

# Long distance passenger transport: The Australian experience

by

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## INTRODUCTION

The aim of this paper is to give a short but comprehensive review of the development, current nature and future of long distance passenger transport in Australia. Although the slant of the paper is essentially economic, data limitations for parts of some modes preclude a more technical analysis than the essentially descriptive approach followed. The paper is entitled Long Distance Passenger Transport because in Australia intercity transport is the dominant component of long distance passenger transport.

The paper is divided into six parts. Following this brief introduction, the historical development of Australian intercity transport systems is discussed in order to highlight the unique features of the setting. In part three the current features of the Australian system are reviewed, including the involvement of governments in the provision of transport services. The second last part of the paper considers the outlook and probable future for intercity passenger transport in Australia. The paper ends with a summary and short section of conclusions.

## HISTORICAL DEVELOPMENT

Long distance and hence intercity transport development in Australia has essentially been determined over time by the interaction of available technology with the geographical characteristics of the continent. Although Australia is about the same size as the United States of America, it is largely an arid continent. Humid areas are limited to the monsoonal north and narrow coastal strips along the east and south-east coasts, and the south-west of Western Australia. These latter areas are those where initial settlement took place and, to a large extent, has remained.

The early settlements were very widely separated, partially because of a relative lack of good natural harbours along the temperate humid coastlines. They grew into important trading centres and ports, but never became self-sufficient and remained entrepôts for one and a half centuries, exporting the produce of and distributing imports to their relatively drier hinterlands. As agricultural and pastoral practices were adapted to the environment this trade grew and the cities with it. In these times coastal shipping services provided virtually all intercity passenger and freight services.

The outcome of this development was the establishment of six independent colonies, essentially widely separate city states with vast sparsely populated hinterlands. Even now, some 60 per cent of all Australians reside in the six State capitals. With few exceptions, cities outside them are small by world standards as shown in Table 1. Despite Australia's image as a rural nation, 86 per cent of Australians lived in urban areas in 1973.

The first railways were constructed by private compa-

nies in the 1850s but were very soon relinquished to the State governments for financial reasons. They gradually extended from each of the colonial capitals into the hinterlands, particularly between 1880 and 1920. For various reasons, alternate States chose different track gauges.

Table 1 - Size of Australian cities as at 30 June 1973

City	Population
Sydney *	2 874 380
Melbourne *	2 583 900
Brisbane *	911 000
Adelaide *	868 000
Perth *	739 200
Newcastle	357 770
Wollongong	205 780
Canberra +	185 000
Hobart *	157 870
Geelong	126 500
Townsville	76 500
Gold Coast	74 500
Rockhampton	50 300

\* State Capital City

+ National Capital City

Source Australian Bureau of Statistics,  
Official Year Book of Australia, No 60, 1974, pp 143-145

Intercapital city links were not fully established until 1917, when the transcontinental line linked the Western and South Australian systems. Other dates of completion of intercapital links were Sydney-Melbourne 1883, Brisbane-Sydney 1888, and Melbourne-Adelaide 1889.

A journey from Brisbane to Perth, a distance of about 5000 km, took a week and involved six train changes.

Since the Railway Standardization Agreement of 1949, the Commonwealth Government has assisted the State systems to develop standard gauge links by contributing 70 per cent of the cost. Currently all mainland State capitals are linked to the standard gauge system except Adelaide.

Until the 1920s, the road system in Australia was very primitive. With the development of private motor vehicles, demands arose for better roads and the system has gradually been improved with Commonwealth Government assistance to the States since 1926. In 1974 the Commonwealth Government passed the National Roads Act under which it provides 100 per cent funding for the construction of a system of national highways which resulted in all State capitals being linked by sealed roads in 1976. Despite these developments there were only 646 km of dual carriageway in the national highway system of 16,303 km in 1974.<sup>1</sup>

A vigorous air transport industry developed in Australia

lia following the First World War. Initially it principally provided vital links to outback towns and pastoral stations, but has now become the major carrier of intercity passengers. Following World War II, a two airline agreement was initiated which limits interstate flights to two airlines. One is government owned and operated, while the other is a private enterprise. Other smaller airlines operate intrastate services. Air passenger services are a particularly important part of intercity transport in Australia, since the State capital cities are spaced about 1000 km apart.

