INDUSTRY
COMMISSION

INTRASTATE AVIATION

REPORT NO. 25
17 JULY 1992

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INDUSTRY COMMISSION

17 April 1992

The Honourable J S Dawkins M P
Treasurer
Parliament House
CANBERRA ACT 2600

Dear Treasurer

In accordance with Section 7 of the *Industry Commission Act 1989,* we submit to you the Commission's report on *Interstate Aviation.*

Yours sincerely

Gary Banks
Presiding Commissioner

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Associate Commission

COMMISSIONER

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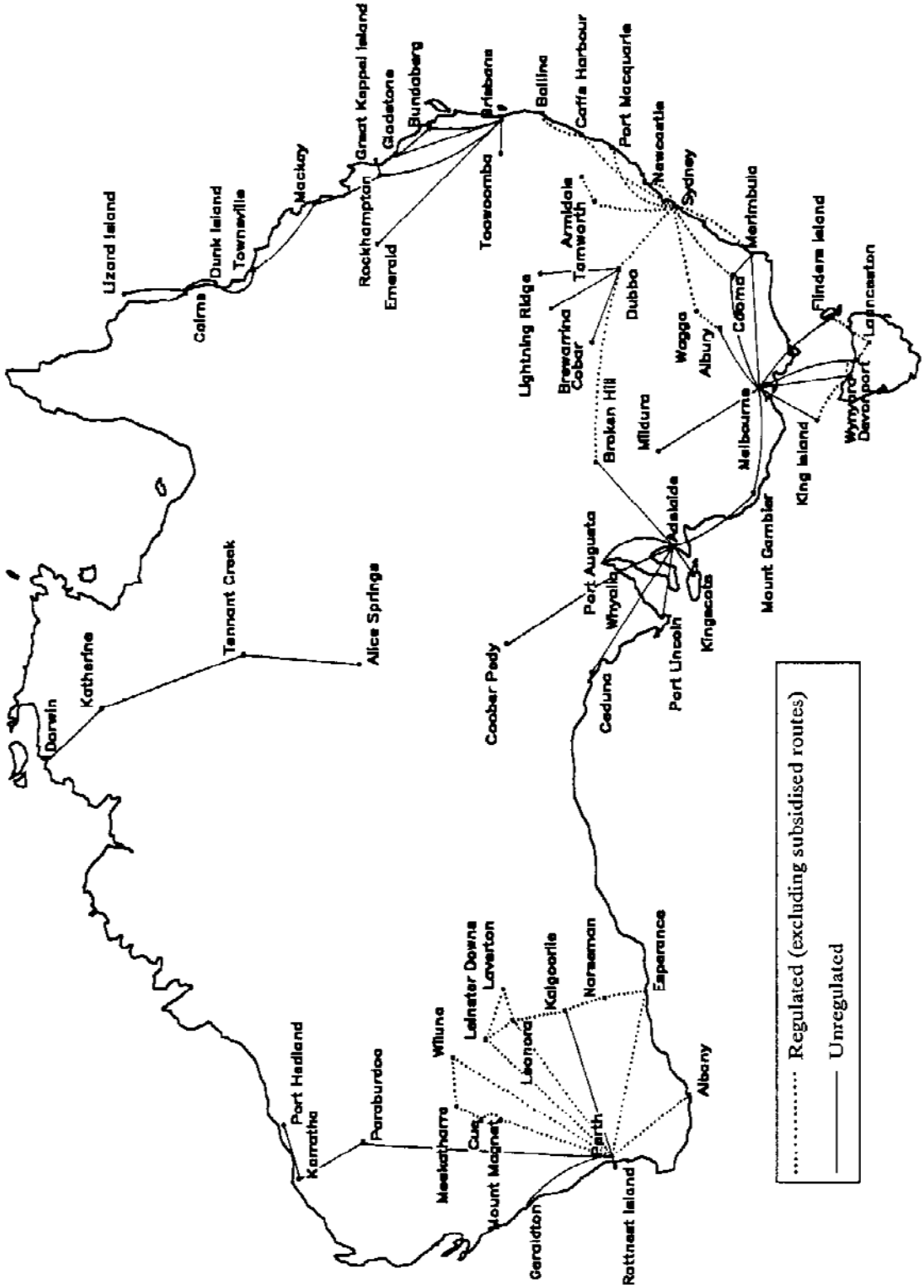
ABBREVIATIONS

ABS	Australian Bureau of Statistics
ALOP	Aerodrome Local Ownership Plan
AMATS	Airspace Management and Air Traffic Services
ANA	Australian National Airways
AOC	Air Operator's Certificate
ASK	Available Seat - Kilometres
BTCE	Bureau of Transport and Communications Economics
CAA	Civil Aviation Authority
CRS	Computer Reservation Systems
CTC	Canadian Transport Commission
DATP	Domestic Air Transport Policy Review
DOTAC	Department of Transport and Communications
DSD	New South Wales Department of State Development
FAC	Federal Airports Corporation
GAIT	General Aviation Infrastructure Tariff
GBE	Government Business Enterprise
GDP	Gross Domestic Product
IAC	Industries Assistance Commission
IAFC	Independent Air Fares Committee
IC	Industry Commission
ICAO	International Civil Aviation Organisation
KSA	Kingsford Smith Airport
MTOW	Maximum Take-Off Weight
PSA	Prices Surveillance Authority
RASS	Rural Air Services Subsidy
RPK	Revenue Passenger - Kilometres
RPT	Regular Public Transport
TAA	Trans Australia Airlines
TAAATS	The Australian Advanced Air Traffic System
TPA	Trade Practices Act
TPC	Trade Practices Commission

MAP OF SELECTED AIRLINE ROUTES



OVERVIEW

Intrastate aviation encompasses airline and general aviation activities within a state or territory. Airline operations involve regular scheduled flights, primarily for transporting passengers and freight. General aviation covers a wide range of other activities, including aerial spraying, survey and photographic work, pilot training and charter operations.

Of the many hundreds of general aviation operators, most are small businesses with only a few aircraft. Although charter work and some operations near state or territory borders can involve interstate flights, most general aviation occurs within state or territory boundaries.

In contrast to general aviation, there are relatively few operators engaged in airline services. Most operators providing airline services to small communities are themselves small, whereas intrastate services linking regional centres to capital cities tend to be provided by larger businesses, some of which conduct operations in a number of states. In Queensland, major intrastate routes are serviced by the nation's major domestic airlines.

Importance of efficient performance

Intrastate airline services form an integral part of Australia's transport network. In many regions, they supplement services provided by road, rail and, in some instances, coastal shipping. However, in some remote areas, intrastate air services provide the only practicable means of transporting inhabitants, tourists, food, medical supplies and other goods. Similarly, general aviation operators provide services on which many rural communities are heavily reliant, such as crop dusting and medical services.

Given their important role in Australia's transport system, it is imperative that intrastate aviation services are provided efficiently. If they are not, segments of the community may be disadvantaged and the overall performance of the economy impaired.

In the Commission's view, the intrastate aviation sector is currently not performing to its full potential. Its present performance and future development is being hampered by a number of factors which are subject to the control of governments in Australia. The most significant of these is 'economic' regulation which continues to apply to intrastate airline operations in a number of states. This encompasses restrictions on entry to (and exit from) the industry, as well as regulations specifying conditions of service, such as fares, schedules, routes and even aircraft type. *The Commission considers that all economic regulation should be dismantled.*

The performance of intrastate aviation is also affected by the efficiency of providers of airport infrastructure and safety and air navigation services. These services also affect the performance of interstate and international aviation.

Regulation by state and territory governments

Since the 1920s, intrastate aviation has been subject to extensive Commonwealth regulation and, in most parts of Australia, regulation imposed by state and territory governments. Although regulation has predominantly focussed on the activities of airline operators, this in itself has required the regulation of some general aviation activities (for example, to prevent charter flights from eroding traditional airline markets).

Following the Commonwealth's decision to assess applications for licences to operate on commuter routes on safety grounds only, regulation of most other areas of intrastate aviation has been in the hands of state and territory governments since 1979.

In subsequent years, most governments followed the lead of the Commonwealth and relaxed or withdrew regulation. Today, intrastate aviation in Victoria, South Australia and the Territories is no longer subject to state or territory regulation. Minimal regulation remains in Queensland, while in Western Australia only the relatively small non-jet network is regulated. The New South Wales Government has announced that entry to most routes will continue to be restricted, but that an additional operator will be permitted on some major routes. Licence conditions will continue to specify the standard of service on some regulated routes. In Tasmania, intrastate aviation continues to be subject to extensive regulation: scheduled intrastate airline services are currently provided by a licensed monopolist - Airlines of Tasmania. Licences are also required for all other commercial intrastate aviation activity, such as agricultural spraying, charter work and freight services.

The underlying rationale for the economic regulation of intrastate aviation has not always been clearly enunciated. Over the years, it has been perceived as serving a range of objectives, including: maintaining 'essential' services to rural communities; improving the quality of services; providing services at 'affordable' prices; and increasing the stability of regional air services.

Over the past decade or so there have been significant developments in transport and communications as new technology has been developed and as our economy has grown. For example, extensions and improvements to the road network and in the range and quality of coach services have provided many communities which formerly relied on intrastate air services with relatively inexpensive alternatives. Consequently, some of the objectives underlying regulation of intrastate aviation are now less relevant.

Nonetheless, some sectors of the community continue to benefit from regulation. For example, regulation may help to ensure that services are maintained on some unprofitable 'thin' routes and,

in some regions, it may provide a degree of stability. However, any benefits which result from regulation need to be weighed against the costs.

Costs of regulation

The potential for costs derives mainly from the suppression of competition which underpins the regulatory framework. The licensing provisions have in most instances given licence holders sole rights to provide air services over a particular route or network. This insulates licensed operators from competition and reduces market incentives and disciplines to keep costs and prices to a minimum. It also mutes pressures to adapt to changing market conditions and to provide air services which best suit the characteristics of the different aviation markets.

The practice of licensing two operators on some major routes - as occurs in New South Wales - has the potential to create some competitive pressures. However, the experience of the two-airline policy in interstate aviation suggests that the prospects of achieving meaningful competition with a regulated duopoly are small.

State regulations have generally required licence holders to provide a specified minimum frequency of service on designated routes, or specified levels of service (involving, for example, the use of large or even jet aircraft), which would normally be uneconomic to provide. This has involved 'cross-subsidisation': in the absence of competition, higher than normal profits can be made on some routes to support the provision of 'subsidised' services on lightly trafficked routes. In effect, the pattern of charges and services is distorted from that which reflects the underlying economic characteristics and potential of the aviation market. In the longer term, this may be compounded by investment decisions which divert scarce capital to less productive uses (such as aviation infrastructure which is dependent on subsidisation).

The effect of deregulation on fare levels and the characteristics of air services cannot be predicted with any accuracy. However, analysis undertaken by the Commission - as well as independent studies and the majority of information submitted by participants - suggests that fares are likely to fall if free entry is permitted. Similarly, experience both in Australia and overseas suggests that air services will in most cases better reflect users' preferences if they are not constrained by regulation. It also suggests that many regions currently served by regulated carriers are forgoing the growth in traffic and associated tourist activity which has frequently accompanied deregulation elsewhere.

