MARKET RESPONSE TO DISCOUNT AIR FARES ON SELECTED DOMESTIC TRUNK ROUTES

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ABSTRACT:

In recent years discount air travel on the domestic trunk network has increased as a proportion of total travel as there has been a downturn in full fare demand and an increase in the range of discount fares available. To gain some insight into this trend a series of surveys of Sydney/Melbourne and Sydney/Brisbane passengers was undertaken between July 1983 and February 1984. Data were collected on the demographic and travel characteristics of full fare and discount fare passengers, the alternative travel arrangements which discount fare passengers would have made if their fare type was not available and passengers attitudes to fare changes.

A survey of intercity coach passengers revealed major differences between the characteristics of air and coach travellers and gave some insight into the latent demand for domestic air travel.

INTRODUCTION

Background

On 18 June 1981 assent was given to the Independent Air Fares Committee Act 1981, which established a committee to "review the basis on which certain domestic passenger air fares are determined and to determine those domestic passenger air fares". This Act lists a number of conditions which, if satisfied, require the Independent Air Fares Committee (IACF) to approve a proposed discount air fare and these include:

(a) the introduction of that proposed discount air fare is likely to improve the profitability of the operations of that passenger operator in relation to the provision of air services; and

(b) the introduction of that proposed discount air fare is unlikely to result in economy air fares in respect of air services provided by any trunk route operator over trunk routes being increased.

These conditions provide the background to this work as their interpretation clearly relies on an understanding of the market response to different types and levels of air fares. The basic aim of this work was to gain further understanding of the discount air fares market in Australia, and so to assist the IAFC and the aviation industry as a whole.

The measures of market response used in this work are those commonly used within the aviation industry, namely passenger dilution, diversion and generation. Passenger dilution refers to the response of discount air fare passengers who would have been prepared to pay full fare with the same airline if their discount fare had not been available. Diversion describes the response of passengers who would have travelled by another airline if their discount fare had not been available. Generation describes the response of passengers who would not have made their journey by air if their discount fare had not been available. Generated passengers fall into two categories, those who would otherwise have travelled by land transport modes and those who would otherwise not have made the journey. Mode diversion is used to describe the former response and stimulation is used to describe the latter response. From these definitions it follows that a discount fare is financially viable only if the net revenue gained from passenger generation and diversion exceeds the net revenue lost from passenger dilution.

Methodology

The market response to discount air fares was assessed by:

- surveying airline passengers of Ansett Airlines of Australia (AAA), Trans Australia Airlines (TAA) and East-West Airlines (EWA); and
- surveying Ansett Pioneer coach passengers.

Three surveys of airline passengers were undertaken. Two were of EWA passengers to determine the alternative travel arrangements they would have made if their low-cost fares were not available, the third of AAA, TAA and EWA passengers to collect data on passengers' characteristics, passengers' attitudes to fare increases and again the alternative travel arrangements

discount fare passengers would have made if their discount fares were not available. A survey of interstate coach passengers was also conducted to assess the potential for passenger diversion from coach to air.

Discount Air Fares

Subsequent parts of this paper describe the response of AAA and TAA passengers travelling on Apex, Standby and Excursion 45/Flexi-Fare fares, and EWA passengers on excursion fares. The levels of discount and the conditions which applied to these fares at the time of the main survey (November 1983) are summarised in Table 1.

CHARACTERISTICS OF AIRLINE PASSENGERS

Survey Design and Administration

The travel choice characteristics of passengers travelling on the Sydney/Melbourne and Sydney/Brisbane routes were measured with a self-administered survey conducted in departure lounges. The survey was carried out at Kingsford-Smith airport in Sydney from 28 November to 1 December 1983. The duration of the survey was determined by the time required to collect the required level of data for the smallest carrier (EWA).

Passengers on each of the selected flights were asked to complete a survey form after they had completed check-in and seat allocation procedures and before the aircraft boarding call. The numbers of usable responses for the Sydney/Melbourne route were 505, 326 and 167 for AAA, TAA and EWA respectively and for the Sydney/Brisbane route the numbers were 233, 179 and 65 for AAA, TAA and EWA respectively. These figures represented overall response rates of 33 per cent for AAA, 24 per cent for TAA and 54 per cent for EWA.