The history of transport in Australia, therefore, largely revolves about cities acting independently as trade centres. Intercity and long distance passenger transport was initially relatively unimportant and was restricted to the sea mode. It has developed this century as State rail systems linked up, as roads have been improved, and as the airline industry has progressed, in that order. Concomitant with these structural changes has been the demise of intercity sea passenger transport which is now insignificant.

## CURRENT SITUATION

### The Size of the Task

In Australia, long distance passenger transport really means interstate travel between capital cities. As shown by Table 1, few cities other than State capitals are of significant size. It has already been demonstrated that population is only sparsely distributed outside urban areas. There are high volume flows in the Newcastle-Sydney-Wollongong, Melbourne-Geelong, and Brisbane-Gold Coast corridors. These are relatively short and have many of the characteristics of intraurban travel. They will not be considered further in this paper.

An intercapital city corridor also exists between Sydney and Canberra. This corridor has a high density of passenger traffic, being only 300 km in length and joining the nation's largest urban complex to its administrative capital.

This corridor carries about 660,000 private car passengers in total a year, while comparable figures for the other modes are 500,000 for air, 36,000 for rail and 20,000 for express bus. Travel from Canberra to Melbourne by private car, air and rail is much less than half these levels. Compared with other intercapital city links, the Canberra-Sydney route is unique in terms of distance and, as will be shown later, modal split, and for this reason is also not included in this discussion.

Complete data concerning the size of the task of moving passengers by each mode between the major cities is not available. The greatest gap exists in private motoring statistics. Nevertheless, some preliminary estimates from various BTE studies are shown in Appendix Tables A to D.

Intercapital city passenger transport tasks are summarised in Table 2. These figures demonstrate that air is by far the most important of the commercially operated modes. Although figures are not available, private car travel is known to be the next most important carrier. Rail travel is of tertiary importance, but experience suggests that many passengers such as railway employees, school children and welfare recipients travel at concession rates. Express bus and sea intercity transport are insignificant, the latter having declined markedly over time.

Some indication of the possible relative importance of private road travel may be gained from considering the Sydney-Melbourne corridor. A study of this corridor indicates that private car through traffic in both directions per day consists on average of some 273 vehicles, with an average of about 2.0 occupants each. On this basis, the private road passenger task is about 199,000

passengers a year or 178 million passenger kilometers. Comparison with Appendix A to D shows that these levels are less than a quarter of those for the air task between Sydney and Melbourne and are comparable to those for rail.

Table 2 – Size of intercity passenger transport tasks 1972-73

Mode	Passengers	Passenger task
	Intercity	Intercity
	'000	'000,000 km
Domestic air	3 300	3 280
Non urban rail	800	960
Non urban private road vehicles	na	na
Non urban bus	220	150
Coastal sea <sup>1</sup>	28 <sup>2</sup>	47 <sup>2</sup>

<sup>1</sup> 1972

<sup>2</sup> Includes round trip passengers that were not carried on cruise ships.

Source: Australian Bureau of Statistics

na Not available

Source BTE preliminary estimates

Care should be exercised in applying this relationship to other city pairs. Distances vary and Perth, for example, was not linked across the Nullarbor Plain to the Eastern States by a sealed road until 1976. Furthermore, direct road and rail transport are not possible to Hobart because Tasmania is separated from the mainland by Bass Strait. Nevertheless, there is some indication that the modal split is very roughly 60 per cent air, 20 per cent each for road and rail.

Intercapital city movements by air represent 40 per cent of all passengers carried by the domestic airlines and half of their task in terms of passenger kilometers. By contrast, such intercapital city movements only make up small proportions of the tasks of other modes. While intercapital city passengers are about a fifth of all coastal shipping passengers, the trades are overwhelmingly dominated by freight in both bulk and general forms. Apart from air, therefore, intercapital city transport by other modes is only of minor importance.

### Market Structure

Previous discussion has emphasised the impact that geographical features have had upon the intercity transport networks of Australia. However, other factors have been and remain influential. Not the least of these is government intervention in Australian transport markets.

The Commonwealth Government of Australia is involved in many forms of activity that influence intercity transport. Governments normally tax, subsidise, regulate and make loans to transport activities but in addition to these functions the Commonwealth of Australia owns and operates large scale transport facilities and services. These include major airports, Trans Australia Airlines, the Australian National Line, air and sea navigation aids and railways in two States (South Australia and Tasmania) and the Commonwealth Territories. The Commonwealth also makes grants for the construction, improvement and maintenance of roads but is not directly concerned with road construction or road operations. It does however levy taxes on fuel and vehicles and encourages cooperation between State governments in matters affecting road use.

