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ABSTRACT: *The paper examines the response in South Australia to a recent change in the operating environment of the airline industry. The change was signified by the Commonwealth granting ANR 203 exemptions for commuter operations on routes operated by Airlines of South Australia (ASA). Because South Australia has chosen not to regulate air services, commuter operators have been free to compete with ASA. The paper examines the consequences. Particular attention is given to changes in flight frequency, fare structures, market shares and operating strategies. An attempt is made also to assess the viability of the resulting market. It is concluded that the response has been consistent with the theory of contestable markets.*

INTRODUCTION

Civil aviation in Australia is regulated by the Commonwealth under powers initially conceded to it by the States in the Air Navigation Act of 1920. In addition, in four States (NSW, Queensland, Western Australia and Tasmania) and the Northern Territory, legislation exists which enables these States and Territory to impose regulation on aviation activities. In these cases the opportunities to impose economic, as opposed to safety, regulation is unequivocal. Commonwealth powers on the other hand are less clear. There is a presumption that the 1920 legislation intended to give the Commonwealth powers only with respect to air safety matters. In practice the Commonwealth has imposed a degree of economic regulation also, not only with respect to the major trunk routes but equally in the context of local air services. Indeed, until November, 1981, fares of regular public transport (RPT) services were subject to Ministerial approval (under air navigation regulation (ANR) 106) on the grounds of whether they were "fair and reasonable".¹

In spite of this, the Domestic Air Transport Policy Review (1979) concluded that the powers of the Commonwealth to impose economic regulation were limited constitutionally to regulation of services within Territories or between Territories and States. It added: "Economic regulation of interstate services is invalid under Section 92 of the Constitution and the Commonwealth can license intrastate services with regard to matters concerned with the safety, regularity and efficiency of air navigation and to no other matters" (para. 3.5.3, p. 174, VI). The review also concluded that freedom of entry and exit by operators providing local commuter air services was desirable in the public interest, "since it fosters economic efficiency, through competition and flexibility in the supply of specific services" (para 5.4.7, p. 192, VI).

These conclusions appeared to produce two significant developments. The first was that following the Review, the Commonwealth decided not to hinder the "orderly development of competition by regional airlines and commuter operators" (BTE, 1981, p. 113). This apparent change of policy was manifest in a greater willingness to grant those commuter operators holding charter licences, an exemption from the necessity of obtaining an airline licence. These exemptions were granted under Air Navigation Order (ANR) 203(1) and the effect of this different set of operating requirements, as Kirby (1981) points out, was to reduce the costs of operation. As a result, applications to operate exempted services grew rapidly after the first were authorised in 1967. Nevertheless, until 1979, the Department of Civil Aviation and later Transport, was generally circumspect in the issue of exemptions especially on routes where existing operators held airline licences.

¹ Approval of air fares is now the responsibility of the Independent Air Fares Committee set up by the Commonwealth under the Independent Air Fares Committee Act 1981. These powers to approve, derive from the Commonwealth's constitutional corporate affairs powers.

The second development followed from the Review's recommendation that a new class of Supplementary Airline Licence be introduced to cover commuter operators. The intention was that the new Supplementary Airline Licence would afford formal recognition to the commuter aviation sector and avoid the need to seek exemptions under ANR 203. The Government subsequently adopted this recommendation. New licensing arrangements took effect from 1 February, 1983 and were paralleled by introduction of revised operating standards for commuter operators.² The more significant of these were that aircraft licenced to carry 10 or more passengers would require a co-pilot and those licenced to operate with 20 passengers or more would require a flight attendant.

The change of attitude following the Domestic Air Transport Policy Review was reflected in South Australian developments. Until 1979, Airlines of South Australia (ASA), an operating division of Ansett Transport Industries Ltd., had operated regional airline services for the most part on an exclusive basis.³ During that year, however, the Department of Transport issued exemptions under ANR 203 for commuters to operate largely unrestricted services over four of ASA's five routes.⁴ With South Australia having no regulatory framework of its own there was, as a consequence, the potential for a marked increase in competition within the State's aviation market.