These relatively low overall response rates for AAA and TAA passengers were due to the existence of multiple check-in facilities at Kingsford-Smith airport. This made it impractical to include in the survey the passengers who moved from all parts of the terminal to the departure lounge soon after the boarding call. The low response rate for EWA passengers was due to the difficulty of identifying passengers' destinations at the single check-in point used for all flights.

Due to the relatively low survey response rates it was necessary to assess the degree to which the results were affected by non-response bias. The most reliable method of estimating non-response bias would have been to ensure that on some flights all passengers completed a questionnaire and then to have compared the results from these flights with the results obtained with the sampling procedure used on other flights. In practice this approach was administratively infeasible and a substitute test based on passengers' purpose of travel was developed.

To estimate the degree of non-response bias in the sampling technique the arrival time distributions of business and non-business travellers were measured to determine whether the passengers who arrived in the departure lounge before the boarding call were representative of all passengers on the flight. This procedure was carried out for five flights not included in the full survey. The chi-squared test for independence (Conover 1971) was used to determine whether there were statistically significant differences between the

TABLE 1-MAJOR CHARACTERISTICS OF COMMON DISCOUNT AIR FARES IN NOVEMBER 1983

Fare type	Characteristics
AAA/TAA Apex	35 per cent discount off the economy fare Available in limited numbers on selected jet routes Return tickets only Bookings had to be made at least 30 days in advance Minimum stay of seven nights
AAA Flexi-Fare/ TAA Excursion 45	45 per cent discount off the economy fare Available in limited numbers on selected jet routes Return tickets only Bookings had to be made 4-14 days in advance Minimum stay of one night Maximum stay of 21 nights Only the day of travel could be specified: flight details were issued day before travel
AAA/TAA Standby	20 per cent discount off the economy fare Availability depended on the number of unoccupied seats when the flight closed Tickets only issued at airports on a first-come-first-served basis
EWA Excursion	Approximately 47 per cent off the AAA/TAA economy fare Available on limited routes Return tickets only Minimum stay of two days Ticket valid for a maximum of 30 days

Sources: Airlines' fares brochures.

purpose of travel distributions before and after the boarding call. For each of the five individual flights, the 'purpose of travel' distributions were statistically the same before and after the boarding call and for this reason it was concluded that there was no need to correct the survey results for non-response bias[1].

1. For a null hypothesis of independence, the probability of a type I error ranged from 0.2 to 0.9, depending on the flight. These very high levels of significance led to the null hypothesis not being rejected in any case.

Results

Characteristics of passengers who were included in the survey are detailed in Tables 2 to 5. Further characteristics, including sex, age and household income, can be found in BTE (1985 in press). At the time of the survey there appeared to be no major public events or industrial disputes which might have distorted travel patterns.

General features

Three general features emerged from the statistical tests performed on the data. The first was that the characteristics of passengers on the Sydney/Melbourne and Sydney/ Brisbane routes were very similar. There were no significant differences (at the 5 per cent level) between the purpose of travel, sex, household income and decision time distributions for each route. Statistically the largest differences were observed in the distributions of trip duration; trips on the Sydney/Melbourne route tended to be shorter than on the Sydney/Brisbane route, with means of six and 10 nights respectively.

The second main feature was that on the Sydney/Melbourne and Sydney/Brisbane routes the characteristics of AAA and TAA passengers were essentially the same, but markedly different from the characteristics of EWA passengers. Compared with AAA and TAA passengers, EWA passengers were less business orientated, had a more even male to female balance, purchased their own tickets, came from households in lower income groups, booked earlier and stayed away longer. Compared with AAA and TAA passengers, a higher proportion of EWA passengers were either young (< 20) or old (> 64).

The third general feature of the data was that the characteristics of AAA and TAA discount fare passengers were very similar to EWA passengers. (In this context discount fare passengers were defined to be all passengers who did not travel with first or economy class tickets).

Passengers' frequency of air travel

Details of how often people travel by air can be used in conjunction with ticket sales data to estimate the number of people who travel by air each year. To collect the travel frequency data required for this calculation, passengers were asked how many return journeys by air in Australia they had made for business and non-business reasons in the past year. The results obtained are shown in Figure 1. It can be seen from this Figure that to a large extent the markets for business and non-business travel were independent; only about 27 per cent of trips were made by passengers who travelled for both business and non-business reasons in the same year.