The most important mode for intercity passenger transport in Australia has been shown to be air. The Commonwealth controls the air mode through powers handed over to it by the States. An important instrument

of control is an agreement under which air transport on the major (trunk) routes is divided between two operators. These are the Commonwealth Government owned Trans Australian Airlines and the privately owned Ansett Transport Industries Ltd. The agreement was initiated in 1953 and has been maintained since under the Australian Airline Agreement Act 1958-73. This legislation essentially establishes a government controlled cartel on intercity air routes that is capacity controlled through the licensing of imports of aircraft.

The effects of this agreement are:

- a. entry into the industry is effectively prohibited
- b. output is held within limits
- c. even competition of a non price nature is strictly limited, the difference between the two airlines being insignificant
- d. price agreement between the airlines is basically automatic and government sanctioned
- e. allocation of routes, flights and times, and hence revenues are also agreed to.

Despite these apparent disadvantages the agreement appears to be acceptable to the public on the basis of consumer protection. It may explain a somewhat higher level of fares than for comparable US services, despite the high load factors achieved in Australia by capacity control.

In Australia, *railways* are owned and operated by State and Commonwealth governments and, in some cases, by private companies. Private railways are mainly ancillary to the operations of mining companies hauling bulk minerals and account for almost half the national rail freight task. The Commonwealth Government operates the Australian National Railways principally in South Australia and Tasmania and the Northern Territory, while each of the mainland States operates its own systems. These regional monopolies are loosely coordinated as Railways of Australia for technical interchange and such matters as striking border transfer charges. Apart from this agreement, they operate separately, although, through the Australian Transport Advisory Council (ATAC), the development and implementation of co-ordinated policies is being pursued. The Commonwealth Government has also made grants to State systems mainly for track standardisation.

Many rail services in Australia run at a loss, often for social or political reasons. Hence, government railways in Australia incur large deficits and new investment is limited. To date deficits have been readily funded by the relevant treasuries and much investment in the form of rebuilding rolling stock and track takes place under the guise of maintenance.

Until recently, railways in Australia were protected to varying degrees from competition with road hauliers by State road taxes and haulage regulations. In Queensland they are still protected by regulation from intrastate shipping. In general, such regulations are being phased out.

*Road* construction and maintenance is the province of State and local governments. The Commonwealth Government only has the responsibility for a limited length of roads in the Territories. Nevertheless, through its control of taxes and loan and grant monies, the Commonwealth Government has a marked impact on the supply of and demand for road space. The Commonwealth also assumes full financial responsibility for national roads which comprise national highways and declared export and major commercial roads.

Australian State Governments have made various attempts to regulate commercial road transport in an endeavour to protect their railway systems. However, interstate traffic must be able to move unimpeded under Section 92 of the Australian Constitution, even to the

extent that vehicle registration fees cannot be levied on vehicles operating interstate. The effects of such regulations are sometimes bizarre. For example, in some instances long distance buses can only pick up in one State or Territory and set down in another. On the whole, regulation of long distance road transport, which has never been particularly restrictive in Australia, is tending to be phased out.

*Coastal shipping* in Australia is also highly regulated. Australian coastal shipping is heavily protected from competition by ship import and voyage licensing regulations. Unless ships are Australian built and manned, they cannot operate freely in the coastal trades without the approval of the Commonwealth Department of Transport. As mentioned previously, the railways in Queensland are protected by regulation from intrastate shipping. Although coastal shipping is dominated by freight transport mostly in the bulk trades, multipurpose ships ply between Tasmania and the mainland.

In summary therefore, air, rail and sea passenger carriers are all highly regulated or government owned and operated in Australia. The road mode is controlled to a much lesser extent. Only the private motor vehicle moves absolutely freely and only then after paying quite high levels of duty, taxes and fees on vehicles, fuel, accessories and licences. While air and sea are essentially organised as government protected cartels, the railways operate as independent regional monopolies. Only road is truly competitive and even there State regulations and pricing policies have in the past inhibited the growth of intrastate commercial traffic in order to protect the railways. As railway deficits increase, less attention is being given to attempting to protect them by regulation and rather more to the rationalisation of their operations.