The next section reviews this change in the competitive environment, and places it in an Australia-wide context. This is followed by a case study of recent developments along a specific route between Adelaide and Port Lincoln/Ceduna. A third section considers the implications of these developments for a viable regional air transport industry.

NATIONAL AND STATE DEVELOPMENTS

One outstanding feature of Australian aviation during the last decade has been the growth of activity by commuter operators (Table 1).⁵ National growth rates for 1978, 1979 and 1980 were 24.2 per cent,

² The term commuter will be used in this paper to signify scheduled, publicly available services which, prior to February 1983, were subject to ANR 203 exemptions.

³ In the mid-1970's Central Australian Airways operated 'commuter' services from Adelaide to Mt. Gambier via Naracoorte and Millicent and from Adelaide to Ceduna by intermediate centres. Williams Aviation also operated direct between Adelaide and Ceduna. ASA service Mt. Gambier direct and Ceduna via Port Lincoln.

⁴ The exception was the interstate service to Broken Hill where ANR 203 exemptions were granted on a more restricted basis. A degree of ambivalence in the operation of the policy relating to intrastate routes should also be noted. Commuters were still required to submit fares and schedules for 'approval' and since 1979 there has been a case of a fare proposal (for Minlaton) being rejected.

⁵ For an analysis of Australian commuter operations extant in 1979 see BTE (1980), pp. 102-112.

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TABLE 1

Regional Airline Plus Commuter Activity - Australia 1977-1981

	Commuter PAX ('000)	% Change p.a.	Regional Airlines PAX ¹ ('000)	% Change p.a.
1977	439	-	1,417	-
1978	545	24.2	1,558	10.0
1979	660	21.0	1,594	2.3
1980	740	12.2	1,575	-1.2
1981	836	12.9	1,484	-5.7

¹ Excludes TAA's regional routes. In 1981 these accounted for approximately a quarter of a million passengers.

21.0 per cent and 12.2 per cent respectively while in 1981 the increase was 12.9 per cent. In S.A., Adelaide is the focal point of similar activity (see Figure 1) and Table 2 shows the growth in commuter passengers through Adelaide airport. Based on these Adelaide statistics the S.A. trend appears to have run counter, in recent years, to the national trend. 1977 saw a decrease in activity followed by a comparatively small increase in 1978, but very large increases in both 1979 and 1980. The 1981 increase was moderate but still well above the national average.

Table 2 also shows the change in ASA's patronage during the corresponding period. A stagnant market in 1976 was followed by two years of healthy growth and then accelerating decline. This trend was broadly similar to regional airline activity throughout Australia as a whole⁶ except that in S.A. by comparison, the growth was muted and the subsequent decline emphasised.

At this superficial level, therefore, the indications are that the very rapid growth in recent commuter activity was, in South Australia, to an extent, at the expense of the existing regional airline. By 1980 when commuter operators provided for a quarter of the total regional market about two-thirds of their passengers were on ASA routes or close substitutes.