Deregulation

The Commission recognises that the circumstances of each state which regulates intrastate air services vary. Nonetheless, it considers that in most cases concerns about existing services being terminated or failing to meet users' requirements - concerns which underlie continuing regulation - are misplaced. Australian and overseas experience suggests that thin routes will generally continue

to be serviced following deregulation. Although smaller aircraft may be employed, associated increases in the frequency of service are commonly regarded as improvements in the quality of service.

Accordingly, the Commission's assessment is that the costs of continuing to regulate intrastate air services outweigh the benefits. It recommends that all state and territory government regulation of intrastate aviation activity be abolished.

In many instances, the removal of regulatory barriers to entry will result in direct competition on routes formerly licensed to a sole operator. This would increase pressures for efficient operation, and provide strong incentives for airline operators to be responsive to users' needs and to utilise opportunities to promote innovative fare packages. Some routes are too small to sustain more than one operator. However, as long as there is the potential for competition from a new entrant (that is, routes are 'contestable'), sole operators face strong incentives to operate efficiently.

The Commission recognises that the removal of the regulatory framework, and its scope for cross-subsidisation, could result in air services to some small communities being discontinued. Where these services are judged to be essential, they should be provided for by means of direct government subsidies. This form of support would avoid the adverse effects which accompany restrictions on competition. Similarly, concerns about airport congestion that could arise from deregulation of intrastate aviation would, in the short term, be more efficiently addressed directly, using measures which apply to all airport users, not just intrastate aviation operators.

Provision and operations of airports

With a few exceptions, Australian airports are government owned. The major airports are owned and operated by the Federal Airports Corporation (FAC). Some of the remainder are owned and operated by the Commonwealth Government, but the majority are the responsibility of local authorities.

If airport services are not efficiently provided or are priced inappropriately, the economic performance of intrastate aviation operators will be impaired, as will the performance of international and interstate operators. However, there is a limited basis for assessing airport performance. As almost all airports are government owned, they are not subject to market disciplines (such as threat of takeover or insolvency) that encourage efficient management of most commercial ventures. Moreover, geographical separation limits the scope for competition between airports, and alternative transport modes. In those instances where competition between airports may be possible (say between Tullamarine and Essendon airports), common ownership militates against competition. Consequently, airport owners enjoy considerable flexibility in setting prices and determining how airports operate.

Commercial requirements

The Commission believes that it is in the community's interest that airports be run on a commercial basis. The creation of the FAC and measures to transfer ownership and responsibility for the operations of other airports to local authorities should facilitate the achievement of this objective.

As with other commercial organisations, publicly owned airports should be required to earn a real rate of return on assets and pay a dividend. The rate of return - which should be set before interest and tax - should apply only to assets required for airports to perform their functions efficiently. Because of the lumpiness of airport investments and fluctuations in demand conditions, airport managers should be required to achieve the rate of return target on average over a number of years, rather than to achieve it each year.

If a rate of return target is to be an effective indicator of performance, airport assets - and in particular airport land - must be valued appropriately. The assessed value of airport assets should reflect the greater of either the assets' current use or the highest valued alternative use (less any development costs and an allowance for risk).

A rate of return target on its own may do little, however, to compensate for the lack of competitive pressures to which the FAC (and airports generally) are exposed. It needs to be augmented by other financial and non-financial indicators of performance to help identify whether costs and charges are appropriate. A set of 'benchmark' indicators would facilitate comparisons of performance, not only among Australian airports, but also between Australian airports and their overseas counterparts.

Two other measures would promote efficient airport performance.

- First, some FAC secondary airports should be leased or sold to state or local governments or, subject to adequate regulatory safeguards, to private sector operators. This would help align airport services with the needs of the communities they serve. In some regions, it may also allow for competition to develop between airports. An evaluation of the performance of those airports initially transferred could serve as a basis for determining whether further transfers are warranted.

- Second, irrespective of ownership, all aspects of airport operations should be subject to the general provisions of the Trade Practices Act and the Prices Surveillance Act. These changes would expose airport operators to government disciplines that apply to private enterprise generally.

FAC charging policies and practices

Since its inception, the FAC has progressively brought its charges more closely into line with costs. Nonetheless, under current policies: the majority of FAC airports operate at a loss; there is under recovery of aeronautical costs at all airports; and charges paid by general aviation bear little

relationship to their use of smaller FAC airports. Charges which do not adequately reflect the cost of services provided can lead to the inefficient use of airports and inappropriate investment decisions.

A closer relationship between airport charges and the services used by aircraft operators could be achieved if the FAC and other airport owners review their charging policies with a view to ensuring that, in the medium term, each airport operates profitably and under-recovery of aeronautical charges is eliminated. In the case of the FAC, this would require a departure from its practice of applying uniform landing charges at most FAC airports. It would also require that the FAC make wider use of specific landing charges in place of the general aviation infrastructure tariff (GAIT) which is unrelated to the frequency of use of FAC airports. To the extent that GAIT charges remain, they should be airport specific and the level of charge set so that general aviation operators make an appropriate contribution towards the costs of the airports they use.

In principle, the use of peak period surcharges is an efficient means of addressing congestion problems. However, in view of changes in operating procedures at Kingsford Smith Airport introduced at about the same time as the surcharges, it is not clear that the charges and the periods to which they currently apply are appropriate. Given the significant impact of the surcharges on intrastate aviation operators and the concerns expressed to the Commission by a broad spectrum of the industry, it is important to demonstrate the need for them. Accordingly, the Commission suggests that the issue be re-examined, preferably by an independent consultant, and that the report be made available to the public.

Safety and air navigation services

Safety and navigation services are almost entirely the responsibility of the Civil Aviation Authority (CAA), a Commonwealth Government business enterprise. CAA charges for safety and air navigation services can constitute up to 15 per cent of commuter airline costs. Consequently, it is important that the matters subject to regulation are appropriate, and that the enforcement of regulation and the provision of airways services are performed as efficiently as possible.

As the CAA is a 'sole supplier', it is difficult to assess its performance. However, the requirement that it operate on a commercial basis has provided significant impetus for change. For instance, the CAA has devolved some tasks to the private sector and is reducing its staff by around 50 per cent over a five year period.

The requirement that the CAA meet a real rate of return target and pay an appropriate dividend to Government - neither of which has been achieved to date - will assist in improving the CAA's financial performance. As with the FAC, the Authority's rate of return target should be before interest and tax, and should relate to all assets required for the efficient discharge of its functions, including safety-related services.

The incentive for the CAA to operate efficiently would be further increased if it were exposed to competitive pressures. While natural monopoly characteristics preclude the development of meaningful competition in some CAA activities, overseas experience indicates that competition is possible for air traffic services at individual aerodromes. Allowing multiple suppliers could erode some economies associated with supply by a single organisation. This is only likely to be of overriding importance at the eight major airports that will be fully integrated into the new Australian Advanced Air Traffic System. The Commission considers that at other airports the benefits from competition between alternative suppliers, coupled with the potential for airport operators to reduce costs by combining air traffic control tasks with conventional airport functions, should outweigh any costs associated with removing the CAA's sole supplier status.

CAA charging policies

To date, the major focus of initiatives to improve the CAA's efficiency has been on measures to decrease costs and improve productivity. Considerably less emphasis appears to have been given to ensuring that pricing practices are efficient. This probably reflects the less visible improvements which result from more efficient pricing and the additional administrative costs which may be associated with it.

Most CAA charges are set on a network basis, with uniform charges applying across broad classes of users. While administratively convenient, this results in cross-subsidisation between users and a consequent reduction in efficiency. As the CAA has yet to develop fully a basis for allocating revenue and costs at its various locations between different classes of users, it is not possible to gauge the extent of cross-subsidisation.

To encourage a more efficient use of CAA facilities and services, charges should be modified to better reflect the services provided to different users. This will require the development of comprehensive information on revenue and costs categorised by location, route and class of user.

The costs of most CAA services to avgas aircraft are recouped by means of a fuel levy. This results in all aircraft paying a charge proportional to fuel usage, even if they never use CAA services and facilities. Consequently, the charges need bear no relation to the use by avgas aircraft of CAA services. Some improvement could be achieved by extending usage-based charging to a greater number of aerodromes and, in respect of CAA enroute charges, exempting those classes of aircraft which do not use enroute services (such as agricultural spraying aircraft). As fire and rescue services which exist at some airports are installed primarily for the benefit of the larger airlines, there is also a strong case for permitting small aircraft operators to elect to pay on a usage basis.

FINDINGS AND RECOMMENDATIONS

1. The Commission considers that the major factor subject to influence by governments in Australia which leads to inefficient resource use in intrastate aviation is the economic regulation that continues to apply in some states.

2. The institutional arrangements and operations of some government instrumentalities engaged in the provision of airport infrastructure, safety regulation and air navigation services, impair the efficiency with which such services are provided, as well as the efficiency of aircraft operators and aviation users generally.

Removing regulation

3. To improve the efficiency of intrastate aviation services, the Commission considers that, in those states where intrastate aviation remains subject to economic regulation (namely Tasmania, New South Wales, Western Australia and, to a minor extent, Queensland), each government should:

   - repeal all economic regulation of intrastate aviation by 31 December 1993, after giving 12 months notice; and

   - where necessary, support the provision of services deemed essential by direct government subsidy. The operator and the extent of the subsidy should be decided by a tender process and relate to a specified period of not longer than 3 years.

Improving airport services

4. To improve the efficiency with which airport infrastructure and related services are provided by the Federal Airports Corporation:

   - the real rate of return target should be based on earnings before interest and tax, and relate only to assets which are necessary to allow it to perform its functions efficiently;

   - the value of airport land and other assets should reflect the greater of either the value of assets in their current use or their highest valued alternative use (less appropriate development costs and an allowance for risk);

   - the Corporation should be fully compensated by means of direct payments for complying with ministerial directions, including matters 'in accordance with government policy';

- consideration should be given to separating the responsibility for the administration of aviation policy and responsibility for the performance of the Federal Airports Corporation;

- some smaller Federal Airports Corporation airports should be leased or sold to State government or private interests;

- each airport should, over time, recover all costs and meet a real rate of return target;

- under-recovery of aeronautical services should, as far as is practicable, be eliminated;

- the peak and shoulder period surcharges that apply at Kingsford Smith Airport should be reviewed, preferably by an independent body, to ascertain whether surcharges are necessary to alleviate congestion and, if so, the appropriate level and time periods that should apply;

- the exemption from shoulder period landing charges at Kingsford Smith Airport that currently applies to aircraft providing regular public transport services should be removed if shoulder period surcharges are found justified;

- all airport activity should be subject to the general provisions of the Trade Practices Act and the Prices Surveillance Act;

- weight-based landing charges should be extended to include those Federal Airports Corporation airports where the administrative cost is small relative to total airport costs. At other airports, the existing general aviation infrastructure tariff should be replaced with an access fee that is airport specific and set at a level consistent with each airport recovering all costs and meeting a rate of return target; and

- common access facilities should, where viable, be provided at all major airport terminals.

5. To improve the efficiency with which airport infrastructure and related services are provided at non-Federal Airports Corporation airports:

    - the Commonwealth should expedite the transfer of ownership and full responsibility for the funding of airport operations to local authorities;

    - state governments should place on a fully commercial basis all bodies under their control which operate airports. This would require that such bodies pay all relevant taxes and, in lieu of paying Commonwealth taxes, an equivalent amount to state treasuries. They should also be required to meet a real rate of return target based on earnings, before interest and tax, on assets necessary to allow them to perform their functions efficiently, and remit dividends to state treasuries or, where relevant, to the appropriate local government authority; and

- all airport activity should be subject to the general provisions of the Trade Practices Act and the Prices Surveillance Act.