There is little doubt that in countries such as Australia with relatively widely separated centres of population leading to fairly modest intercity passenger flows and high per capita incomes, the dominant modes can be expected to be air and the private car. The market shares of the modes with lower fares are distorted by heavy subsidisation of passenger rail services relative to express buses. Because of the distances and low volumes involved, even high speed trains will not compete in the foreseeable future with air travel in Australia on inter-capital city links. The future of the various modes appear to be reasonably accurately reflected in their current subsidy levels and market shares.

### **Factors Affecting Demand for and Supply of Transport**

Few studies have been carried out on the markets for transport services in Australia. That work which has been done almost exclusively concentrates on air travel, presumably because a data base is available. Variables which affect the level of demand for transport services may be considered to consist of three groups. These are socioeconomic, level of service and attraction variables.

Socioeconomic variables consist of income levels, age, sex and occupations of travellers, and other user characteristics such as number of motor vehicles per family. Level of service variables include time per journey, costs, fares or charges, frequency and degree of comfort. Attraction variables include population measures, indicators of retail and service employment and distance travelled. Those Australian studies of demand which have been undertaken have used various combinations of these variables.

Studies of Australian intercity air travel have produced results which tend to confirm those obtained by research in other countries. They indicate that the market for air travel is relatively insensitive to changes in the levels of service and costs for other modes. Variations in demand are principally explained by population and in-

come levels and real air fares. In these respects, the demand for air travel by older and higher income persons and business travellers is less sensitive than for younger and non business passengers with lower incomes. These latter distinctions demonstrate that the intercity air travel market is not homogeneous but composed of several strata of travellers with different characteristics. The apparent insensitivity of air travel demand to the costs of rail and road transport in studies undertaken to date may result from a high degree of stability in intermodal fare ratios over time.

The studies on air travel which have been carried out within the BTE returned elasticity estimates which averaged -1.0 for own fares and 2.0 for income. These estimates were based on time series, not cross-sectional analyses, and thus are averaged over income classes. Larger and lesser values would be expected for lower and higher incomes users respectively. Further, most elasticities would also be expected to become smaller over time.

The growth of air travel has averaged 10 per cent annually over the past fifteen years. A setback is currently being experienced and this situation has also occurred in the past. In each instance the drop-off in the rate of increase in demand has arisen in times of recession rather than following increases in the real level of fares. These facts emphasise the importance of the income effect.

The demand for intercapital city passenger transport by either of the other modes has not been investigated fully as yet. Nevertheless, they can be expected to respond in the same way as air with some minor differences. As mentioned previously, train passenger services appear to attract a significant proportion of individuals who simply prefer train travel over other modes. Some of these are entitled to concession fares, and to most of them time is largely immaterial, eg. welfare recipients or overnight or tourist travellers. Others may be fearful of road and air travel. Intercapital city rail passenger demand should, therefore, be more inelastic with respect to fares and income than its air counterpart. In fact, demand has shown a slight decline in recent years despite rising population and income levels and falling real fares.

The situation with regard to road travel is not as clear due to limited data availability, except for several surveys that are either limited in scope or not very appropriate to the purpose of this paper. Nevertheless, since few single occupant vehicles were observed in these surveys on long trips, it appears that the cost per passenger of private car travel in comparison with that of other modes is an important factor. This contrasts with the results cited for air and postulated for rail. Little can be said about income effects upon the demand for private car travel since they cannot be isolated from those of other factors without econometric analysis. However, statistics indicate that levels of car ownership may approach saturation in the future. This suggests that the income elasticity of demand for this mode is diminishing over time.

The intercapital city sea passenger task is falling rapidly as air travel becomes more popular since it is relatively more expensive in terms of time and money combined. It seems most unlikely that this trend will be reversed.

In summary therefore, much more economic research is required concerning long distance passenger transport in Australia. At present few estimates of demand elasticities exist and these are confined to the air mode. However, before such efforts can be undertaken data must be collected. Because of the past and current nature of transport statistics, this will involve the conduct of continuous surveys of transport users. Plans already exist for the BTE to undertake a national travel survey.