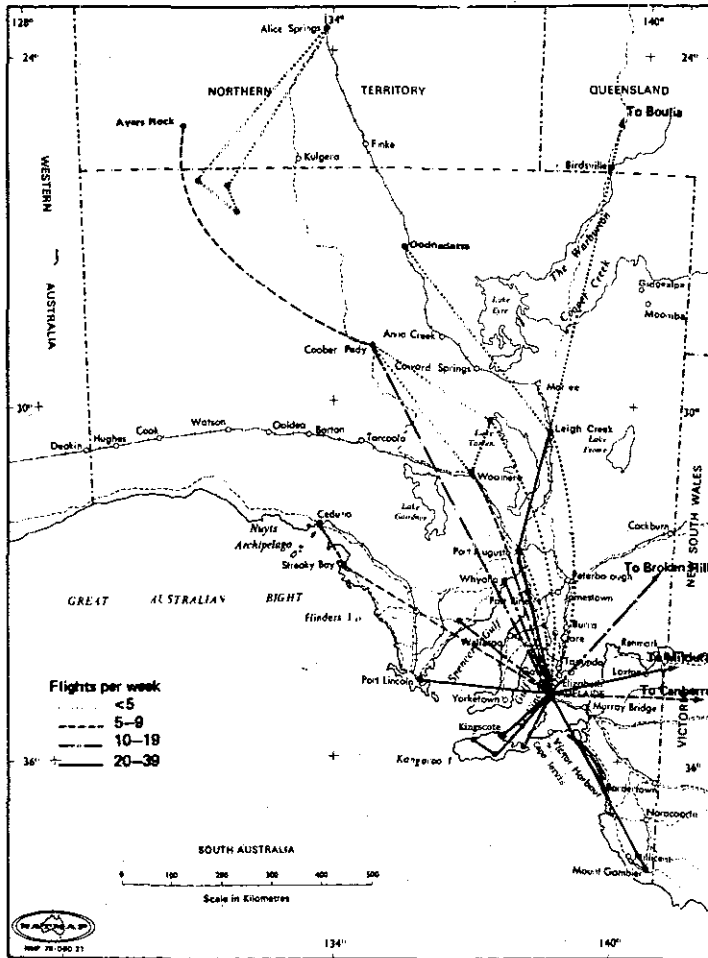
The largest of these ASA routes are to Kangaroo Island and to Port Lincoln/Ceduna. Each of these two routes accounted for about 30 per cent of ASA's patronage.

⁶ This excludes TAA regional airline activities for which separate data was not available.

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FIGURE 1

STAGES FLOWN BY COMMUTER OPERATORS -
SEPTEMBER 1979 - SOUTH AUSTRALIA AND
NORTHERN TERRITORY



SOURCE: B. I. E., (1980)

TABLE 2

Regional Airline Plus Commuter Activity - Adelaide, 1972-1980

1 Year	2 Pax ASA	3 % Change p.a.	4 Pax Commuter	5 % Change p.a.	6 Total Pax	7 4 as % of 6
1972	154,658		9,779		164,437	5.9
1973	182,379	15.2	12,756	40.7	196,135	7.0
1974	200,512	9.0	17,634	28.2	218,146	8.0
1975	207,380	3.3	27,977	58.7	235,357	11.9
1976	207,354	-0.1	36,759	31.4	244,113	15.0
1977	216,010	4.2	34,203	-7.2	250,113	13.6
1978	225,938	4.6	36,912	8.2	262,850	14.0
1979	222,331	-1.6	50,447	36.7	272,778	18.5
1980	212,386	-4.5	71,497	41.7	283,883	25.2
1981	196,116	-7.7	83,978	17.5	280,094	30.0

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Unlike other routes the Kangaroo Island service is dominated by the leisure market and as a consequence experiences severe seasonal fluctuations in traffic. Passenger numbers on the route in the January peak are generally three times those for July. The situation is further complicated during the period of interest by increased competition from surface transport. The regular State shipping service was supplemented by a new ferry service providing two relatively fast daily sailings between Cape Jervis and Kingscote. This increased surface competition, in conjunction with a fixed amount of accommodation on the island, is a probable explanation for the *decline* which occurred during 1981 in total air passengers to Kangaroo Island.

Although there is on the Port Lincoln/Ceduna route, too, a marked seasonal traffic pattern it is much less severe than in the Kangaroo Island case. Moreover, competition from ship and coach remained fundamentally unaltered during the 1979-81 period. There was a large increase in petrol prices at the beginning of the period but with a driving distance of over 700 kilometers the air-car cross elasticities are probably very small. Also the competitive structure between air operators on the Port Lincoln route is more akin to that on the other major State route to Whyalla. Consequently, we have chosen to analyse in detail the Port Lincoln/Ceduna route.

In the next section we consider first, the route operating structure, second, changes in fare structures, third, changes in the timing and frequency of service, and finally, the market response.

