSTRY



7 QUEENSLAND INTRASTATE TRAVEL, 1970-1979 (PASSENGER KILOMETRES)

LONG DISTANCE BUS INDUSTRY

THE LONG DISTANCE BUS INDUSTRY

Employment

As discussed earlier the scheduled long distance bus services in Queensland are provided by only seven operators. The schedules are operated by approximately 70 buses in peak times and 60 buses in off peak times. Approximately 100 drivers are employed in addition to over 110 support staff (at terminals, maintenance facilities, ticket offices etc).

Revenue

In 1978/79 revenues amounted to over \$5.5 million on the long distance licensed routes of which approximately 11% was attributable to freight movement. On some routes this percentage rose to as high as 33% (mainly on inland runs). By comparison total passenger revenue from Queensland Railways Country Services was \$6.44 million in 1978/79.

License Fees

License fees paid to the Department of Transport in respect of the long distance licenses amounted to over \$300,000 or approximately 5.5% of revenues (6.1% of passenger revenue).

Fees are in general calculated by a formula based upon passenger kilometres travelled. For routes which do not compete with a rail service the rate is 0.24 cents per adult passenger kilometre and half this rate for children. For bus routes which compete with rail services the license fee rate is increased by 25%.

Passenger Volumes

As discussed earlier it is apparent that the number of bus kilometres operated on long distance routes has not significantly altered over the last decade. It would be surprising therefore to find any dramatic change in the passenger volumes being carried. In fact this is confirmed by a comparison of the available data on bus passenger kilometres travelled as shown below:-

1969/70	102 million passenger km (1)
1978/79	120 million passenger km (2)

This represents an overall growth of 18 percent over the period or an average annual growth of less than two percent.

- (1) Source: Expansion of 1969/70 estimated origin-destination matrix presented as Table 4.3 in 1970 long distance bus study
- (2) Source: Analysis of license fees paid by operators.

Market Share

Long distance bus transport is operating in competition with the private car, rail and the airlines for long distance passengers. The preliminary results of the National Travel Survey (NTS) conducted in 1977-78 suggested that long distance bus services were catering for just over two percent of the inter-urban trips within Queensland at that time. Motor car travel comprised 85% of inter urban trips and train and plane travel accounted for 1.5% and 6% respectively. This means that of the inter urban non-car trips the bus was carrying 22.4%, the train 14.3% and the airlines 63.3%. In order to check these figures and to analyse the trend in market share over the last decade statistics were obtained from Queensland Railways and the Federal Department of Transport. (No reliable data exists for private car travel other than from the NTS). For the purpose of this analysis it was most convenient then to exclude private car travel and to examine passenger kilometres travelled on each of the public modes.

The estimated totals for 1969/70 and 1978/79 are shown and the trends over the last ten years are plotted in Figure 7.

System	Passenger Kilometres (millions)		Market Share (%)	
	1978/9	1969/70	1978/9	1969/70
Bus Network	120	102	11.1	17.5
Country rail network	80 ⁽¹⁾	65 ⁽¹⁾	7.4	11.2
Air Services (2)	885	415	81.5	71.3
<u>Total</u>	1085	582	100.0	100.0

- (1) Estimated from annual country passenger revenue and the rail fares per kilometre.
 (2) Includes TAA, Ansett and BPA.

It is clear that over the last decade the real growth in the long distance travel market has been captured almost entirely by the airlines. The comparison of passenger kilometres (rather than trips) tends to over emphasize the success of the airlines, however it is still sobering to realise that of the estimated increase of 503 million passenger kilometres over the ten year period, bus and rail services captured only 33 million (or less than 7% of the increase). This may suggest that the air traffic market is to a large extent independent of the bus and rail market.

LONG DISTANCE BUS INDUSTRY

Passenger Characteristics

Passenger characteristics are summarized in Table 2. From these data it is clear that the long distance bus industry is presently catering predominantly for women (two-thirds of all passengers). Passengers in the over 45 age group make up almost 40% of all passengers compared with only 30% in the total Queensland population. Similarly the 15 to 19 years age group is estimated to comprise some 23% of all passengers compared with a 9% representation for this group in the overall Queensland population.

Over half of all passengers are not in full time employment (ie pensioners, students, housewives or unemployed) and almost 40% of passengers do not hold a drivers license.