The average numbers of business, non-business and total return trips on the domestic trunk network were 7.3, 1.3 and 8.6 per year respectively. If it is assumed that Sydney/Melbourne and Sydney/Brisbane passengers are representative of all trunk route passengers, that all air passengers make nine return journeys per year, that a total of about four million return journeys are made on the trunk network each year (DofA 1984) and that Australia's population is 15 million, then it follows that air travel is restricted to between 2 and 3 per cent of the total population. If it is further assumed that air travel is rarely undertaken by those aged under 20 or over 64 then it follows that air travel is restricted to about 5 per cent of the population between 20 and 64 (ABS 1983).

TABLE 2-PURPOSE OF TRAVEL BY AIRLINE FOR THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES IN NOVEMBER 1983
(per cent of passenger trips)

Purpose of travel	Sydney/Melbourne				Sydney/Brisbane			
	AAA	TAA	EWA	Total[a]	AAA	TAA	EWA	Total[a]
Business/work	79	78	23	77	74	71	5	71
Holiday	11	7	24	10	10	11	32	11
Visiting friends or relatives	7	8	35	9	9	12	41	11
Personal business	2	4	13	3	4	5	14	5
Other	1	3	6	2	3	1	8	2
Total	100	100	100	100	100	100	100	100

(a) The figures in this column were obtained by weighting the results for each airline by the number of occupied seats in the survey period.

Note: Figures may not all add to totals due to rounding.

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

TABLE 3-PURPOSE OF TRAVEL BY FARE TYPE FOR THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES IN NOVEMBER 1983

(per cent of passenger trips)

Purpose of travel	Sydney/Melbourne				Sydney/Brisbane			
	AAA/TAA			EWA	AAA/TAA			EWA
	First[a]	Economy	Discount[b]		First[a]	Economy	Discount[b]	
Business/work	92	86	28	23	89	80	31	5
Holiday	4	6	35	24	5	6	37	32
Visiting friends or relatives	1	4	29	35	7	7	19	41
Personal business	4	2	4	13	-	4	10	14
Other	-	2	3	6	-	3	4	8
Total	100	100	100	100	100	100	100	100

(a) First class includes TAA business class.
(b) AAA/TAA discount fare passengers are defined to be all passengers who did not travel with first, business or economy class tickets.

\- nil or rounded to zero

Note: Figures may not all add to totals due to rounding.

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

TABLE 4-TRIP DURATION BY AIRLINE FOR THE SYDNEY/MELBOURNE AND SYDNEY/ BRISBANE ROUTES IN NOVEMBER 1983

(per cent of passenger trips)

Trip duration (nights)	Sydney/Melbourne				Sydney/Brisbane			
	AAA	TAA	EWA	Total[a]	AAA	TAA	EWA	Total[a]
0	20	23	4	21	11	13	2	12
1	28	21	12	25	16	24	7	20
2	12	14	8	13	19	13	7	15
3- 7	23	26	46	25	27	19	44	23
8-14	9	5	20	8	12	10	26	11
> 14	7	11	10	9	16	22	15	19
Total	100	100	100	100	100	100	100	100

(a) The figures in this column were obtained by weighting the results for each airline by the number of occupied seats in the survey period.

Note: Figures may not all add to totals due to rounding.

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

TABLE 5-TRAVEL DECISION TIME BY AIRLINE FOR THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES IN NOVEMBER 1983

(per cent of passenger trips)

Time prior to departure of decision to travel (days)	Sydney/Melbourne				Sydney/Brisbane			
	AAA	TAA	EWA	Total[a]	AAA	TAA	EWA	Total[a]
0	3	6	2	4	3	4	3	4
1- 3	26	24	12	25	24	17	16	20
4-14	36	29	31	33	28	37	38	33
15-30	12	15	18	14	10	20	14	16
> 30	23	26	37	25	34	22	29	27
Total	100	100	100	100	100	100	100	100

(a) The figures for this column were obtained by weighting the results for each airline by the number of occupied seats in the survey period.

Note: Figures may not all add to totals due to rounding.