PORT LINCOLN ROUTE: CASE STUDY

On the Adelaide-Port Lincoln route two commuter operators provide services. Commodore Aviation Ltd., commenced service in 1979 and Rossair Pty. Ltd., in February, 1981. Commodore currently operates 3 Cessna 402 and one Piper. (They also provide regular public transport (RPT) services to Whyalla). Of the services operated to Port Lincoln, one a day stops if required at Minlaton (Yorke Peninsula). The Minlaton stop adds 15 minutes to the travel time between Adelaide and Port Lincoln. Passengers for Minlaton, are included in the Port Lincoln figures. Advice from D of A indicates the numbers are trivial.

Rossair Pty. Ltd., operate in conjunction with ASA. The fares for the two operators are the same and from May, 1981 Rossair services appeared on the ASA timetable. The Rossair services, using Cessna 402 aircraft are scheduled at times to complement the ASA F27 services. Rossair cooperates with ASA in a similar manner on the Mount Gambier and Whyalla routes (the latter in competition with Commodore) and on the service extensions to Ceduna on the west coast of the Eyre Peninsula.

Fares

The changes in fares on the Port Lincoln - Adelaide route are summarized in Table 3.

At the start of the period under review the Commodore fare was greater than the ASA fare but, from March 1980, ASA's fare has been higher. The highest differential was in February, 1982, the last month in the period. Commodore has not increased its fares since February, 1981.

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TABLE 3

Adelaide-Port Lincoln Fares (\$)

<u>Date:</u>	<u>ASA</u>		<u>Commodore</u>		<u>Rossair</u>
	<u>Adult Single Fare</u>	<u>Discounts</u>	<u>Adult Single Fare</u>	<u>Discounts</u>	<u>Adult Single Fare</u>
Nov. '79	32.80		33.00	60.00 same day return	
Dec. '79				60.00 return	
Mar. '80	36.00	15% return for designated off- peak flights (10 per week)		40.00 return - limited offer	
June '80	37.90				
Sept. '80			35.00	65.00 return <u>Excom</u> 55.00 return	
Nov. '80	39.90				
Feb. '81			37.50	70.00 return <u>Excom</u> 60.00 return & 32.50 single	39.90
Mar. '81					42.80
May '81	42.80	14 off peak flights per week			
Aug. '81	45.00				45.00
Feb. '82	48.00	Off-peak discount discontinued, APEX 30% introduced			48.00

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Commodore was the first to introduce promotional fares. In November, 1979 a same day return of \$60 (a 10% discount) was available and in December that fare was extended to all return flights. ASA responded in March, 1980 by designating 10 flights/week as off-peak and offering a return fare at a 15% discount.

Commodore offered a \$40 return fare (a 40% discount) on special flights from March, 1980. This was a limited offer but the period of the offer is not known. In September, 1980 Commodore offered an 'Excom' fare at 22% discount on return flights. The Excom fare is an advance purchase fare with a 7 day pre-paid time limit. ASA did not respond to this initiative until March, 1982 when it introduced an APEX fare with 30 day booking and 14 day payment periods and a 30% discount. In the interim ASA continued offering off-peak return fares and increased the number of designated off-peak flights to 14 per week in May, 1981.

Rossair's flights were timetabled to fill gaps in ASA's services and fares were the same from 5 months after Rossair commenced operation. The APEX fare which only applies to a certain number of seats on each flight is not available on the Rossair services on which Cessnas are flown.

During the period under consideration, ASA's adult single fare has increased almost 18% in real terms, approximately 8% p.a. Commodore's standard fare, however, has decreased in real terms by about 3% p.a. This adult single fare has not been adjusted since February, 1981 when Rossair commenced operation.

In summary, Commodore appear to have been the leaders in innovating with fares, although at the end of the period ASA were offering higher discounts (albeit with tougher restrictions). ASA's single fares in general were much higher than Commodore's.

Timetables

Timetables have been analysed at five points in time:

- September, 1978 before commuter services started;
- November, 1979 when Commodore data became available;
- December, 1980 when both ASA and Commodore had made adjustments to timetables;
- May, 1981 when Rossair services appeared on ASA's timetable; and
- February, 1982.

In September, 1978 prior to services being provided by Commodore, ASA provided 40 services/week between Adelaide and Port Lincoln, 20 in each direction. On weekdays it was possible for Adelaide residents to make a day return trip to Port Lincoln each day. For Port Lincoln residents, day return trips were only possible on three days (Monday, Tuesday and Friday).