Improving safety and air navigation

6. To improve the efficiency of aviation safety and air navigation services provided by the Civil Aviation Authority:

   - the real rate of return target should be based on earnings before interest and tax, and relate only to assets which are necessary to allow it to perform its functions efficiently, including the provision of safety-related services;

   - subject to compliance with the appropriate regulations and standards, any organisation should be permitted to provide air traffic control services at Australian airports other than the six major capital city airports, Cairns and Coolangatta. This arrangement should be reviewed within five years;

   - charges should be modified so as to eliminate, as far as is practicable, cross-subsidisation between users and more closely reflect the cost of services provided to different groups of users;

   - terminal navigation charges applying to aircraft powered by aviation gasoline at major capital city airports should be extended to include those airports where any extra administrative cost would be small relative to the Authority's airport costs;

   - aviation gasoline aircraft used for agricultural purposes and any other aircraft readily identifiable as not requiring, or having access to, Civil Aviation Authority enroute services, should receive a rebate of that part of the excise on aviation gasoline attributed to the cost of providing enroute services; and

   - general aviation aircraft operators should be permitted to pay for rescue and fire fighting services according to use.

Social and environmental consequences

7. The implementation of the Commission's recommendations would not result in any significant adverse social or environmental consequences. To the extent that deregulation may result in the termination of essential air services to some small communities, the provision of explicit government subsidies, as recommended, would adequately address such concerns.

1 INTRODUCTION

Intrastate aviation provides important services to many regions in Australia. Users of these services, including tourist and rural businesses, are directly affected by the efficiency with which they are provided. This report provides an opportunity to consider factors which influence the efficient provision of intrastate aviation services, in particular the economic regulation that is employed by some state governments and the provision of airport infrastructure and related aviation services.

This report responds to a reference asking the Commission to report on factors 'subject to the influence of governments which lead to inefficient resource use' in intrastate aviation, and to advise on 'courses of action to remove such inefficiencies'. The terms of reference, which were prepared in consultation with state and territory governments, are shown in full on page x.

The Commission's approach

For the purposes of this report, the Commission has interpreted the term 'intrastate aviation' to include all forms of aviation activity undertaken within states or territories. Thus, it encompasses the passenger, freight and other commercial aviation activities of enterprises providing scheduled intrastate airline services. Although relatively little information was submitted by participants about intrastate freight and most general aviation activities - such as agricultural spraying, charter operations, aerial survey and photographic work - these activities also fall within the scope of the reference.

At present, the efficiency of intrastate aviation services in some parts of Australia is directly affected by state government regulation which limits competition and mandates particular market outcomes (such as the level of service and maximum fare levels). However, as emphasised by many participants, the efficiency of intrastate aviation is also dependent upon the extent and operation of infrastructure necessary to support aviation services. Consequently, this report also examines issues relating to the provision of airport facilities and safety and air navigation services.
Intrastate aviation services have been subject to considerable change over the past three or four years.

- In some states (eg Queensland and Western Australia), regulation has been largely removed or relaxed to allow competition on routes previously protected by licensing arrangements.

- The establishment of the Federal Airports Corporation (FAC) and the Civil Aviation Authority (CAA) has led to procedural changes and initiatives to recover costs for most services provided by these Commonwealth Government agencies.

- The deregulation of interstate aviation in October 1990 has blurred the demarcation between interstate and intrastate operators, led to a greater concentration of airline ownership and exerted pressure on regional operators to reduce fares.

- The imposition of peak period landing surcharges at Sydney's Kingsford Smith Airport (KSA) has significantly increased the cost of regional airlines using the nation's major airport during peak periods. Landing charges at many country airports have also increased significantly.

- Activity levels on many regional routes were affected by the pilots' dispute and, more recently, by the general downturn in economic conditions.

In the wake of these events, the inquiry comes at an opportune time. It provides an opportunity to review the nature of the changes that have occurred, to consider their effect on intrastate aviation services and to re-assess the economic regulation employed in some states. It also provides an opportunity to consider whether further changes to improve efficiency are warranted.

In addressing these matters, the Commission's policy guidelines require it to have regard to the desire of the Commonwealth Government to encourage the development of efficient industries, facilitate structural adjustment, reduce unnecessary industry regulation, and recognise the interests of other industries and consumers generally. The Commission is also required to report on the social and environmental consequences of any recommendations it makes.

In accordance with these guidelines, existing regulation and institutional arrangements are evaluated from the perspective of the economy as a whole rather than simply that of the aviation industry. In this context, the Commission recognises that intrastate aviation provides an important service to the rural community and the tourist industry in a number of states. However, to the extent that demand for intrastate aviation services adds to the need to construct more publicly funded airport facilities and associated infrastructure (eg improved access roads to airports), and to the extent that such additions impose environmental costs on some regions, intrastate aviation is an issue which concerns a broader spectrum of the community than just users of air services and the aviation industry itself.

Inquiry procedures

In preparing this report, the Commission has benefited greatly from participants' written submissions, information tendered at public hearings and discussions with aircraft operators and users, and with government agencies responsible for aviation policy and infrastructure provision.

Two rounds of public hearings were conducted. Hearings were held in Melbourne, Sydney, Adelaide and Canberra in late October and early November 1991 to enable participants to comment on matters raised in the Commission's Issues Paper and on other matters which they considered relevant to the inquiry. In May 1992, a second round of public hearings was held in Launceston, Sydney, Perth and Canberra to allow participants to respond to the Commission's draft report.

Submissions were received from 59 participants. A list of those who provided written submissions, attended public hearings or had discussions with the Commission is at Appendix A.

Structure of the report

The next chapter briefly outlines the nature and significance of the aviation sector and its markets. As a backdrop for discussion of intrastate aviation issues, Chapter 3 describes the development of interstate aviation policy and outlines government regulation presently applying to intrastate aviation in each state and territory. Chapter 4 considers the merit of government regulation of intrastate aviation. Chapter 5 discusses ownership and management of airports, while the final chapter focuses on the regulatory framework for aviation safety.

2 INDUSTRY STRUCTURE AND MARKETS

The domestic aviation sector in Australia currently consists of two major airlines with national networks, about a dozen enterprises that have well developed routes in more than one state and hundreds of small airline and general aviation businesses. Intrastate activity accounts for about one-third of all passenger movements undertaken by airlines and the majority of general aviation activity. The current market structure reflects barriers to entry, as well as economies of scale and density. The deregulation of interstate aviation, increases in government charges and the decline in general economic activity have all impacted on intrastate aviation in the last year or so.

In 1991, there were over 9000 non-military aircraft registered in Australia. Most were small aircraft operating within a state or territory.

Intrastate flights account for the majority of aircraft movements at most Australian airports, other than at major capital city airports. The majority of airports are owned by local government authorities or the Commonwealth Government. A small number are owned by private organisations (eg Broome) and state government authorities, such as the Cairns Port Authority. Most major airports, however, are owned and operated by the FAC.

There are relatively little data on the size and composition of aviation in Australia. According to the most recent ABS data, the air transport industry accounted for 1 per cent of Australia's GDP and 0.8 per cent of the national wage and salary bill in 1986-87.[1] Employment in the air transport industry in March 1991 was estimated at 37 700 persons - less than half a per cent of Australia's total workforce.

2.1 Structure of domestic aviation

The structure of the Australian aviation industry has been influenced by many factors, including the nature of demand for air services, the regulatory environment and a range of financial, technical and demographic features. Thus, the scale and form of operations undertaken varies considerably - from small privately owned operations serving local regions, to large airlines with nation-wide (and international) markets and annual revenues in excess of a billion dollars.

[1] Air transport industry figures include international and domestic aviation. However, they exclude establishments providing services to air transport (eg airport and air navigation facilities).

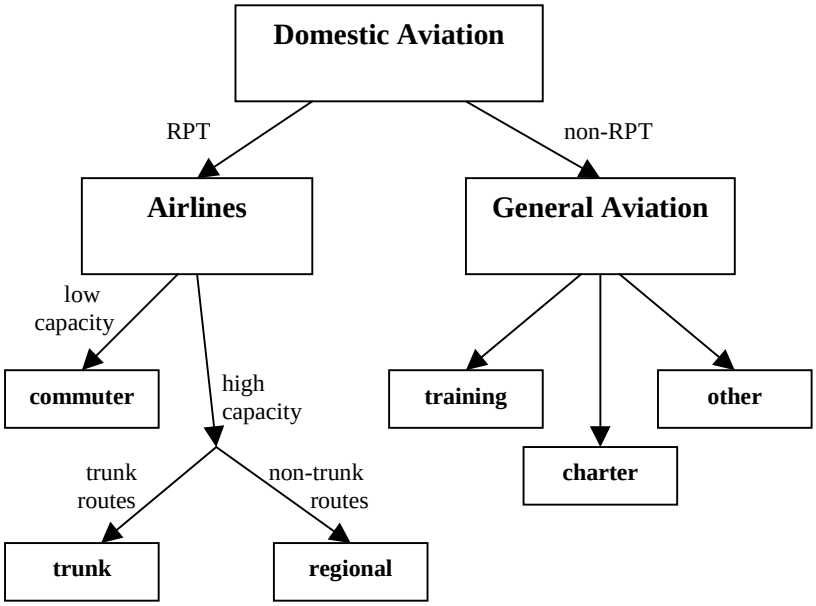
This section outlines broad operational categories which can be applied to domestic aviation and, subsequently, some important characteristics of the industry. These include, first, the extensive ownership links that have developed between the major operators and, second, the varying degree of accessibility of domestic aviation markets to new operators.

Classification of domestic aviation activities

Operators within the domestic aviation industry are not generally classified according to whether or not flights transcend state or territory borders. Instead, the industry has traditionally been categorised according to operational parameters such as aircraft size, route networks and flight schedules. These parameters have been influenced by the regulatory environment.

The two broadest categories within domestic aviation - airlines and general aviation - are delineated according to the type and frequency of the services they provide. Airlines provide regular public transport (RPT) flights in accordance with fixed schedules, to and from terminals and over specified routes. As shown in Box 2.1, they can be further classified as either trunk, regional or commuter airlines. Operators in the general aviation sector provide a wide range of air services, but not according to regular and published flight schedules.

Box 2.1: **Classifications within the domestic aviation industry**



Airlines

As part of the two-airline policy, domestic airlines were classified according to capacity constraints applied by the Commonwealth Government. Although that policy has now been abandoned, the former classifications are still commonly used to categorise airlines in Australia. The three airline groupings are:

- *Trunk airlines* - This originally referred to airlines which were able to import `high-capacity' aircraft suitable for service on trunk routes.[2] Trunk routes include those between state and territory capitals, as well as intrastate connections to Cairns, Townsville, Mackay, Rockhampton, Mount Isa, Coolangatta, Proserpine, Launceston, Alice Springs and Gove. Trunk routes continue to be serviced mainly by the two traditional operators - Ansett and Australian. For the 12 months to December 1991, major trunk routes were also serviced by Compass Airlines. In 1990-91, trunk airlines accounted for 74 per cent of all domestic passenger embarkations (see Table 2.1).