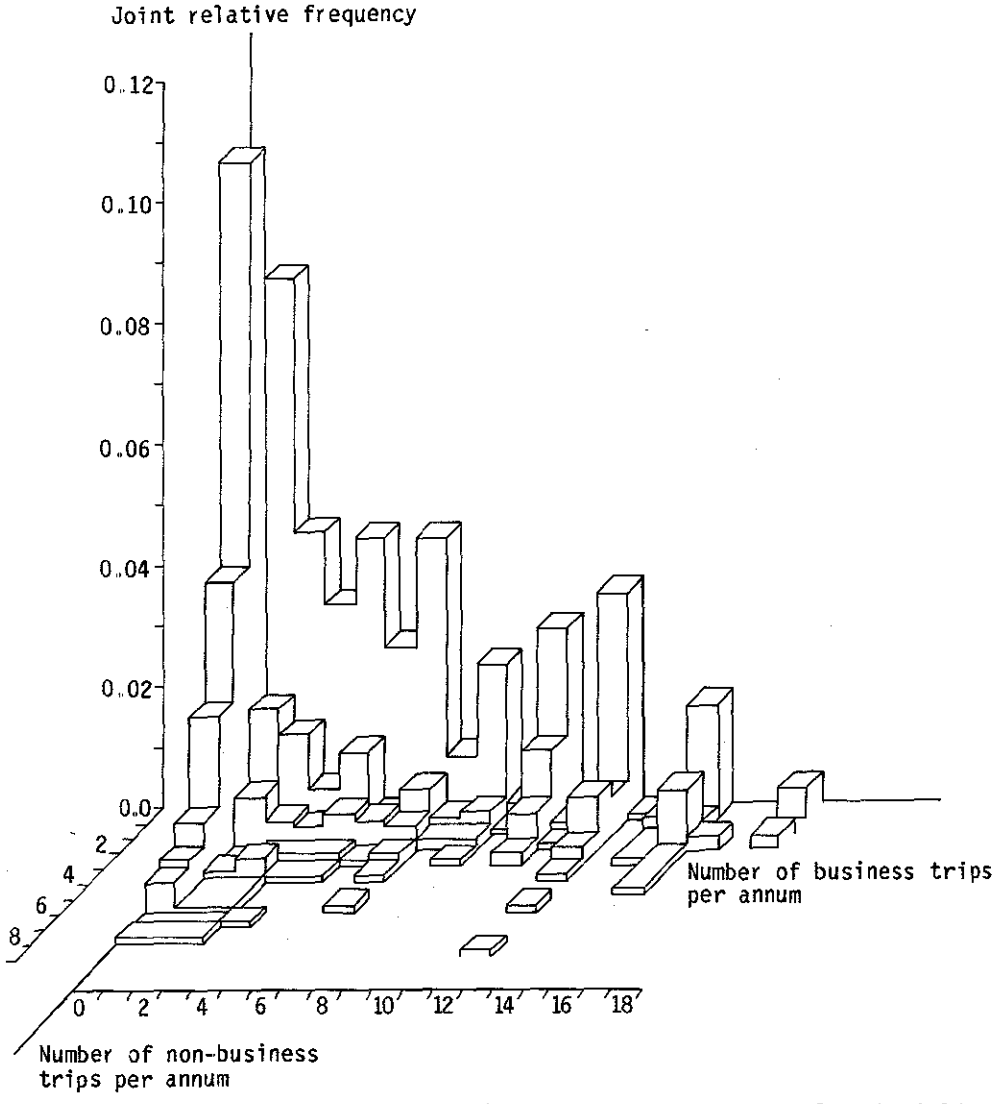
Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

These estimates, however, only tell part of the story because no allowance has been made for the fact that those people who travel frequently account for a disproportionately large fraction of total network patronage. If it is assumed that the Sydney/Melbourne and Sydney/Brisbane routes are respresentative of the trunk route network, then it follows from the data collected that about 60 per cent of air passenger trips are made by about 0.5 per cent of the total population.

Potential for dilution to discount fares

The results of the survey enabled estimates to be made of the potential for dilution to Apex and Excursion 45/Flexi-Fare fares.

In the case of Apex fares, passengers were required to book at least 30 days in advance and to stay away at least seven days. It was found that 14 per cent of all passengers (excluding first class) met these two basic Apex fare restrictions and that 10 per cent of passengers met these restrictions and were also travelling for non-business purposes. Of the AAA and TAA economy fare passengers, 6 per cent met the basic Apex fare restrictions and 4 per cent met the restrictions and were travelling for non-business purposes. The results of the surveys indicated that Apex passengers filled 5 per cent of occupied seats and that about 24 per cent of Apex passengers were travelling for business purposes.