Table 4 gives the frequency per week by operator⁷ for the five

⁷ Rossair services are considered to be part of the ASA services. Although Rossair operated in conjunction with ASA from the start, it only appeared on ASA timetables from May, 1981.

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TABLE 4

Flights Per Week by Operator

<u>Date</u>	<u>ASA</u>	<u>Commodore</u>	<u>Total</u>
Sept. '78	40	-	40
Nov. '79	40	42	82
Dec. '80	38	57	95
May '81	42(4)(1)	68	110
Feb. '82	52(14)(1)	68	120

(1) Rossair flights in parenthesis.

TABLE 5

Port Lincoln - Adelaide Tuesday Flights(1)

<u>Time</u>	<u>Date</u>				
	Sept. '78	Nov. '79	Dec. '80	May '81	Feb. '82
0600-0659					
0700-0759		C	C	C	A*C
0800-0859	A	A	A	A	A
0900-0959		C	C	C	C
1000-1059					
1100-1159					
1200-1259	A	A	C	C	C
1400-1459					
1300-1359					
1500-1559					
1600-1659			A	AC	AC
1700-1759		C	C	C	C
1800-1859	A				
1900-1959		A	A	A	A

(1) C = Commodore
 A = ASA
 A* = Rossair

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points in time listed above. Since September, 1978 the number of flights per week has increased from 40 to 120. The ASA flights dropped in December, 1980 from 40 to 38 but in May, 1981 Rossair flights increased frequency to 42 and in February, 1982 to 52. It should be noted however, that there are only 38 F27 flights compared to 40 before Commodore commenced operation.

Commodore commenced operation with 42 flights/week and currently offers 68. The increase came in two steps, 57 by December, 1980 and 68 by May, 1981. In terms of capacity ASA seats offered have decreased 400-500 per month while Commodore offered approximately 1,600 seats per month and Rossair 400.

It requires an examination of departure times to determine whether the increased number of flights has improved the level of service i.e., it is possible, of course, that Commodore could have simply adopted parallel scheduling with ASA. However, this was not the case. To demonstrate the effect of competition on departure times a reasonably representative day, Tuesday, is chosen. Monday, Tuesday and Thursday all have similar timetables, Sunday and Friday have extra flights for weekend trips, while Wednesday appears to be the least active day. The results are given in Table 5.

Commodore commenced operation by scheduling flights around ASA's e.g., 7.30 a.m. and 9.00 a.m. opposed to 8.25 a.m. by ASA. The early departure from Port Lincoln was obviously popular as Rossair now also provide a flight at 7.20 a.m. ASA dropped their lunch time departure and this time slot was taken up by Commodore (December, 1980). By May, 1981 Commodore had introduced a light aircraft in the 4.00 - 5.00 p.m. slot after ASA had moved there approximately 6 months earlier.

There seems to be no evidence of parallel scheduling: in September, 1978 services were offered between 8.25 a.m. and 4.10 p.m. with an average interval between flights of almost 4 hours, and by February, 1982 services were offered between 7.20 a.m. and 7.10 p.m. with an average interval between flights of 1 hour 20 minutes. There were however intervals in the middle of the day of 3 1/2 hours and 2 1/2 hours: based on the changes in the timetables it seems that this is simply because there is little demand at these times.

Table 6 presents similar data for Adelaide - Port Lincoln. The same general conclusions can be drawn. There appears to be a reasonable coverage of the day by both airlines with some concentration at the beginning and end of the day.

The final measure of improved service examined is the number of day return trips possible on weekdays. The data for Port Lincoln - Adelaide, and Adelaide - Port Lincoln is presented in Tables 7 and 8 respectively. The number of day return trips has increased markedly in both directions, but more so for Port Lincoln - Adelaide because of the Rossair services.

In summary as a result of competition, frequency has increased, there is a better coverage of departure times throughout the day, and Port Lincoln residents in particular can now more easily make day return trips to Adelaide.