Table 2.1: **Passenger embarkations by airline category, 1985-86 to 1990-91** [a]
(percentage)

Airline Category	*Year*					
	1985-86	*1986-87*	*1987-88*	*1988-89*	*1989-90*	*1990-91*
Trunk	74.8	76.3	77.6	77.8	75.4 a	74.3
Regional	16.9	15.2	14.2	13.5	11.0	13.6
Commuter	8.3	.5	8.2	8.7	13.6	12.1

a An industrial dispute with the Australian Federation of Airline Pilots (the 'pilots' dispute) severely restricted the operations of Ansett, Australian and some related airlines between August 1989 and April 1990. During that time, some international and military aircraft were employed on trunk routes.

Source: DOTAC (various years).

- *Regional airlines* - Under the two-airline agreement, this category included airlines which were restricted in their ability to import equipment suitable for operation on trunk routes, although their fleets contained high-capacity aircraft. Regional airlines have traditionally provided the bulk of intrastate airline services, linking major rural population centres with the state or territory capital (BTCE 1988). Under this classification, regional airlines presently include East-west, Ansett WA, Ansett Express and Australian Air Link, although East-west is progressively becoming integrated with Ansett.

[2] High-capacity is defined as aircraft of over 38 seat capacity or 4200 kg payload.

- *Commuter airlines* - This includes airlines which utilise low-capacity aircraft to service short-haul, low-density routes. Commuter routes are generally intrastate, although some involve interstate flights. Large commuter airlines, such as Eastern Australia and Kendell, employ over 200 people and have ticket sales in excess of $40 million. However, the majority of commuter airlines are considerably smaller, operating 2 to 6 relatively small aircraft (ie seating 9 passengers or less). Together with the regional airlines, commuters have accounted for around 25 per cent of passenger embarkations in recent years.

The operations of most airlines changed considerably following the abandonment of the two-airline policy in October 1990 - for some, change occurred prior to this. As observed by the CAA (sub. 25, p. 19):

> The regional airlines have been steadily withdrawing from many rural routes for several years now, seeking to redefine their niche in the overall aviation industry, possibly in recognition of the fact that, in many cases, the aircraft they were operating were a little too large given the operating frequencies needed for the markets they were serving. The markets they have abandoned have been taken up by commuter airlines ... [which] are better suited to the levels of demand in the markets they are serving.

As a consequence, the airline categories of trunk, regional and commuter have become less applicable. For the purpose of air operators' certificates, however, the CAA still distinguishes between high and low capacity aircraft, and it is on this basis that airline statistics are collected and reported by the Department of Transport and Communications (DOTAC).

General aviation

The general aviation sector accounts for the majority of aircraft in Australia. Compared with overseas, Australia has a very large general aviation sector, largely reflecting its geographic size and low population density.

General aviation activities can be classified according to the following groups (DOTAC 1992):

- *Aerial work* - all aerial survey and photography, spotting, aerial stock mustering, search and rescue, ambulance, fire fighting and coastal surveillance.

- *Agriculture* - operations involving the carriage and spreading of chemicals, seed, fertilisers or other substances for agricultural purposes.

- *Business* - flying by aircraft owners, their employees or hirers of aircraft for business or professional reasons.

- *Charter* - carriage of cargo or passengers on non-scheduled operations on a hire-and-reward basis.

- *Private* - flying of aircraft for non-business purposes (eg recreation or sport).

- *Test and ferry* - flying associated with the testing of an aircraft, its delivery or movement to another location for maintenance, hire or other planned use.

- *Training* - flying under instruction for the issue or renewal of a licence or rating.

Passenger movements by general aviation operators are not an appropriate measure of the level of activity in the sector. Comparisons between the general aviation sector and the airlines are therefore generally based on hours flown per annum and aircraft movements.

In terms of hours flown, general aviation accounted for over 80 per cent of domestic aviation activity during 1991, with training and charter activities being the most prominent (see Table 2.2). In terms of aircraft movements, the general aviation sector is again dominant within domestic aviation. Airports such as Bankstown, Moorabbin, Parafield and Jandakot -- which are all mainly concerned with general aviation activity -- each cater for over 300 000 aircraft movements per annum. This is substantially more than the total movements of all domestic and international traffic into KSA, which is Australia's busiest passenger airport.

Table 2.2: **Hours flown by industry sector and activity, 1991**

Industry & flying activity	*Hours flown*	*Change over 1990*	*Share of total hours*
	'000	*%*	*%*
Airlines			
trunk and regional	316.6	24.2	13.9
commuter	209.2	3.2	9.2
General Aviation			
training	452.6	-5.6	19.8
charter	386.5	-3.2	16.9
aerial work	282.7	-3.9	12.4
private	261.7	-11.7	11.5
business	240.3	-13.2	10.5
agriculture	101.3	-33.1	4.5
test and ferry	29.7	-8.3	1.3
TOTAL	2280.6	-4.5	100.0

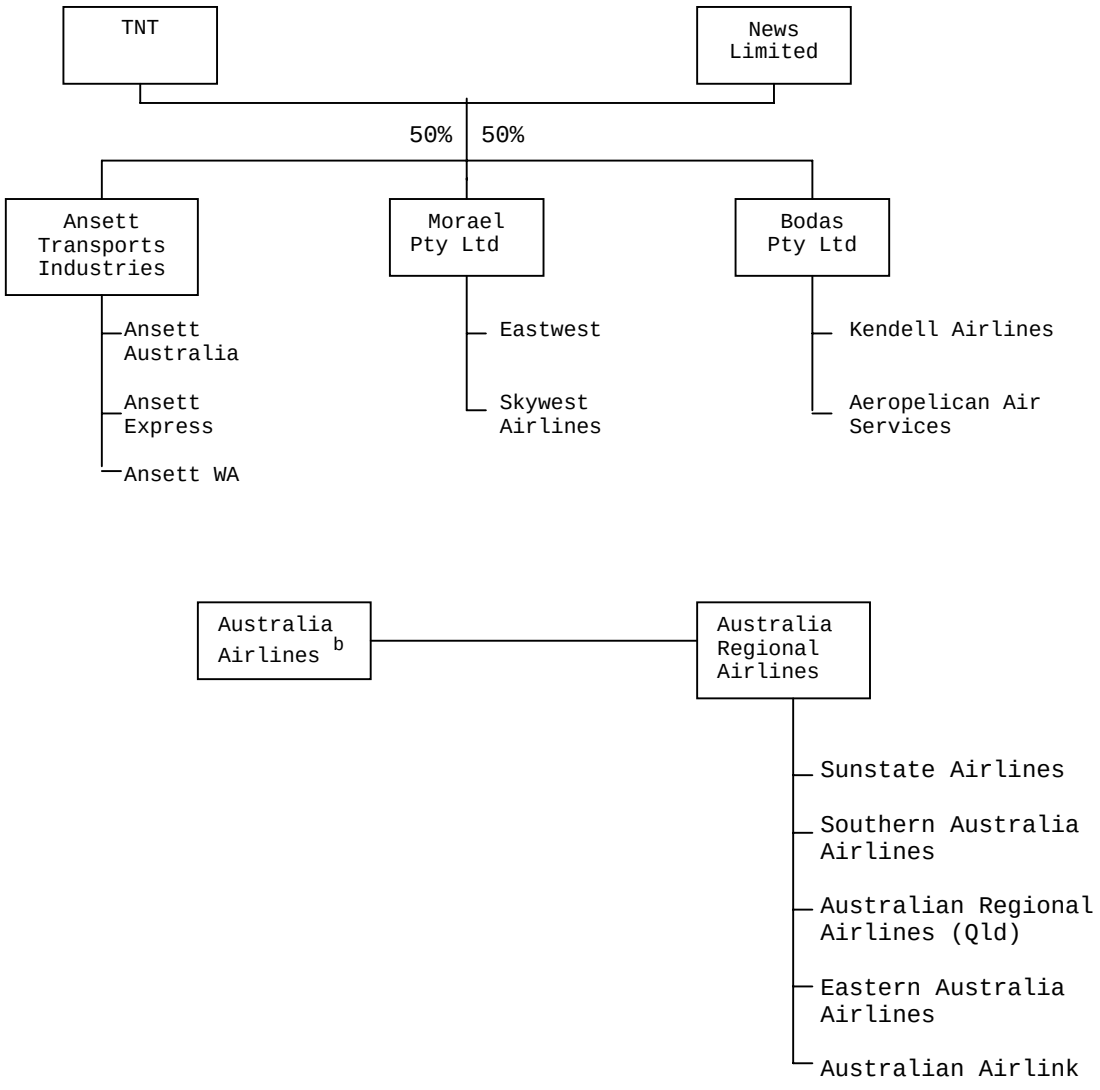
Source: DOTAC (1992). Survey of Hours flown

Concentration of ownership

Whereas ownership of general aviation operations is highly fragmented, the airline segment of the domestic aviation industry is characterised by a high degree of market concentration. Apart from dominating the domestic trunk market, Ansett and Australian have extensive ownership links with regional and commuter airlines (see Figure 2.1). Furthermore, it has recently been announced that Australian is to be acquired by Qantas.

The purchase of regional operators by the major airlines began in the 1950s, although the movement into the commuter sector of the industry has mainly occurred over the last 5 years. At present, all regional operators and all but two of the major commuter airlines - Flight West and Hazelton - have ownership links with either Ansett or Australian.

Figure 2.1: **Ownership links between affiliates of Ansett and Australian** [a]



a Unless otherwise indicated, all ownership links represent 100 per cent equity.
b Qantas is to acquire all of Australian and its subsidiary companies.
Source: Adapted from BTCE (1991a).

A range of factors other than regulation has contributed to the present level of concentration. These include: cost savings associated with the operation of larger aircraft or bigger fleets (economies of scale); advantages from increasing passenger density on routes (economies of density); and the greater accessibility of larger airlines to terminal infrastructure.

Economies of scale

In most commercial activities, increasing the scale or size of operation permits firms to operate at lower per-unit cost than smaller firms. In the airline industry, the scale of operation is related to the average size of aircraft and the number of aircraft employed. According to the Bureau of Transport and Communication Economics (BTCE 1988), larger aircraft achieve scale economies through lower costs per available seat-kilometre in the areas of fuel, maintenance and, within prescribed limits, crewing costs. Although these expected costs savings were not found to be significant under Australian conditions, more recent empirical work suggests they are important in some overseas markets (BTCE 1991b).

Cost advantages may also be achieved by airlines with large fleets. A larger fleet may, for example, provide an airline with greater flexibility in matching aircraft with demand on routes within its network. The Commonwealth Treasury (1985) reported empirical evidence suggesting that the minimum efficient size for an airline fleet was around five aircraft.