Note: The raw data have been weighted for the patronage of each airline.

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

Figure 1-Joint relative frequencies of business and non-business air travel

To be eligible for an Excursion 45 (TAA) or Flexi-Fare (AAA) fare, passengers must have decided to travel more than four days in advance and had to stay away for between one and 21 nights. These fares were also targeted more towards non-business travellers as there was some uncertainty about flight time. It was found that 57 per cent of all passengers (excluding first class) included in the survey met the pre-booking and minimum stay requirements and that 17 per cent of passengers met these restrictions and were travelling for non-business purposes. Of the AAA and TAA economy fare passengers, 53 per cent met the pre-booking and minimum stay requirements and 9 per cent met these requirements and were travelling for non-business purposes. Only 4 per cent of passengers were travelling with Excursion 45 or Flexi-Fare tickets, and about 20 per cent of these were travelling for business purposes.

In the case of Apex and, more particularly, Excursion 45/Flexi-Fare fares the differences between potential dilution (as estimated from the survey results) and ticket sales may have been partly due to the effect of minor fare restrictions not included in this analysis. It is also important to note that AAA and TAA impose limits on the availability of many discount fares in order to reserve seats for full fare passengers.

AIRLINE PASSENGERS' RESPONSE TO DISCOUNT FARES AND FARE CHANGES

To understand the nature of the demand for discount fares, it was necessary to determine the travel arrangements that passengers would have made if their particular discount fare had not been available and also to determine the dependence of discount fare demand on fare levels.

Alternative Travel Arrangements for Discount Fare Passengers

East-West Airlines' passengers

In the first months of 1983, the introduction by EWA of excursion fares on the Sydney/Melbourne and Sydney/Brisbane routes was a topic of debate within the aviation industry. In its assessment of these discount air fare initiatives the IAFC was required, under the IAFC Act 1981, to assess whether the introduction of excursion fares by EWA would result in increases in trunk route economy air fares by any trunk route operator. The work described in this section was undertaken to contribute to this debate by quantifying the diversion of passengers from AAA and TAA to the EWA excursion fares introduced on the Sydney/Melbourne and Sydney/Brisbane routes. Full details of this work can be found in BTE (1983), BTE (1984) and BTE (1985).

Three surveys were carried out to determine what, if any, alternative travel arrangements EWA excursion fare passengers would have made if their discount fares had not been available. The first survey was carried out at Kingsford-Smith airport in Sydney and Tullamarine airport in Melbourne from Wednesday 6 July to Friday 8 July 1983. Passengers were asked to complete survey forms in the departure lounges. The number of usable questionnaires for the Sydney/Melbourne and Sydney/Brisbane routes were 427 and 165 respectively. The second survey of EWA passengers was carried out from 28 November to 1 December 1983 at Kingsford-Smith airport. The administration and much of the data collected in this survey have already been described. The third survey of EWA passengers was carried out at Kingsford-Smith airport from 10 to 14 February 1984. The number of usable questionnaires for the Sydney/Melbourne and Sydney/Brisbane routes were 117 and 58 respectively.

The purpose of travel data collected in each survey are summarised in Table 6 for each route. There were large differences in the purpose of travel distributions from one survey to another. Using chi-squared tests it was found that, at the 5 per cent level of significance, the purpose of travel distributions in each survey were significantly different, both for the Sydney/Melbourne and Sydney/Brisbane routes. There does not seem to be a straightforward explanation for the large variations observed, except in terms of seasonality effects.

TABLE 6-PURPOSE OF TRAVEL FOR EWA EXCURSION FARE PASSENGERS ON THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES IN JULY 1983, NOVEMBER 1983 AND FEBRUARY 1984

(per cent of passenger trips)

Purpose of travel	Sydney/Melbourne			Sydney/Brisbane		
	Jul 83	Nov 83	Feb 84	Jul 83	Nov 83	Feb 84
Business/work	26	23	24	13	5	18
Holiday	20	24	32	32	32	13
Visiting friends or relatives	51	35	38	38	41	27
Other[a]	3	19	7	17	22	42
Total	100	100	100	100	100	100

(a) Included 'personal business' in November 1983 survey results.

Note: Totals may not all add due to rounding.

Sources: BTE surveys of EWA passengers; July 1983, November 1983 and February 1984.