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TABLE 6

Adelaide - Port Lincoln Tuesday Flights⁽¹⁾

<u>Time</u>	<u>Date</u>				
	Sept. '78	Nov. '79	Dec. '80	May '81	Feb. '82
0600-0659					
0700-0759	A	AC	AC	AC	AC
0800-0859					
0900-0959		C	C	C	C
1000-1059					
1100-1159	A	A			
1200-1259					
1300-1359					
1400-1459					
1500-1559			AC	ACC	ACC
1600-1659					
1700-1759	A				
1800-1859		A	A	A	AA*
1900-1959		C	C	C	C

- (1)
 C = Commodore
 A = ASA
 A* = Rossair

TABLE 7

Day Return Trips Per Week: Port Lincoln - Adelaide (Weekdays Only)

<u>Date</u>	<u>Operator</u>		<u>Total</u>
	<u>ASA</u>	<u>Commodore</u>	
Sept. '78	3	-	3
Nov. '79	3	5(1)	8
Dec. '80	3	10	13
May '81	3	10	13
Feb. '82	7(4)(2)	10	17

- (1) 2 departure times possible 7 a.m. and 9 a.m.
 (2) 4 by Rossair

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TABLE 8

Day Return Trips Per Week: Adelaide - Port Lincoln (Weekdays Only)

<u>Date</u>	<u>Operator</u>		<u>Total</u>
	<u>ASA</u>	<u>Commodore</u>	
Sept. '78	5	-	5
Nov. '79	4	5(1)	10
Dec. '80	4	5(1)	10
May '81	4	10	14
Feb. '82	4	10	14

(1) 2 departure times possible 7.30 a.m. and 9.00 a.m.

The collaboration between ASA and Rossair may indicate predatory competition although this is not borne out by the fare policy of ASA and Rossair. The Rossair weekday flights have been scheduled close to the Commodore 7.30 a.m. flight which is one that provides a day return for Port Lincoln residents.

Market Structure

One noticeable distinction between ASA and commuter patronage is that the former exhibits a more pronounced and varied seasonal pattern. January, May and October are months of high demand for ASA's services in contrast to much lower levels of demand in June, July and November. Commuter patronage, on the other hand, shows a more moderate increase during the summer months.

In terms of total patronage, numbers stagnated between 1978 and 1979 prior to the entry of the commuters. In 1980 there was a modest growth over the preceding year. This growth was repeated again in 1981 when the annual increase was 3.0 per cent (See Table 9). However, within these totals there were considerable shifts in market shares. Over the two years, passengers embarking on ASA services fell by nearly 20 per cent. During 1980 commuters held 15 per cent of the market, a share which was to increase to almost one-quarter in 1981.

COMMERCIAL VIABILITY

A conclusion we draw from the preceding analysis is that commuter operators are capturing a large share of the market at the expense of the established regional operator, ASA. Increased competition does not appear to have generated a significant increase in the total travel market (although in the generally depressed economic circumstances it may have forestalled a stagnant or declining market). In these circumstances one might expect a growth of excess capacity with

TABLE 9

Port Lincoln/Ceduna Passengers

<u>Operator</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>% Change 79-81</u>
<i>Cyril Pennington</i> ASA	71,590	71,712	63,513	59,064	-17.6
Commodore	-	1,566	11,158	16,714	-
Rossair(1)	-	-	-	1,119	2377
Commuter(2)	-	1,566	11,158	17,833	20175
Total(3)	71,590	73,278	74,671	76,897	4.9
			(+1.9%)	(+3.0%)	

79000 81/82: 85000

- (1) Commenced operation February 1981, Ceduna passengers excluded.
 (2) Commodore & Rossair *+ EML*
 (3) ASA plus, where applicable, commuter

possibly serious consequences for the viability of existing services. We, therefore, turn to consider some pointers in this context.

ASA have seen their patronage fall by 13 per cent since its 1978 peak and, therefore, one might expect this to be reflected in various performance indicators. ASA operate 3 F27⁸ in fixed 44 seat configuration and consequently do not have the opportunity to adjust the type of aircraft used on a particular service to the anticipated loadings. The only option available in the short term is to alter service frequencies. This, in fact, has happened. We noted, for example, that ASA now operate only 38 F27 flights a week to Port Lincoln compared with 40 in 1979. A similar shaving of frequencies has taken place on other routes.