Trip Characteristics

Trip characteristics are summarized in Table 3. As expected the predominant journey purposes are associated with visiting friends, sightseeing and holidays, constituting 65% of all trips. The other major trip purpose categories were work (13.2%) and personal business (14.1%). These results compare extremely well with the figures reported from the Domestic Tourism monitor and from the National Travel Survey. (1) (2)

The question requesting frequency of travel achieved only a 61.4% response rate and this suggested that persons making the trip for the first time were unsure how to respond. Only 35% of trips are made on a "less than yearly" basis (assuming that the majority of those who did not respond were "first timers"). This is consistent with the high proportion of "visit friends, sightseeing and holiday trips". As expected the highest proportion of high frequency trips were recorded on the shorter distance routes.

Passenger Attitudes

The overwhelming majority (95%) of travellers indicated that the long distance coaches provide adequate or better than adequate levels of comfort. This is a tribute to the industry as a whole and illustrates the high standards of coaches which the industry is maintaining.

Only 15% of passengers overall thought the fares were too high, however on individual routes this figure rose to as high as 50%. These occurrences are associated with high incidence of students travelling and on shorter routes. On the inland group of routes approximately 11% of passengers considered that the fares were "cheap". While this percentage rose to 15% on one specific route.

- (1) "Domestic Travel in Queensland - April 1978 to March 1979" Queensland Tourist and Travel Corporation September, 1979.
- (2) National Travel Survey, Preliminary Statistical Summary June Quarter 1978" Bureau of Transport Economics Occasional Paper No. 31 Australian Government Publishing Service 1979.

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TABLE 2 Passenger Characteristics

	All routes	Old. & total population
<u>AGE</u>		
Less than 15	2.5	28.1
15 - 19	23.1	9.0
20 - 29	20.8	16.2
30 - 44	14.6	17.6
45 - 64	25.4	19.7
Over 65	12.7	9.4
No response	0.8	0.0
<u>SEX</u>		
Male	31.1	50.3
Female	62.3	49.7
No response	6.6	0.0
<u>OCCUPATION</u>		
Professional, admin, exec	12.4	
Clerical or Service Ind	13.3	
Primary Ind. or Armed forces	14.8	
Pensioner	11.9	
Student	14.0	
Housewife	20.0	
Unemployed	2.5	
No response	11.1	
<u>CAR OWNERSHIP</u>		
Car	79.4	
No car	19.2	
No response	1.4	
<u>DRIVERS LICENSE</u>		
Yes	60.8	
No	37.8	
No response	1.4	
NO. IN SAMPLE	1507	

LONG DISTANCE BUS INDUSTRY

TABLE 3 Trip Characteristics

	All Routes	All modes from National Travel Survey	All modes from Qld. Tourist & Travel Corp
TRIP PURPOSES (% in each category)			
Work	13.2		
Personal Business	14.1	28.4	27.0
Visit friends, sightseeing, holiday	64.4	63.0	69.0
Other	6.3	8.0	4.0
No response	2.1	0.6	-
TOTAL	100.0	100.0	100.0
TRIP FREQUENCY (% in each category)*			
Less than monthly	8.7 (14.2)		
Monthly - Yearly	26.3 (42.9)		
Greater than yearly	26.3 (42.9)		
No response	38.6		
TOTAL	100.0		

*Figures in brackets are the percentages of all valid responses (ie excluding the number of non responses).

Service frequency appears to generally provide the desired level of service since overall only ten percent of existing passengers considered the service to be not frequent enough. This percentage rose to as high as 23% on some shorter routes having a high incidence of more regular travellers.

When interpreting these results we must be conscious of the reality that many travellers who have particularly negative reactions to the service attributes (comfort, journey time etc.) provided by the bus service have probably chosen not to use the service. The attributes reported here are therefore likely to overstate the general public's attitudes towards the bus services.

CONCLUDING REMARKS

The long distance bus industry provides an extremely important part of the states public transportation network. The long distance bus industry is operating at a profit without government subsidy and at the same time contribute approximately 6% of revenues by way of license fees.

The growth of the long distance travel market is expected to continue particularly for the non-car modes. The share of this market captured by the bus industry will depend primarily on the marketing strategies adopted by the industry. There is evidence that a range of price/quality packages offered by the bus operators would match the demands the various market segments and produce positive revenue gains.

The energy efficiency of long distance buses far exceeds the levels achievable by rail, plane or car and as is obvious from the foregoing analysis service is offered at very competitive fare levels. Existing services are providing a high level of accessibility to many small and remote towns.

The long distance bus industry has a continuing role to play in providing service to the states widely distributed population, while the bus network largely parallels the state railway network it is clear that the bus provides quicker, more energy efficient and (at today's prevailing fares) very competitive service. On these grounds it is clearly in the public interest to foster the survival and expansion of the industry even if this requires some hard decisions in relation to passenger rail services.