The alternative travel arrangements which excursion fare EWA passengers would have made are detailed in Table 7. The 95 per cent confidence limits on the data are also shown in the Table.

It can be seen from Table 7 that large differences were observed in the results of each survey. Using chi-squared tests, it was found that the travel choice alternatives measured in the November and February surveys were statistically different at the 5 per cent level of significance, both from each other and from those determined in the July 1983 survey. As in the case of the purpose of travel distributions, there appears to be no straightforward explanation for the differences in the results of each survey.

Until the factors which affect alternative travel options are better understood, diversion data measured at one point in time may be unrepresentative and consequently difficult to interpret.

TABLE 7-ALTERNATIVE TRAVEL OPTIONS FOR EACH SURVEY OF EWA PASSENGERS ON THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES

(per cent of passenger trips)

Alternative travel option	Sydney/Melbourne			Sydney/Brisbane		
	Jul 83	Nov 83	Feb 84	Jul 83	Nov 83	Feb 84
Air diversion	30 ±4	52 ±7	36 ±9	44 ±8	57 ±12	31 ±12
Generation						
Mode diversion	47 ±5	32 ±7	52 ±9	46 ±8	32 ±11	36 ±12
Stimulation	20 ±4	13 ±5	12 ±6	7 ±4	8 ±7	31 ±12
Other	3 ±2	3 ±2	1 ±2	3 ±3	3 ±4	2 ±4
Total	100	100	100	100	100	100

Notes: The confidence limits (95 per cent) were based on the uncorrected normal approximation.
Figures may not all add to totals due to rounding.

Source: BTE surveys of EWA passengers; July 1983, November 1983 and February 1984.

AAA and TAA passengers

The travel arrangements which AAA and TAA Apex, Excursion 45/Flexi-Fare and Standby passengers would have made if their discount fares were not available are summarised in Table 8. About 8 per cent of passengers were stimulated to travel by the availability of discount fares. The overall ratio of traffic dilution to traffic generation was about 3:1 in the case of Apex passengers and about 1:1 in the case of Excursion 45/Flexi-Fare and Standby passengers. A more detailed analysis of the results in Table 8 was hampered by the relatively large errors associated with the data. As explained previously, airlines make only a limited number of seats available for discount fare passengers and for this reason it was difficult to collect accurate statistics on the characteristics of passengers travelling on each individual discount fare.

Passenger's Response to Fare Increases

Passengers' responses to air fare increases were assessed by asking passengers if they would still have made their present journey by air if all air fares were 10 per cent, 20 per cent, or 30 per cent more. The results obtained from an analysis of the answers to these questions are shown in Figure 2, where decrease in demand is plotted as a function of fare increase. In Figure 2 it can be seen that the response of business travellers to hypothetical fare increases was quite different from the response of non-business travellers, and that the response of each category of non-business

TABLE 8-ALTERNATIVE TRAVEL OPTIONS FOR AAA AND TAA DISCOUNT FARE PASSENGERS ON THE SYDNEY/MELBOURNE AND SYDNEY/BRISBANE ROUTES IN NOVEMBER 1983

(per cent of passenger trips)

Alternative travel option	Apex	Excursion 45/ Flexi-Fare	Standby
Dilution	73 ±11	54 ±14	54 ±14
Generation			
Diversion	19 ±10[a]	36 ±14[a]	38 ±14[a]
Stimulation	8 ±7	9 ±8	8 ±7
Other	-	2 ±2	-
Total	100	100	100

(a) Results include diversion from bus, car and train and from EWA.

- nil or rounded to zero

Notes: The confidence limits (95 per cent) were based on the uncorrected normal approximation.
Figures may not all add to totals due to rounding.

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

traveller was essentially the same. From the slopes of the response curves at the origin it was deduced that the price elasticities of demand for business travel and non-business travel were -1.1 ± 0.3 and -3.2 ± 0.6 respectively. The bounds on these elasticity estimates refer to 95 per cent confidence limits.