The existence of scale economies associated with larger aircraft and fleets is not altogether consistent with the current structure of the industry engaged in intrastate aviation. For example, in some cases, aircraft of very different size currently operate over the same route - in Western Australia, Skywest operates 18 seat turboprop aircraft in competition with much larger jet aircraft. Similarly, the notion of fleet economies has not precluded many operators with small fleets competing in the commuter and charter sectors. As observed by BTCE (1988, p. 70):

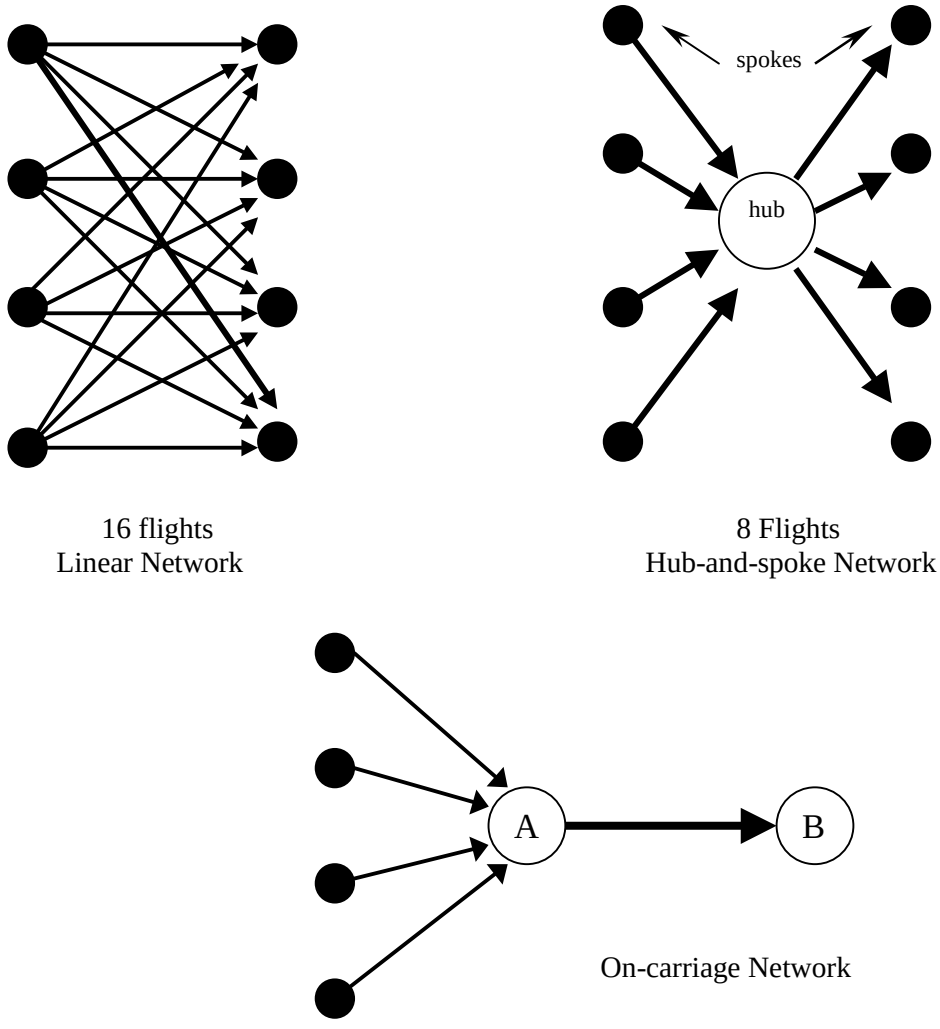
> ... experience in the South Australian market has seen several operators successfully maintain niche operations over competitive routes for many years with as few as two aircraft. This suggests that economies of fleet size are probably not particularly significant in relation to intrastate air service provision.

Economies of density

In a study of United States airline costs, Caves, Christensen and Tretheway (1984) found that savings could be attained by increasing passenger movements between two ports. Under the same route structure, the authors concluded that, if airlines could increase passenger flows by 10 per cent, the resulting increase in costs would only be 8 per cent. Moreover, these cost advantages -- termed ‘economies of density’ -- were found to be more significant than economies of scale.

The concept of economies of density is illustrated by the 'hub-and-spoke' networks that have developed in the United States since deregulation. As shown in Figure 2.2, rather than offer direct flights, passengers within a region are flown to an intermediate hub before flying on to their final destination. In the example, an airline operating within the hub-and-spoke arrangement is able to reduce the number of flights from 16 to 8, while still servicing the same ports (ie the load factor increases). These benefits may be eroded, however, if a significant portion of passengers travelling via the hub consider the trip inconvenient and choose to travel by alternative transport.

Figure 2.2 **Indicative air transport networks**



16 flights
Linear Network

8 Flights
Hub-and-spoke Network

On-carriage Network

Source: Adapted from BTCE (1991b).

In Australia, where large cities are relatively few and widely dispersed, the development of hub-and-spoke networks is limited. Hence, trunk operators have relied on on-carriage arrangements with regional and commuter airlines to increase density on major routes. On-carriage generally involves the 'feeding' of regional and commuter passengers into ports so as to link-up with flights by larger operators (see Figure 2.2). Unlike the hub-and-spoke arrangement, a large portion of the passengers feeding into airport 'A' will not continue on to port 'B'. Information from participants suggests that between 8 and 20 per cent of regional passengers flying to trunk ports are on-carried by trunk operators.'

The benefits of on-carriage arrangements provide a clear incentive for trunk operators to develop close relations with regional and commuter airlines. Harris (1988 Advisory group on Australian Airlines) estimated that on-carriage links with regional and commuter operators accounted for 2 to 3 per cent of total passenger revenue for the major airlines. Although this may be achieved through commercial contracts, direct ownership links provide greater security of on-carriage for larger airlines.

Provision of infrastructure

Ownership links with the major airlines can assist smaller regional and commuter airlines to gain access to aviation infrastructure or reduce the cost of such facilities. Indeed, some consider it essential for commercial success to develop strong ties with trunk airlines. As expressed by the former owner of Kendell Airlines (BTCE 1991a, p. 121):

> ... it will become increasingly difficult for an independent regional operator to survive without the support and perhaps protection of a major domestic partner.

The enhanced ability to share infrastructure available to airlines with common ownership has provided a strong incentive for smaller airlines to become associated with Ansett or Australian.

Access to aviation markets

Entry to the domestic aviation industry is impeded by some costs which apply to potential competitors but not incumbents. In addition, there are costs and other influences which, although not constituting barriers to entry as such, also affect a firm's decision to enter aviation markets. The collective impact of these factors varies between industry sectors, although there is some relationship with market size. This has been reflected in the differences in industry structure and turnover of operators:

- *Trunk airlines* - For many years, regulatory barriers to entry reserved major trunk routes for Ansett and Australian. Compass Airlines has been the only new operator to commence services since interstate deregulation in October 1990. Compass has since been acquired by Southern Cross Airlines. The new venture, which will trade as Compass, is expected to commence operations on 31 August 1992. A number of other operators are considering entering trunk and intrastate markets.

- *Regional airlines* - Excluding acquisitions and name changes, this sector has, over the last 10 years, witnessed: the commencement and cessation of two airlines (Air Queensland and Ansett NT); the demise of another two (Northern Airlines and Airlines of South Australia); and the commencement of Australian Air Link.

- *Commuter airlines* - Between 1979-80 and 1990-91, the number of commuter operators fell from 55 to 41. However, only 10 airlines operating during 1990-91 were also operating in 1979-80.

- *General aviation* - Although figures are unavailable, several inquiry participants indicated that turnover within this sector is substantially higher than for any other area of domestic aviation.

The major factors explaining the incidence of entry and exit from aviation markets include: government regulation, `sunk' costs, access to infrastructure, product differentiation and responses by incumbents.

Government regulation

Government regulation has severely limited entry into the airline sector of the industry. From the mid-1960s to October 1990, Commonwealth Government regulation prevented new entrants on trunk routes. The Northern Territory and most state governments have also restricted entry to many intrastate routes. The nature and extent of regulation by governments is central to this inquiry and is addressed in the next chapter.

Sunk costs

Sunk costs are those costs which cannot be recouped in the event of an enterprise failing. Where sunk costs are high, the risk facing a potential entrant is increased, and will need to be offset by higher expected profits. For the incumbent, however, the issue of sunk costs are no longer an influence on decision-making.

The significance of sunk costs in the aviation industry would appear to be limited. For example, there is a well developed market for buying and selling aircraft - the main capital item for many aviation enterprises. Nevertheless, to the extent that sunk costs exist in the aviation industry, they are considerably less for smaller operators. For example, start-up (sunk) costs such as crew training and licence fees are less for a general aviation operator than for a prospective airline. In addition, access to markets for second-hand or leased small aircraft is easier than is the case for larger aircraft. It is possible, for instance, to both acquire and dispose of a wide range of smaller aircraft locally. Airlines seeking to deal in larger aircraft must usually access international markets.

Access to infrastructure

Problems associated with access to aviation infrastructure also influence industry structure.

- *Terminals* - At most major city airports, there is currently limited terminal space for new entrants. Although common-user facilities exist at some airports, a new airline operator may have to rely initially on facilities owned and operated by Ansett or Australian (although, in the longer term, new operators may be able to provide their own terminals or have access to common-user terminals which are to be constructed at some airports). Under the present agreement with the Commonwealth Government, the major airlines are required to provide only limited access (see Chapter 5). This may pose a more significant problem for a large airline than for an operator that does not compete directly with Ansett or Australian. Australian North West Airlines - a new airline which intends to compete with the major domestic carriers - supported this view during the draft report hearings. It stated (transcript, p. 318):

  > They [Ansett] lease terminal space like everybody else, but the terminals were modified or built ... for basically one major user. It's OK for minor smaller users, but if you're going to compete with an incumbent, you have to be able to offer an equivalent service ...

- *Landing facilities* - Congestion at airports can also arise if runway capacity is insufficient to accommodate demand. If landing `slots' are unavailable, the entry of a new airline is impeded. In Australia, only KSA has experienced considerable congestion problems (see Chapter 5). Moreover, the main instrument of demand management at KSA has been peak-period pricing rather than the allocation of landing slots. This reduces the possibility of congestion being a barrier to entry. However, as the current peak period charges are based on a fixed charge per aircraft, their impact has been greatest on airlines operating small aircraft.

- Computer Reservation Systems (CRS) - Problems associated with CRSs can also deter entry into the aviation market. In the United States, for example, claims of unfair access to the system and biased displays of information have resulted in extensive litigation between airline companies. In Australia, it is not yet clear if similar problems will arise following interstate deregulation. The Trade Practices Commission (TPC) has recently sanctioned a merger between the three companies which own the marketing rights to the major CRSs employed in Australia. As the companies are owned by the three major airlines - Qantas, Ansett and Australian - authorisation has been subject to a code of conduct which is intended to prevent

the major airlines from using ownership and control over CRSs to reduce competition between airlines. Nevertheless, an independently owned airline, Hazelton, was sceptical of the position of the majors with respect to fair access to CRSs. In its submission to the draft report hearings (sub. 72, p. 6), it stated:

> ... be assured that the major airlines within Australia are already using ownership and control over CRSs to give unfair access or biased displays of information in Australia.

Hazelton, which is hosted on Australian's CRS, is concerned that Australian affiliates may be given priority on CRS booking screens when inquiries are made. Hazelton suggests this severely restricts its ability to compete on routes serviced by airlines such as Eastern and Southern Australia.

- *Travel agencies* - It is estimated that approximately 50 per cent of domestic airline reservations are now made through travel agents. Following interstate deregulation, the two major airlines have taken equity holdings in major travel agencies. While this arrangement could result in a travel agent promoting the airline with an equity interest in its business, the extent to which such integrated arrangements restrict entry and influence industry structure is unclear. It is possible that the size of commission payments is a more important determinant of sales patterns than are equity links. Indeed, in a recent study of Compass Airlines, the TPC (1992, p. 33) found `no indication of a systematic bias in the allocation of reservations by travel agents arising from equity links between airlines and travel agents'.