This has enabled ASA to maintain a reasonably high load factor; load factors have fallen less than corresponding falls in patronage (Table 10). In fact within an industry-wide context ASA appears to have done rather well in this respect. In comparison, ANSW (another operating division of Ansett Transport Industries) and East-West Airlines (both airlines operate all - F27 fleets, albeit larger than ASA's) ASA's loadings have been moderately stable. In addition ASA's passenger and combined passenger/freight (weight) loadings have remained consistently higher than those of the independent East-West Airlines.

On the other hand, one would expect this relatively good performance in terms of maintaining loadings to be offset by a deterioration in aircraft utilisation. This has not happened (Table 11). On the contrary a static number of hours per aircraft between 1979 and 1980, was followed by a significantly improved utilisation rate of

⁸ Recently increased to four.

TABLE 10

Load Factors for Selected Airline Operators

	Revenue Passenger Load Factor			Weight Load Factor		
	ASA	ANSW	EW	ASA	ANSW	EW
1981	63.8	65.3	55.8	57.5	63.7	54.8
1980	63.8	64.7	54.9	58.3	63.4	54.3
1979	66.2	72.6	58.9	59.8	74.6	54.7
1978	68.2	60.9	62.6	60.0	77.5	61.7
1977	67.8	64.1	64.5	62.8	74.4	63.9

TABLE 11

Utilisation of F27 Series Aircraft by Australian Airline Operators
(Annual hours flown per aircraft)

	TAA	EW	NA	BPA	AAA	AWA	ANSW	ASA	Industry Average
1981	2317	3038	-	2019	2511	-	3116	2306	2643
1980	2434	3220	1903	2944	1914	1660	3119	2129	2525
1979	2479	2990	557	-	1822	1460	3027	2178	2432
1978	2299	2864	-	-	2015	928	2935	2315	2410
1977	2214	2464	-	-	1976	-	2710	2114	-

Key: TAA, Trans Australian Airlines; EW, East West Airlines; NA, Northern Airlines (formerly Connair); BPA, Bush Pilot Airways; AAA, Ansett Airlines Australia; AWA, Airlines of Western Australia (formerly MMA); ANSW, Air New South Wales; ASA Airlines of South Australia.

the F27's between 1980 and 1981. This improvement reflected, in fact, an increase in charter work, including an important new contract between Adelaide and the Moomba gas fields in the far north of the State.

Of course, a good performance in maintaining the utilisation of the aircraft fleet does not necessarily reflect itself in an equally favourable performance in terms of the return on capital. This depends also on yields from fares and, as we have seen, increased competition from commuter operators resulted in ASA introducing promotional fares. Unfortunately, we do not know the proportion of full fare and promotional tickets sold⁹ so we are unable to calculate average revenues per passenger kilometre. However, we think it is unlikely that average revenues will have deteriorated much, if at all. The number of promotional tickets sold is usually much less than the number of full fare tickets whilst the cost of the latter rose significantly in *real* terms during the 1979-81 period.¹⁰

If ASA have performed fairly well in the more competitive environment of the last 2 or 3 years, how then have the opposition fared?

Commuter operators have set the pace on fares and on the Port Lincoln route and elsewhere, have tended to hold these constant in money terms for long periods. Thus we noted that Commodore has not altered its Port Lincoln fares since February, 1981. Similarly since November, 1979 Albatross, who operate to Kangaroo Island, has increased its fare only once on the Island route. With costs rising, *ceteris paribus*, such behaviour must lead to deteriorating margins.

However, there is one redeeming factor. Generally speaking commuters have enjoyed increasing load factors. The trend for Commodore over the Port Lincoln/Adelaide stage for the period November, 1979 through to March, 1982, was

Intercept		t(month)	Mean
69.6	+	0.23t	72.97

and for Rossair's Port Lincoln/Adelaide service since February, 1981

60.7	+	0.49t	71.49
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and for Albatross on the Kingscote/Adelaide stage from November, 1979 until February 1982

69.1	+	0.62t	78.19
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⁹ Because of this and the short period for which data are available we were unable also to develop successful demand equations. The sole variable statistically significant was flight frequency (flights per week) with an elasticity coefficient of 0.78.