Part 3 of this paper demonstrated that the structure of transport markets in Australia is such that supplies of domestic transport services are very much dependent upon government initiatives. The Commonwealth Government owns and operates all major airports and air navigation aids and limits the import of aircraft under a licensing system. Ports are owned and operated by State government authorities while the Commonwealth owns and operates the sea navigation aids and controls both the import of ships for coastal trades and particular journeys of foreign ships through licensing systems. Passenger carrying railways are all owned and operated by government authorities. Finally, a large part of the cost of motor vehicle purchase and operation consists of taxes while investment in roads, particularly in the national highways that link the cities, are also highly dependent upon federal fiscal initiatives.

Supplies of transport services therefore tend to shift in a once and for all stochastic manner as governments perceive community needs and as budgetary constraints allow. In effect therefore, demand creates its own supply in the government controlled sector of the Australian transport industry.

Investment proposals, particularly those requiring federal finance, are increasingly subject to economic scrutiny. This task has been performed by both the Commonwealth Bureau of Roads and the Bureau of Transport Economics which are currently in the process of being amalgamated. Benefits and costs are weighed against each other and where possible, intangibles are enumerated and their extent documented so that policy decisions are based upon the best possible information. Nevertheless, the analyses undertaken have usually been of a partial nature. A need to resort to more general equilibrium analysis is now being recognised.

#### THE FUTURE OF INTERCAPITAL CITY PASSENGER TRANSPORT IN AUSTRALIA

Because of the relative lack of analysis of Australian transport markets, the future of the industry cannot be discussed authoritatively. Nevertheless, sufficient trends and other information exists to enable an outlook statement to be prepared.

Since 1945 there has been a marked increase in intercity passenger travel in Australia. Rates of growth have been fairly constant and consequently the temptation exists to simply extrapolate these trends into the future. However, due to recent changes in the rate of population growth and in the Australian economy, such a procedure would be untenable.

An intensive study of the Australian population has shown that the rate of growth may fall to only one per cent per annum in the future. From World War II until the late 1960s the Australian economy grew in a very stable fashion and, although income per head is still expected to rise at an average rate of 3½ per cent per annum, the past six years have seen volatile fluctuations which have not yet been controlled. In the immediate future Australia may therefore experience less consistent growth in GNP than historical precedent suggests.

The costs of transport may be expected to rise at a rate greater than the historical trend. A decrease of one per cent per annum in real terms could well be reversed to a one per cent increase. Such a change will depend particularly upon fuel prices and labour costs. Improving conditions for the Australian workforce can result in falling productivity per man if technology remains constant.

Taking these factors into account and assuming a price demand elasticity of -2.0, total non urban travel is expected to grow at an average rate of 6 per cent over the next decade. In the past, non urban travel has grown at a rate somewhat less than 10 per cent. The forecast there-

fore implies a reduction in the rate of growth of demand of some 40 per cent. This should also apply to inter-capital city passenger transport.

It is expected that the airlines will absorb the bulk of the projected growth in intercity transport as they become more competitive for traffic and introduce more flexible pricing policies. The national highways program will improve intercity road links markedly and should also stimulate private car travel. On the other hand, express buses are only envisaged as holding their current share of the market while intercity rail and sea transport should continue to decline in absolute terms.

On the supply side, governments can be expected to upgrade airports and air facilities as demand increases. It has already been mentioned that considerable investment in intercity roads can be expected as the National Highways program advances. Rising demand for intercity freight should result in the further upgrading inter-capital city rail links which will benefit passenger traffic. However, competition from the air and road modes should lead to continued reduction in the numbers of rail passengers on such links. Although further capital investment and expansion of port facilities is anticipated, it is unlikely that these will benefit passenger traffic in any way.

The outlook for intercapital city transport therefore indicates an expansion of passenger movements at a rate of about six per cent per annum, with growth concentrated in the air and private car modes.

#### SUMMARY AND CONCLUSIONS

Intercity transport in Australia is essentially intercapital city transport. All four major modes - air, rail, sea and road - are involved in the intercapital city passenger transport task. Their relative importance has changed markedly over time with the development of their technologies and investments in transport infrastructure. Currently the air mode dominates with sea and express bus being insignificant.

Transport markets in Australia are characterised by government intervention to the extent that only private car travel is not directly influenced by regulations of some sort, although regulation of road freight and passenger services is limited and tending to decline. As a consequence, the supply of transport services and especially infrastructure is largely dependent upon public as opposed to private investment programs.

Economic research into long distance passenger transport markets is limited and few estimates of demand elasticities exist. There is a need for more research in this area and also for work concerning the effects of regulation.