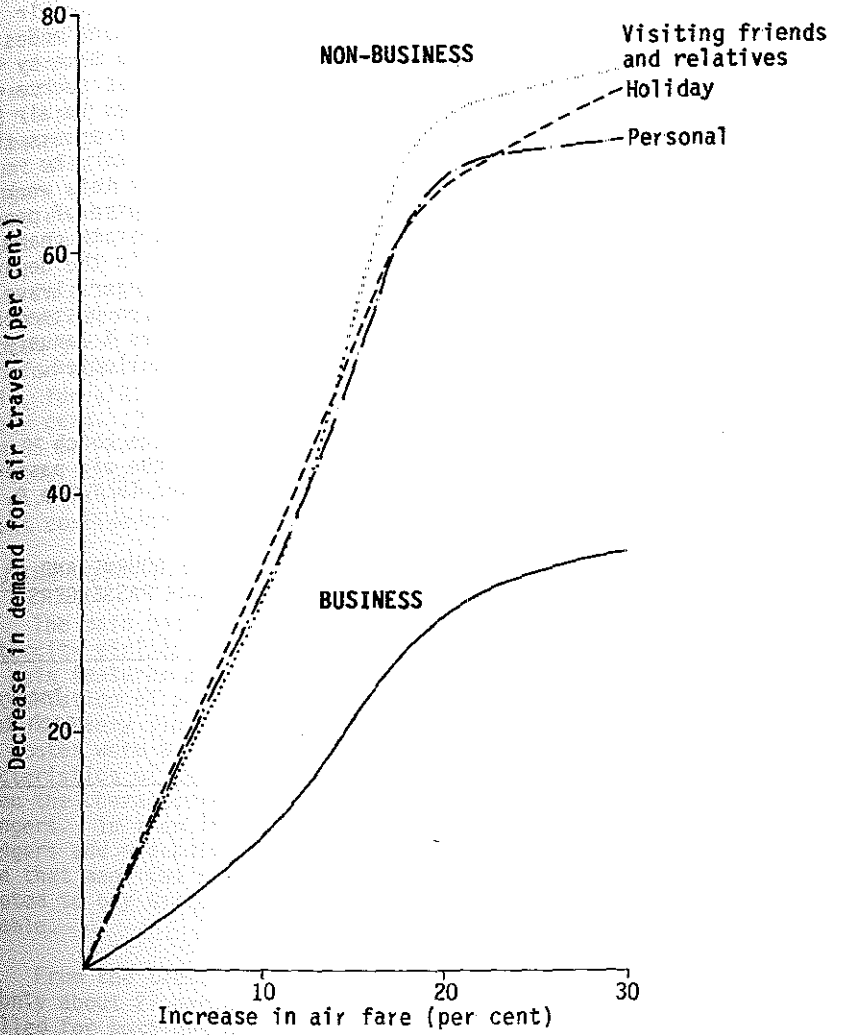
Disaggregating the results by fare type established that first class travellers were less responsive to fare increases than full economy passengers, who in turn were less responsive than discount fare passengers. The price elasticities of demand for first class, economy and discount fare travel were estimated to be -0.6±0.4, -1.3±0.2 and -4.2±0.5 respectively. Again the bounds are the 95 per cent confidence limits.

The relativities between the results may be more accurate than the absolute values as there is an unavoidable bias in any question about an individual's response to a price increase.

LATENT DEMAND FOR AIR TRAVEL

Survey of Interstate Coach Passengers

It appears that little, if any, market research has been undertaken in Australia to assess the latent demand for air travel on the domestic trunk



Note: The raw data have been weighted for the partonage of each airline

Source: BTE survey of passengers at Kingsford-Smith airport, November 1983.

Figure 2-The effect of increasing air fares on demand for different purposes of travel on the Sydney-Melbourne and Sydney-Brisbane routes

route network. There are two sources of latent demand for domestic air travel, passenger trips which are presently made by land transport modes and trips people would like to make by air, but are not prepared to make by land modes. In terms of the definitions used in this work, the first source of latent demand corresponds to diversion from land transport modes to air and the second source refers to passenger stimulation. In order to assess the potential for passenger stimulation it would probably be necessary to undertake some form of household survey. This was not done in this work because of resource constraints. In order to assess the response of people travelling by land transport modes, a limited survey of interstate coach passengers was undertaken in conjunction with Ansett Pioneer in the departure lounge of the Canberra terminal. Emphasis was given to passengers travelling between Canberra and Melbourne, but some data were collected on passengers travelling on other routes. The survey was undertaken between 5 January and 10 February 1984 and in all 450 usable questionnaires were collected.

Passenger characteristics

In many respects the characteristics of the interstate coach passengers were very different from the characteristics of the air passengers described previously and the main differences are summarised in Table 9.