Product differentiation

The establishment of a good safety and on-time departure record provides incumbent airlines with a high level of `goodwill'. To capture sufficient market share, new entrants may therefore need to promote their services through advertising campaigns, special introductory offers and the like. This can be costly and time consuming.

Largely because they are the most heavily patronised, the trunk route operators have the greatest degree of brand identification and customer loyalty. In recent years, attempts have been made to enable affiliated airlines of Ansett and Australian to appropriate some of this goodwill. This has been achieved, for example, by sharing aircraft livery (eg Australia's kangaroo symbol), flight information facilities and marketing strategies, such as the Frequent Flyer Scheme.

Although some small airlines serving niche markets have a strong local identity, issues of customer loyalty do not affect small commuter airlines and general aviation operators to the same extent as larger airlines.

Responses by incumbents

The prospect of successful entry by a new airline is reduced if established airlines can significantly reduce price or increase capacity on particular routes. The ability to do so is most pronounced in markets where the incumbents are well established with considerable financial backing.

This issue was raised by Flight West (sub. 13, p. 10):

> ... specific routes [have been] flooded with capacity in the short term ... [this] is an indication of the uneconomic activity in which both Ansett and Australian are prepared to engage in order to destroy any initiative they see as competitive to route structures they have developed in the inefficient environment of the two airline policy.

It is difficult to determine if a price or capacity response is 'unfair' competition - and thus a barrier to entry - or normal commercial behaviour. However, airline operators are subject to the provisions of the Trade Practices Act (TPA) relating to 'predatory' responses by incumbent firms. This provides some deterrent against the pursuit of predatory policies by incumbent firms.

2.2 Intrastate aviation markets

In 1990-91, just under one-third of all domestic passenger movements were between intrastate ports (see Table 2.3).[3] In 1990-91, airlines controlled by TNT-News Limited accounted for almost half of intrastate passenger movements, while the Australian group of airlines accounted for around one-third.

Although Eastwest carried more passengers overall, Ansett WA was the most prominent regional airline in terms of intrastate movements. Among commuter operators, Eastern Australia, Kendell, Hazelton and Sunstate were the major operators in terms of all passenger movements in 1990-91. Collectively, they accounted for approximately 20 per cent of the intrastate market in that year.

[3] Data for alternative measures of intrastate RPT activity (eg passenger revenue-kilometres and available seat-kilometres) are not available.

Table 2.3: **Passenger markets for principal airlines, 1990-91** [a]

Operator	*Major Market(s)*	*Total Passengers*	*Intrastate Passengers*		*Interstate Passengers* [b]		*Intrastate Market Share*
		'000	*'000*	*%*	*'000*	*%*	*%*
Trunk							
Australian	National	5 973	921	15.4	5 052	84.6	18.3
Ansett	National	5 654	615	10.9	5 039	89.1	12.2
Compass	National	525	20	3.8	505	96.2	0.4
Regional							
Eastwest	National	1 000	299	29.9	701	71.1	6.0
Ansett WA	WA	752	680	90.4	72	9.6	13.5
Ansett Express	NSW, Qld	730	424	58.0			
Ansett NT [c]	NT	139	112	80.7	27	19.3	2.2
Australian Airlink							
Commuter							
Eastern Australia	NSW	421	304	72.2	117	27.8	6.0
Kendell	Vic, SA	357	195	54.7	162	45.3	3.9
Hazelton [d]	NSW	285	275	96.4	10	3.6	5.5
Sunstate (Qld) [d]	Qld	256	256	99.9	-	0.1	5.1
Australian Regional [d]	Qld	193	193	100.0	0	0	3.8
Flight West [d]	Qld	128	125	98.0	3	2.0	2.5
Aeropelican	NSW	83	83	100.0	0	0	1.7
Skywest	WA	82	82	100.0	0	0	1.6
Airlines of Tasmania	Tas	68	50	73.5	18	26.5	1.0
Southern Australia	Vic	42	35	84.0	7	16.0	0.7
Other [d]		413	355	86.1	57	13.9	7.1
All Operators [d]		17 101	5 024		12 077		100.0

a Passenger statistics are based on 'traffic on board by stages'.
b Includes traffic between Canberra and Sydney.
c Ceased operations in May 1991.
d Estimates based on provisional data.
Source: DOTAC estimates.

Among the states and territories, Queensland is the most important market for intrastate aviation. This is largely due to the popularity of routes between Brisbane and Cairns, Townsville and Rockhampton - all of which are serviced by trunk airlines (see Table 2.4). On the other hand, Western Australia and New South Wales are important intrastate markets for regional and commuter airlines. Victoria is less dependent on intrastate air services, mainly because it is relatively small and has a well developed road system.

Table 2.4: **Major intrastate routes, 1990-91**

Intrastate Rank	*Route*	*Passengers*	*Operator Status*
1	Brisbane - Cairns	408 567	trunk
2	Brisbane - Townsville	337 829	trunk
3	Brisbane - Rockhampton	176 915	trunk
4	Alice Springs – Darwin	168 852	trunk
5	Karratha - Perth	107 929	regional
6	Coffs Harbour - Sydney	101 405	regional
7	Brisbane - Mackay	91 287	trunk
8	Belmont - Sydney	83 466	commuter
9	Alice Springs - Ayers Rock	81 659	trunk
10	Dubbo - Sydney	77 822 [a]	regional/commuter
11	Sydney - Wagga	72 535	regional/commuter
12	Kalgoorlie - Perth	70 898	regional/commuter
13	Adelaide - Port Lincoln	69 517	commuter
14	Brisbane - Hamilton Island	69 140	trunk
15	Cairns - Townsville	68 914	trunk

a Estimated figure.
Source: DOTAC estimates.

As with airline activity, the majority of general aviation movements takes place in New South Wales and Queensland although, on a per capita basis, the highest level of activity is in the Northern Territory (see Table 2.5). Total hours flown by general aviation aircraft during 1991 fell by 9 per cent, with the decline being greatest in Tasmania and New South Wales. During 1991, landings by commuter and general aviation operators also declined by .... per cent.

Table 2.5: **Hours flown by general aviation aircraft by state and territory, 1988 to 1991** [a]

State or Territory	*Thousand Hours Flown*				*Hours Flown per thousand people (1991)*
	1988	*1989*	*1990*	*1991*	
New South Wales	506.1	559.0	592.0	505.1	85.7
Victoria	311.8	346.9	353.3	320.7	72.4
Queensland	409.7	438.1	418.3	400.4	134.7
South Australia	118.8	131.2	133.3	124.2	85.3
Western Australia	249.9	276.5	265.0	257.9	154.8
Tasmania	29.6	30.6	37.4	26.3	57.1
Northern Territory	109.1	114.5	104.0	94.4	564.5
ACT	27.7	30.9	27.3	25.8	88.0
Australia	1762.6	1927.6	1930.8	1754.7	101.2

a State and territory refers to location of home base of aircraft. It is assumed that the majority of general aviation activity occurs within the aircraft's home state or territory (see BTE 1980, p. 96).
Sources: DOTAC (1992) Survey of Hours flown; ABS (1991).

Factors affecting demand for intrastate services

A range of factors has recently affected the demand for intrastate aviation services. Many are the result of events elsewhere in the economy. The major impacts on domestic aviation markets are outlined below.

Deregulation of interstate aviation

Although primarily impacting on the operations of trunk airlines, interstate deregulation has greatly affected demand - and in some cases supply - for aviation services. Firstly, it has enabled some regional and commuter airlines to service routes which were previously unavailable to them, such as niche holiday markets. Secondly, increases in demand within the trunk market, which followed greater competitive pressures and associated falls in air fares, have spilt over into regional and commuter markets. Demand on many intrastate routes has recently been stimulated by discounts and a greater variety of fares offered by smaller airlines.

Developments affecting alternative transport modes

The demand for air travel is dependent on the relative cost of road, rail or water transport. This relationship has been affected by developments in a number of areas, including:

- *Road quality* - The quality of many Australian roads has improved considerably in recent years. This has been partially due to road construction under the Bicentennial Roads Program. Reduced travelling times have thus rendered some intrastate routes unviable. For example, the abandonment of the Perth-Bunbury route by Skywest and subsequent failed attempts by the State Department of Transport to re-establish a service, can be partly attributed to road improvements between the two ports. Check KWs complaints on Bunbury - he said rail increased and another Bunbury service was included

- *Technological advancements* - Improvements in alternative modes of transport, particularly in the areas of speed and comfort, have impacted on the economical provision of air services to some centres. For example, air services to Rottnest Island in Western Australia have decreased from several commuter operators servicing the island to one commuter and a helicopter service??. This rationalisation is largely attributable to improvements in the ferry service between Perth and the Island. A further example is the extension and improvement of XPT services in New South Wales which has enabled rail transport to be more competitive on some traditional intrastate air routes.

- *Deregulation* - In some states, the removal of protection from some transport services has lowered the cost of travel. For example, the removal of restrictions limiting competition on some coach routes has led to a fall in fares which has made coach travel more competitive.

While these changes have made some alternative forms of transport more attractive, they have to some extent been offset by new fare packages introduced by regional and commuter airlines over the last year or so.

General economic activity

Demand for air services is closely linked with the level of activity within the economy. In the case of most regional and commuter airlines, traffic volumes are largely dependent on demand in regional centres. Consequently, the present economic downturn has impacted directly on the financial viability of commuter and, to a lesser extent, regional airlines. For example, Skywest stated (transcript, p. 226):

> Over our routes, numbers [of passengers] have declined, but that decline is a result of the economic circumstances within the country, not due to any level of air service.

Government charges

Actions by the Commonwealth Government and its agencies to recover the cost of aviation infrastructure have had a significant impact on fares, as well as airline and general aviation activity. For example:

- The corporatisation of government agencies such as the FAC and CAA has resulted in costs being funded through a user pays arrangement rather than from consolidated revenue. The peak-period surcharge introduced at KSA in 1991, has also affected many intrastate operators in New South Wales.

- The Commonwealth Government's decision to encourage local ownership has resulted in a considerable increase in landing charges and taxes at many smaller aerodromes.

These matters are dealt with in later chapters of this report.

3 THE POLICY ENVIRONMENT

Government regulation of intrastate aviation has involved a mixture of Commonwealth and state legislation. The involvement of two tiers of government has, to some extent, reflected debate about the powers which each level of government can exercise. Ownership by the Commonwealth of capital city and many regional airports continues to influence intrastate aviation operators. However, following the termination of the two-airline policy in 1990 - elements of which directly impacted on intrastate aviation - the Commonwealth now directly regulates only matters relating to safety. Regulation of other aspects of intrastate aviation by state and territory governments has reduced in recent years, although significant regulation remains in some states.

The present regulatory environment for intrastate aviation has evolved over many years in response to the legislative actions of governments at the Commonwealth, state and territory levels. This chapter initially identifies the roles which have been performed by the different levels of government. Subsequent sections outline the development of the two-airline policy and the regulatory environment in which intrastate aviation in each state and territory is presently conducted.

3.1 The powers of the Commonwealth and states/territories

Ever since aviation activity commenced in Australia, in the early years of this century, there has been considerable debate about the respective powers of the Commonwealth, state and territory governments to control intrastate aviation activity.