The outlook for intercity passenger transport in Australia indicates a slackening of growth from less than 10 to 6 per cent, principally as an effect of a lowering of population growth.

The paper demonstrates that transport development has been markedly effected by the geography and governments of Australia. The development of transport systems in the past has demonstrably affected the present. For instance, the adoption of different rail gauges by the colonies last century has had important effects on interstate rail transport.

Because transport services are mainly intermediate goods, the demand for them is derived from that for other goods and services. They are an input to virtually every source of human satisfaction, especially if pede-

strian activity is included as a mode. Non users as well as users benefit from the provision of transport and as such it generates considerable welfare spinoffs to society as a whole. Some examples are the benefits contributed to defence preparedness and emergency services and the enablement of trade. In many respects therefore, transport services resemble public goods.

A further aspect of transport is that, because of geographical differences in income and the varying resource costs of the modes, it has welfare distributional impacts. Finally, because of the massive investment necessary to much transport infrastructure, many undertakings such as railways are effectively natural monopolies.

These features of transport imply that governments will actively intervene in transport markets to avoid excess profit taking, to impose principles such as the user-beneficiary pays and to achieve social welfare goals.

The implications of the Australian experience, particularly for nations developing their transport systems, largely revolves around the need to undertake investment in infrastructure only after considering very long term potential developments. The growth and distribution of population and income are the main factors which will determine future demands and hence supply requirements. Resource costs relative to usage directly influence user charges in the longer term and hence patronage. In Australia changing incomes, shifts in population and technology have caused these ratios for the various modes to change their relative positions over time. The result has been the demise of sea and rail passenger transport to be betterment of air and road travel.

In poorer countries with high population densities, rail and water transport may have resource costs relative to patronage that will ensure their continued viability. However, the Australian case shows that as incomes rise and particularly if population is sparse, private road and air traffic are preferred to the other modes which become limited to long haul freight tasks.

The changes that have occurred in the Australian transport industry demonstrate a need for flexible long term planning by governments in developing transport infrastructure. Australia now has an over-developed inflexible rail system which has become largely redundant and which requires deficit financing to about \$A500 million per annum. The degree of rationalisation required to overcome this problem poses considerable institutional and political problems.

Most economists will assert that the market works - in other words, supply tends to adjust towards demand. In transport, because of monopoly effects, scale of investment and government involvement, lags between adjustments can become extremely prolonged. The resulting situation can result in massive waste of resources and reduction of social welfare. Governments can only avoid such circumstances through co-operative flexible planning and policy adaptation. Furthermore, development strategies must necessarily be based upon the best information available. There is therefore a need for continual research into transport problems and for increased international co-operation and interchange of information in this field.

#### FOOTNOTE

1. Commonwealth Bureau of Roads, **Report on Roads in Australia**, 1975, p 153.

**Appendix Table A - intercapital city passenger transport task by air**

City Pair		1972-73		1973-74		1974-75		1975-76	
		m. pass.	m.pass. km. *	m. pass.	m.pass. km. *	m. pass.	m.pass km. *	m. pass.	m.pass. km. *
Sydney	Melbourne	1.1	890	1.3	1020	1.4	1070	1.4	1100
	Brisbane	0.5	450	0.6	480	0.6	490	0.7	510
	Adelaide	0.2	240	0.2	260	0.3	320	0.3	390
	Perth	0.1	360	0.1	380	0.1	410	0.1	440
	Hobart	„	50	„	70	„	60	„	70
Melbourne	Brisbane	0.1	230	0.2	280	0.2	300	0.2	310
	Adelaide	0.3	220	0.4	260	0.4	270	0.4	290
	Perth	0.1	420	0.2	480	0.2	510	0.2	570
	Hobart	0.2	130	0.3	170	0.3	180	0.3	180
Brisbane	Adelaide	„	40	„	50	„	60	„	70
	Perth	„	50	„	60	„	70	„	110
	Hobart	„	10	„	10	„	10	„	20
Adelaide	Perth	0.1	170	0.1	210	0.1	230	0.1	280
	Hobart	„	10	„	20	„	20	„	20
Perth	Hobart	„	10	„	20	„	20	„	20
	Hobart	„	10	„	20	„	20	„	20
Total		3.3	3280	4.0	3780	4.1	4020	4.3	4380

Source: BTE estimates, preliminary figures

\* Determined using distances between capital cities as shown in Table No. 157 in ABS, **Transport and Communication** 1971-72, Bulletin, No. 63  
 „ less than 0.1m