TABLE 9-SUMMARY OF THE MAJOR DIFFERENCES BETWEEN SYDNEY/MELBOURNE AND SYDNEY/BRISBANE AIR PASSENGERS AND INTERSTATE COACH PASSENGERS

Passenger characteristic	Sydney/Melbourne and Sydney/Brisbane air travel	Interstate coach travel
Purpose of travel		
business/non-business	78/22	3/97
Sex		
male/female	79/21	39/61
Age		
<30 years/>30 years	17/83	50/50
Household income		
<$650 per week/>$650 per week	52/48	87/13
Trip duration		
<1 week/>1 week	83/17	38/62

Sources: BTE survey of passengers at Kingsford-Smith airport, November 1983.
BTE survey of Ansett Pioneer passengers, Canberra, January/February 1984.

Coach passenger's response

Coach passengers were asked why they had not travelled by air: about 78 per cent of all passengers had travelled by coach because of the 'price of air travel'. The only other two significant factors were a dislike of air travel (6 per cent) and a desire to see the countryside (11 per cent of all coach passengers). Only about 10 per cent of passengers had tried to book a discount air fare for their journey. The other 90 per cent of coach passengers were clearly not prepared to pay the difference between the coach fare and even the cheapest air fare or were unaware of the existence of some discount fares.

In a separate question, coach passengers were asked how much more they would have been prepared to pay to travel by air. An analysis of the responses given by Canberra/Melbourne passengers yielded a cross elasticity of demand for coach travel with respect to the price of air travel of 0.7±0.2: that is, for a 10 per cent decrease in air fares, coach travel would decrease by 7 per cent. The results of the other routes included in the survey fell within 95 per cent confidence limits of the Canberra/Melbourne results. The price elasticity of demand for Canberra/Melbourne coach travel was estimated to be -1.1±0.3[1]. Again the results for the other routes fell within the 95 per cent confidence limits associated with the Canberra/Melbourne data.

CONCLUDING REMARKS

The main sources of data for this study were a series of three surveys of intercity airline passengers and a survey of interstate coach passengers. Three main features emerged from the air passenger survey data. The characteristics of passengers on the Sydney/Melbourne and Sydney/Brisbane routes were very similar: the characteristics of AAA and TAA passengers on these routes were basically the same but very different from the characteristics of EWA passengers; only small differences were observed between the characteristics of AAA and TAA discount fare passengers and EWA passengers. In view of the similarity of the characteristics of EWA passengers and discount fare passengers travelling with AAA and TAA, it can be argued that many EWA passengers who were diverted from AAA and TAA would have attempted to buy discount fare tickets if EWA excursion fares had not been available.

From the travel frequency data collected with the surveys it was found that only about 27 per cent of passenger trips were made by passengers who travelled for both business and non-business reasons in the same year, indicating that to a large extent the markets for business and non-business travel were independent. The average numbers of business and non-business return trips per annum were found to be 7.3 and 1.3 respectively. By extrapolating the data for the Sydney/Melbourne and Sydney/Brisbane routes to the total network, it was estimated that about 60 per cent of trips on the trunk network are undertaken by about 0.5 per cent of the national population.

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1. In any interpretation of the coach elasticity data it must be remembered that at the time of the survey some coach operators offered lower fares than Ansett Pioneer. Thus Ansett Pioneer passengers may have been less price sensitive than average.

The latent demand for trunk route air travel from interstate coach passengers was studied by means of a survey of coach passengers travelling on routes through Canberra. It was found that about 20 per cent of interstate coach passengers chose to travel by coach for non-price reasons, which included a dislike of air travel and a desire to see the countryside. Large decreases in the differences between coach and air fares would have been required to induce the other 80 per cent of coach travellers to travel by air.

Large differences were observed between the attitudes of business and non-business travellers to air fare increases: the survey results indicated that the price elasticities of demand for business and non-business travel were -1.1 ± 0.3 and -3.2 ± 0.6 respectively. The price elasticities of demand (and 95 per cent confidence limits) for first class, economy and discount fare travel were estimated to be -0.6 ± 0.4, -1.3 ± 0.2 and -4.2 ± 0.5 respectively. The absolute values of these elasticity estimates may be too high because of the tendency of survey respondents to overestimate their negative response to a price increase.

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