In 1920, the Commonwealth passed legislation (the *Air Navigation Act*) which was intended to allow it to regulate most facets of intrastate aviation. However, following a number of High Court challenges, it has been held that the Commonwealth has no power to regulate entry into, and the conduct of, intrastate aviation, other than in respect of matters concerning the safety, regularity and efficiency of air navigation. The court has ruled that the states have the power to regulate all other matters relating to entry into and the conduct of intrastate aviation. [1]

[1] There has, however, been continuing speculation that Commonwealth legislation has precedence over state regulation. For example, Poulton (1981, p. 62) has argued that the Tasmanian licensing system has been invalid since 1964.

The Commonwealth's power to regulate safety and related matters stems from the external affairs powers provided it under the Constitution. These empower the Commonwealth to make laws with respect to treaties dealing with internationally agreed conventions and codes of practice. Using these powers, the Commonwealth implemented the provisions of the Paris Convention (1922) and the Chicago Convention (1944), both of which primarily dealt with air navigation and safety matters. Commonwealth regulations encompassing these matters, which apply uniformly to aviation activity throughout Australia, are currently administered by the CAA.

For some years the Commonwealth, using its corporations powers, also regulated air fares under the *Independent Air Fares Committee Act 1981*. The Act, which applied to virtually all interstate and intrastate airline operations, was repealed when the regulation of interstate aviation was terminated in October 1990.

Although the Commonwealth's power to regulate aspects of intrastate regulation, other than matters relating to safety, was found to be limited following court action in 1936, subsequent consultations between the Commonwealth and state governments resulted in all states passing uniform legislation which mirrored existing Commonwealth legislation. This had the effect of applying federal law equally to all aspects of air navigation (including economic regulation), whether interstate, intrastate or territorial. In practice, this effectively permitted the Commonwealth to exercise control over virtually all aspects of domestic aviation.

Between 1967 and 1979, the Commonwealth issued exemptions authorising commuter operations on routes over which trunk or regional airlines did not operate. It was considered inequitable to allow commuter services to compete with airlines as they were exempted from the need to meet the more stringent and therefore more costly standards required of holders of airline licences. However, in 1979 the Commonwealth decided to assess applications for commuter operations on safety grounds only. This change in policy has been interpreted by some as constituting the deregulation by the Commonwealth of the commuter aviation industry. Since that time, economic regulation of intrastate aviation has been primarily a matter for individual states and territories.

3.2 Regulation of interstate aviation

While this inquiry is concerned with issues relating to intrastate aviation, there are important linkages between the intrastate and interstate sectors of the aviation industry. For example, a number of Queensland and Tasmanian intrastate routes form part of the recently deregulated interstate network; many commuter airlines fly on routes which cross state boundaries; there is a considerable amount of on-carriage of passengers between the two sectors of the industry; the sectors share services provided by the CAA; and intrastate and interstate operators frequently share common infrastructure, such as airports and terminals. In addition, there are some parallels between the regulations previously employed to regulate interstate aviation and those presently applicable to intrastate aviation in some areas of Australia.

Consequently, before looking at intrastate aviation policy in Australia, this section briefly outlines the development of the two-airline policy for interstate aviation, the reasons for its abandonment in 1990, and the implications this has had for intrastate aviation policy. (More information on the development of interstate aviation policy is provided at Appendix B.)

The two-airline policy

A Commonwealth Government owned airline, Trans Australia Airlines (TAA), was established in 1946 to counter the possibility of a private monopoly arising from the merging of private airlines, the largest one being Australian National Airways (ANA). However, by 1951 TAA was itself in a dominant position in the domestic aviation market. This reflected substantial financial assistance from the Government, the privileged allocation of airport facilities, favourable rentals, lower airport and airways charges, a monopoly on government business and the transfer to it of the Queensland routes then operated by Qantas.

The Government decided in 1952 to enter into an agreement with ANA which guaranteed it a share in government passenger and mail business, and provided guarantees for the repayment of loans for the purchase of aircraft. Ansett Airways, the other major interstate operator, was excluded from the agreement, as were other smaller operators. This agreement, the 1952 Airlines Agreement, marked the beginning of what became known as the 'two-airline policy' which was to dominate the development and operation of interstate aviation in Australia for 38 years.

The agreement was intended to operate for 15 years, and required ANA and TAA to consult on the 'rationalisation' of matters such as routes, timetables, fares and freight rates. Rationalisation was seen as appropriate to: prevent unnecessary overlapping of services and wasteful competition; provide the most effective and economical services bearing in mind the public interest; and bring earnings into a 'proper' relation to overall costs.

The 'Airlines Agreements'

The 1952 agreement was the first of six Airlines Agreements found necessary to keep the two-airline policy in operation, and to cope with developments in the domestic aviation industry.

- The 1957 Airlines Agreement formalised the position of Ansett (which had taken over ANA in 1957) and companies under its control as the only commercial operator on trunk routes. In practice, entry to trunk routes was barred by the Government's commitment to restrict by means of Customs Regulations the importation of aircraft which could be used on trunk routes. Other

legislation prevented the importation of aircraft which could have given one airline a competitive edge leading to possible instability in the industry. Capacity restrictions were also placed on the airlines to ensure that available capacity was evenly divided between them.

- The 1962 Airlines Agreement introduced requirements that the airlines operate fleets of similar aircraft and operate under comparable cost structures. The latter requirement was met by specifying in considerable detail the matters which could be referred to a Rationalisation Committee. These encompassed: timetables; frequencies; stopping places; aircraft types and capacities; fares; freight rates; load factors; and any other matters affecting the efficient and economical operation of air services.

- The 1972 Airlines Agreement clarified some aspects of the two-airline policy following public and Government criticism of operational matters including parallel scheduling, poor freight and rural services, and low cost recovery payments to the Government.

- The 1973 Airlines Agreement substantially increased air navigation charges to improve aviation cost recovery.

- The 1981 Agreement was the last of the six agreements. It followed the 1979 Domestic Air Transport Policy (DATP) Review (DOT 1979) and the 1981 Independent Inquiry into Domestic Air Fares (the Holcroft Inquiry). Both reviews had their genesis in continuing concerns that the two-airline policy was not providing the expected level of benefits and services to the community. The DATP Review recommended significant changes to the policy to allow for some competition and innovation in the industry.

- The Holcroft Inquiry proposed changes to the method of setting domestic air fares. The 1981 Airlines Agreement was incorporated in the 1981 Domestic Aviation Legislation Package which introduced measures intended to increase the potential for competition between the major airlines. The Package also established the Independent Air Fares Committee (IAFC) to regulate the air fares of RPT operators.

Termination of the two-airline policy

In 1985, the Independent Review of Economic Regulation of Domestic Aviation (the May Review) was commissioned to review the regulation of domestic aviation and to report on options for the future. The report was critical of existing arrangements in the domestic aviation industry and supported the widespread view that it worked to the disadvantage of consumers.

The Review found that the regulatory framework had:

- discouraged the major airlines from seeking new markets and developing existing markets;

- encouraged the airlines to employ excessive numbers of aircraft relative to the size of the market;

- provided an incentive for the airlines to concentrate on the business travel sector to the detriment of those wishing to travel on discount fares; and

- given rise to administrative problems because much of the regulation was cumbersome and internally inconsistent.

The Review also found that Australian aviation was characterised by relatively low productivity and high and stable profit levels in comparison with aviation activity in other countries.

To overcome these shortcomings, the May Review identified five alternative policy options, ranging from the maintenance of the status quo to complete deregulation of the industry.

The Commonwealth Government responded in October 1987, announcing that the 1981 Airlines Agreement would terminate in October 1990 and that, as a result, it would: remove controls over the importation of aircraft under Customs Regulations; withdraw from the detailed determination of passenger capacity; abolish the IAFC; and remove constraints on the entry of new domestic operators to trunk routes.

Other decisions announced by the Government at that time included: allowing Qantas to carry passengers of other international airlines on domestic sectors of Qantas' international services (interlining); reducing restrictions on the import of large jet aircraft for domestic charter flights; issuing new guidelines for international freight and passenger operations; and foreshadowing extensive changes to the role of Australian Airlines (formerly TAA).

The termination of the two-airline policy was widely perceived to have effectively `deregulated' interstate aviation. However, this was not the case - a number of restrictions remained. First, legislative barriers continued to deny Qantas and other international airlines access to the domestic market, with the single exception that Qantas was provided with interlining rights. Second, foreign investment guidelines applicable at that time inhibited investment by foreign international airlines. Investment was limited to a maximum of 15 per cent in any one domestic operator.

Since that time, the restrictions have been eased. In 1991, the Government's foreign investment guidelines were modified to allow foreign carriers flying into Australia to acquire up to 25 per cent equity in any single domestic operator, or up to 40 per cent in aggregate, provided the investment is not judged to be contrary to the national interest. The new guidelines indicated that, in special circumstances, proposals involving higher equity levels by foreign airlines flying to Australia would be considered.

In February 1992, the Government announced a range of policies to accelerate changes in the Australian and Australasian aviation markets. The new measures affected both international and domestic aviation and impacted on: ownership links between Qantas and other domestic airlines; the ability of Qantas to operate on domestic routes (and domestic carriers to operate on some international routes); and the scope for New Zealand carriers to operate within Australia.

Further to the changes outlined in February 1992, the Government announced in June of that year that:

- Qantas would acquire 100 per cent of Australian Airlines for $400 million. The sale is expected to be finalised by the end of September 1992, after which Australian Airlines will become a wholly-owned subsidiary of Qantas;

- all of the newly merged airline will be offered for sale;

- an International Air Services Commission would be established to allocate capacity rights on international routes among designated Australian international carriers;

- following negotiation with the New Zealand Government, the trans-Tasman market will be gradually opened to competition over a period of three years commencing November 1992, from which time Australasian carriers other than Qantas and Air New Zealand (eg Ansett) will be permitted to service trans-Tasman routes. Any new international carriers will only be allowed access to three Australia-New Zealand city pairs in the first year; and

- treaty arrangements will be completed which, from November 1994, will enable airlines of either country to operate domestic services in the other country.

While foreign airlines flying into Australia (other than New Zealand carriers) will still be unable to carry Australian domestic passengers, these changes should significantly increase competition on interstate and some intrastate routes.

Effects of interstate deregulation on intrastate aviation

The impact of interstate `deregulation' on intrastate aviation was evident well before its actual commencement in October 1990. Following the Government's announcement in October 1987 that it would abandon the two-airline policy, the two major airlines introduced new business strategies in anticipation of increased competition. This `repositioning' in the market impacted on intrastate aviation in a number of ways.

First, the major airlines consolidated their links with some of the regional and commuter airlines in order to secure the on-carriage of passengers. This occurred through the major airlines either purchasing, or increasing their equity in, regional and commuter airlines (eg Australian Airlines' acquisition of Eastern and Sunstate airlines, and Ansett's purchase of Kendell, Eastwest and Skywest airlines); and by them establishing links with the remaining regional and commuter airlines through commercial contracts.

Second, the major airlines withdrew from a number of the thinner routes (eg Melbourne-Wynyard), surrendering them to affiliated regional airlines, many of which also operated intrastate air services. This led to some 'downsizing' in aircraft size on these routes.