¹⁰ During 1980/81 only 1 per cent of Airlines of W.A. passengers used promotional fares (Dyson and Knox, 1982). The proportion of TAA's revenue from APEX, off peak, standby and related fares in 1979/80 was 23 per cent.

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Increased loadings such as these will have helped to maintain the viability of services in spite of any fall in real fares.

CONCLUSIONS

Detailed examination of the major Adelaide/Port Lincoln route shows that increased competition appears to have produced a number of features beneficial from the air traveller's viewpoint. There has been a large increase in flight frequencies, a better range of departure times and an increase in the number of day return trips possible on week days. Overall, levels of service have improved. Similarly, the extended range of choice with respect to available flights was reflected also in a more diverse structure of fares. Competition appears to have led to the introduction of promotional fares as well as a choice of standard fares and the cheapest fares available have fallen in real terms.

These features apply to an equal, if not greater extent, on the more competitive Kangaroo Island services and are reflected also in developments on the other major route to Whyalla.

What has not emerged, however, is a marked increase in patronage. Over the 1979-81 period the percentage increase in patronage was virtually the same on S.A. regional routes as on similar routes in the nation as a whole. In fact on the most competitive S.A. route, to Kangaroo Island, the total air passenger market decreased. Although this latter result can be accounted for by special factors, one might have expected other routes to have shown a more definite response to the apparent choice now available to potential air travellers.

The conundrum is difficult to explain. There are, nevertheless, a number of possible causes. First, the regional air passenger market in S.A. is small (just over 10 per cent of the national total) and therefore it might have been more susceptible to the down-turn in the economy. Second, regulations in other States might have had little effect so that commuter operators elsewhere may have been able to compete with regional airlines to an extent similar to that in S.A. However this suggestion does not appear to square with the evidence (Dyson and Knox, 1982). A third suggestion is that what we have noted as distinct benefits from increased competition in S.A. may be regarded in a less favourable light by the potential customer. A factor here is that the commuter operators use non-pressurised aircraft which fly at a lower altitude and give a bumpy ride compared with the pressurised F27's operated by ASA; probably there are people who would never board a light plane so that the fares and timetables the commuters offer are irrelevant. If these people cannot meet the conditions of an APEX ticket, they now face fares much higher in real terms than in 1979.

Increased competition in a slowly growing or static market does not appear to have produced any serious consequences thus far for firm viability. Commuter operators in general have experienced falls in real revenues per passenger kilometre but steadily increasing load factors. It remains to be seen whether and to what extent one factor can continue to offset the other as general economic factors deteriorate. ASA, on the other hand, have seen a significant erosion of their market share. However, they appear to have been able to maintain their operating

efficiency by adjusting schedules and by shifting some surplus capacity to the charter market. In the industry as a whole there is no evidence that increased competition has produced serious excesses of capacity.

In conclusion, we note that these developments appear broadly consistent with those one might expect to see in a market newly 'contested'. A recent challenge to the received theory of industrial structures has been propounded by a number of American economists under the label of contestable market theory.¹¹ In essence, a perfectly contestable market is one in which entry is absolutely free and exit is absolutely costless in the sense that capital assets are mobile between uses and therefore resaleable. The significance of this is that firms in such a market are continuously exposed to the threat of competition from potential entrants. Consequently, it is quite feasible for markets to evolve structures that appear imperfect but to produce behaviour fully consistent with the requirements of a first best optimum. In this context it is interesting to note the response of the S.A. airline market since the barriers to entry were eased. The industry has developed a route structure characterised largely by duopoly or oligopoly. But, significantly and in contrast, the model of behaviour that has evolved is more in keeping with that to be expected in a highly competitive domain. Overall, the pattern of response appears consonant with theory.

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¹¹ See in particular Baumol (1982), and Bailey (1981).

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