**Appendix Table B - intercapital city passenger transport task by rail**

City Pair		1972-73		1973-74		1974-75	
		m.pass	m.pass.km*	m.pass.	m.pass. km*	m.pass.	m. pass.km*
Sidney	Melbourne	0.3	280	0.3	310	0.3	270
	Brisbane	0.2	160	0.1	120	0.1	120
	Adelaide	„	20	„	70	„	60
	Perth	„	120	„	160	„	120
	Hobart	n.a.	-	n.a.	-	n.a.	-
Melbourne	Brisbane	„	90	„	90	„	90
	Adelaide	0.1	100	0.2	140	0.2	150
	Perth	„	130	„	160	„	160
	Hobart	n.a.	-	n.a.	-	n.a.	-
Brisbane	Adelaide	„	10	„	10	„	10
	Perth	„	10	„	20	„	20
	Hobart	n.a.	-	n.a.	-	n.a.	-
Adelaide	Perth	„	40	„	110	„	120
	Hobart	n.a.	-	n.a.	-	n.a.	-
Perth	Hobart	n.a.	-	n.a.	-	n.a.	-
	Hobart	n.a.	-	n.a.	-	n.a.	-
Total		0.8	960	0.9	1190	0.9	1120

\* Determined using distances between capital cities as shown in Table No. 157 in ABS, **Transport and Communications** 1971-72, Bulletin, No. 63.

„ less than 0.1m.

n.a. not applicable

Source: BTE estimates, preliminary figures.

**Appendix Table C - intercapital city passenger movements by express bus: 1975-76**

City Pair		'000 passengers	m.pass.km.*
Sydney	Melbourne	60	30
	Brisbane	40	30
	Adelaide	20	20
	Perth	"	"
	Hobart	n.a.	-
Melbourne	Brisbane	20	20
	Adelaide	40	20
	Perth	"	"
	Hobart	n.a.	-
Brisbane	Adelaide	"	"
	Perth	"	"
	Hobart	n.a.	-
Adelaide	Perth	20	30
	Hobart	n.a.	-
Perth	Hobart	n.a.	-
Total		220	150

\* Determined using distances between capital cities as shown in Table No. 157 in ABS, **Transport and Communications, 1971-72, Bulletin, No. 63.**

" , less than 10,000 passengers, or 10m pass.km.

n.a. not applicable

Source: BTE estimates, preliminary figures.

**Appendix Table D - intercapital city passenger transport by sea: 1972 to 1975**

City Pair		1972		1973		1974		1975	
		'000 pass.	m.pass. km. *	'000 pass.	m.pass. km. *	'000 pass.	m.pass. km. *	'000 pass.	m.pass. km. *
Sydney	Melbourne	9.4	9.9	5.6	5.9	4.4	4.7	1.9	2.0
	Brisbane	2.7	2.5	4.5	4.1	2.9	2.7	2.5	2.3
	Adelaide	1.0	1.8	0.5	1.0	0.3	0.5	0.2	0.3
	Perth	3.3	13.0	1.8	7.3	1.3	5.3	0.9	3.7
	Hobart	7.3	8.6	7.3	8.5	6.7	7.8	5.8	6.7
Melbourne	Brisbane	1.4	2.7	1.6	3.1	0.6	1.1	0.6	1.1
	Adelaide	0.3	0.3	0.3	0.3	0.4	0.4	0.2	0.2
	Perth	1.9	5.8	0.9	2.9	1.7	5.3	0.8	2.4
	Hobart	0.1	0.1	"	"	0.2	0.2	"	"
Brisbane	Adelaide	0.1	0.1	"	"	"	"	"	"
	Perth	"	0.2	"	0.2	"	0.1	0.1	0.5
	Hobart	"	0.1	-	-	"	0.1	0.1	0.2
Adelaide	Perth	0.6	1.4	0.1	0.2	"	0.1	0.1	0.3
	Hobart	-	-	0.3	0.4	-	-	"	"
Perth	Hobart	"	"	"	"	"	"	"	0.1
Total		28.1	46.5	22.9	33.9	18.6	28.3	13.3	19.8

Source: BTE estimates, preliminary figures.

\* Determined using distances between capital cities as shown in Table No. 157 in ABS, **Transport and Communication 1971-72, Bulletin, No. 63.**