The deregulation of the trunk routes also served to remove restrictions on intrastate aviation operators. For instance, interstate deregulation removed restrictions on the provision of air services between trunk ports. It also removed the requirement that intrastate economy and discount fares be approved by the IAFC, and removed constraints on the importing of larger aircraft.

Some of the benefits of removing restrictions on the provision of air services between trunk route ports were realised immediately. For instance, considerable change occurred in Queensland, where a large number of centres were previously designated as trunk route ports (ie Cairns, Townsville, Mt Isa, Mackay, Rockhampton, Proserpine, Brisbane and Coolangatta). Deregulation has resulted in a significant expansion of services on many of these routes. The Queensland Government (sub. 41, p. 11) stated that:

> Since November 1990, passenger traffic on this [the Brisbane-Cairns] route has increased by some 80 percent and average fare levels have decreased considerably.

Deregulation of interstate aviation has created opportunities for the regional and commuter airlines to reorganise their air transport networks. Eastwest Airlines, for instance, has restructured its activities and expanded its services between tourist destinations. While such services are aimed primarily at leisure travellers, they also provide intrastate air services for the residents of the local regions.

The impact on intrastate aviation of other changes to route networks will take longer to assess. However, following interstate deregulation, regional and commuter airlines can now integrate their intrastate networks with trunk route destinations. For example, Flight West Airlines, which operates regional air services within Queensland, provided, for a time, a direct flight service between Coolangatta and Canberra, which was well outside its usual operating area. This option may provide an airline with a greater utilisation of aircraft capacity, thereby allowing it to reduce fares across its entire network, including intrastate legs. In addition, new airlines intending to compete with Ansett and Australian between the major centres may choose to operate initially over intrastate routes. Such a strategy may allow a new airline to reduce start-up problems (eg reservation systems and terminal access) whilst operating on a smaller scale.

The effectiveness of such strategies may in practice be limited by contrasting aircraft requirements of interstate and intrastate aviation. Experience indicates that aircraft of over 38 seats generally are the most efficient for interstate routes whereas, for intrastate routes, smaller aircraft have generally been found to be more appropriate. The BTCE (1988, p. 94) suggested that the scope for the

efficient use of the one aircraft over both inter- and intrastate routes may be confined to 'the long-haul Western Australian routes to the Pilbara'. TransContinental Airlines, which has yet to begin commercial operations, has indicated its intention to compete on these routes prior to operating interstate services.

Another effect of interstate deregulation has been a weakening of the market power of the major airlines and their affiliates. Removal of the regulatory barriers, which previously excluded other airlines from operating the trunk routes, has subjected the major airlines to the threat of competition, in addition to the direct competition experienced during the period that Compass was operating. In other words, the interstate aviation market has become contestable (see Chapter 4).

As noted in the next chapter, deregulation has resulted in significant decreases in air fares on interstate routes. However, fare reductions offered by the major airlines have also stimulated expectations that discount air fares should be available over intrastate routes. Thus, the operators of intrastate air services have not been insulated from the effects of the lower interstate air fares.

Following the announcement of interstate deregulation, terminal leases for the major airlines were renegotiated. The new leases have provided the major airlines with security of tenure over their existing terminals and adjacent land in return for them accepting the responsibility for terminal development and making some gates available for any new interstate airlines. These new arrangements have made it more difficult for the operators of intrastate air services to remain independent from the major airlines.

Coinciding with interstate deregulation, there has also been an increase in the level of cost recovery for aviation infrastructure. This has resulted in higher CAA air navigation charges, as well as increased FAC landing and other airport charges. These issues are discussed more fully in subsequent chapters.

In summary, the impact on intrastate aviation of removing many of the restrictions on interstate aviation has been significant. Change has occurred not only because a number of the trunk routes connect intrastate destinations, but also because deregulation has reduced the market power of the major airlines and has expanded the opportunities for regional and commuter airlines. However, the longer term ramifications of interstate deregulation on intrastate aviation will not be clear for some time.

3.3 State and territory licensing systems

The extent of state and territory regulation of intrastate aviation has varied markedly. For example, in South Australia and the Australian Capital Territory, only Commonwealth Government regulations have applied. In contrast, extensive regulatory controls have in the past applied in most parts of Australia. Although regulation has generally been reduced, considerable regulation remains in Tasmania and New South Wales, with some regulation remaining in Western Australia and Queensland (see Box 3.1).

Box 3.1: **Summary of intrastate licensing requirements, 1992**

State	Licensing requirements
NSW	Most routes presently have single-operator licences issued for 3 year periods. However, changes to the licensing arrangements will result in multiple operators on major routes. No restrictions on entry apply on new routes, or those which have been abandoned by licence holders.
Victoria	No licence requirements.
Queensland	Licences are required, although most services are open to competition. An exclusive licence has been issued for two routes ex Cairns. A subsidised single operator has been granted a non-exclusive licence to provide services in Western Queensland.
SA	No licence requirements.
WA	No restrictions on licences to operate on the jet network and the Perth-Rottnest Island (non-jet) route. Non-exclusive licences are issued for other parts of the non-jet network, which are serviced by single operators. Exclusive licences are issued to operators of remote subsidised services in the north of the State.
Tasmania	All commercial aircraft operations are subject to licensing provisions. Airlines of Tasmania is the sole licensed RPT operator on routes currently serviced.
NT	All services were deregulated in January 1992. Licences are still required by commercial operators.
ACT	No licence requirements.

New South Wales

Intrastate air transport in New South Wales is regulated under the *Air Transport Act 1964*. The Act requires that a licence be obtained before an operator can commence RPT or charter services on an intrastate route.

The present licensing system was introduced in 1987 following a series of amendments to the Act. The most important of these amendments: removed the requirement to consider the impact of intrastate air services on the state railways; deregulated the carriage of freight; allowed more than one operator to be licensed on any one route; allowed Australian Airlines to operate on intrastate routes; and established the Air Transport Council to administer the licensing of intrastate passenger transport.

The Air Transport Council makes recommendations to the State Minister on the award of licences, having regard to the suitability and viability of operators, the needs of the public, and the comparative merits of competing applicants. In the past, licences for RPT services have been issued on the basis of one operator per route, except on a few major routes where competition has been considered by the Council to be viable. Services linking Sydney with Albury, Dubbo, Lord Howe Island, Tamworth and Cooma (in winter) are currently operated by two licence holders.

The licences usually contain conditions relating to aircraft type, frequency of operation, timetables and insurance cover. About 70 licences for intrastate RPT services currently exist, with expiry dates ranging up to November 1994. Licences are issued for three year periods with no automatic right of renewal. Licensees of charter operations must not fly scheduled services and, until the restriction was lifted in 1992 (see below), were not permitted to fly more than 4 times in 28 days over the same route.

Since the termination of the IAFC, no control has been exercised over the level of airfares on any intrastate air services in the State.

Licence application fees are $100 for RPT licences and $150 for charter licences. These fees are deducted from the first annual licence fee of one quarter of one per cent of gross air service income. The New South Wales Department of Transport estimated that licence fees payable by RPT operators in 1990-91 were in the order of $275 000.

In 1990, the New South Wales Business Deregulation Unit reviewed the regulation and licensing of air service operators within New South Wales and issued a report (NSW Business Deregulation Unit 1990) which concluded that:

- regulation and licensing was no longer necessary, since the Commonwealth regulatory framework applying to interstate aviation had been removed;
- continued regulation would limit the benefits of Commonwealth deregulation and hinder the development of air services in country areas;
- not more than three years' notice should be given before abolishing the regulatory framework; and
- local government airport owners and other airport operators should be free to regulate access to their airports.

In September 1991, following the withdrawal of Hazelton Airlines from 14 ports in New South Wales country areas, the New South Wales Minister for Transport stated (sub. 32, pp. 2-3) that restrictions on entry would be removed to allow charter aircraft operators to enter routes relinquished by Hazelton or subsequently by other operators:

> Such routes are now effectively deregulated, and any further withdrawal of airline services will automatically extend entry to the routes concerned. ... [These] changes are interim measures for routes where operators withdraw. ... Commencing in May 1992, all remaining routes in the state which are served under long-term licences will be reviewed as licences expire.

Licence conditions relating to the approval of timetables were also lifted at that time.

The State Government subsequently released a discussion paper (NSW Department of Transport and Air Transport Council 1991) which canvassed options for the deregulation of intrastate aviation. The Department and the Council held discussions in six country towns with shire councils and local chambers of commerce during October 1991. This took place in the context of a regular process of community consultation. A final report on the outcome of the consultative process was submitted to the New South Wales Government in November 1991.

The Government stated in June 1992 that, while it supported total deregulation of intrastate services, it was not feasible to allow unlimited competition within the State because of congestion at KSA, and because the removal of all regulation could jeopardise services to some smaller communities.

While the majority of routes to KSA will remain licensed to single operators, the Government announced that additional operators would be permitted on a further six major routes. Second operators will be allowed on the routes from Sydney (KSA) to Armidale, Coffs Harbour, Port Macquarie, Wagga and Ballina/Lismore/Casino commencing January 1993, while a third operator will be licensed on the Sydney-Lord Howe Island route from October 1992.

Competition will be considered on cross-State routes (which do not include Sydney), and routes terminating at Sydney ports other than KSA (such as Bankstown), provided there is no likelihood of the diversion of passengers from one licensed operator to another. Competition will be allowed on routes to smaller towns where existing operators downgrade or discontinue services, as well as on any new country routes which are established. The removal of restrictions on charter operators which presently prohibit them from flying to particular destinations more than four times a month will also allow increased competition on some routes.

While some licensing conditions will be simplified, on some routes controls will be retained on requirements such as minimum aircraft size, seat capacity and frequency of service. For example, the Air Transport Council will not consider applications for licences for multiple operator routes involving the use of aircraft of less than 18 seat capacity. The Government has indicated that it will attempt to avoid involvement in detailed scheduling decisions for both competitive and non-competitive routes, and will give local councils greater opportunity to consult with licensed airlines about changing schedules to meet consumer needs.

The Air Transport Council will review during 1992 virtually all routes terminating at KSA, and has extended licences due for renewal in 1992 until the end of the review. Although licences for some routes will not expire until well into 1993, appropriate ports will be grouped for review at the same time to facilitate consideration of network development. It is anticipated that new licences will be valid for three years, with most dating from January 1993.

Victoria

The Victorian Government operated an intrastate aviation licensing system under *the Transport Act 1951* for 4 years to 1953. This system regulated the operations of intrastate air services in accordance with perceptions of the public need, and attached conditions to aircraft licences relating to routes, timetables, charges, records and other matters considered appropriate.

Following the passing of the *Transport Regulation Act 1955* and the termination of the licensing system, there has been no requirement for a state licence to operate intrastate air services in Victoria since 1953. Consequently, because the Commonwealth decided in 1979 to license commuter operations on the basis of safety requirements only, intrastate aviation in Victoria has been effectively deregulated since that time.

Queensland

Prior to the mid 1980s, the Queensland Government operated a licensing system for intrastate aviation. The *State Transport Act 1960* authorised the Commissioner for Transport to issue licences taking account of the public interest, and to set conditions relating to fares, routes, timetables and numbers of aircraft used. The licensing arrangements were intended to provide a mechanism for ensuring that commercial air services met appropriate community standards. To this end, they permitted restrictions to be placed on particular routes.

In January 1986, the Queensland Government commenced the deregulation of intrastate air routes to provide a more competitive environment among air service operators and a better choice for travellers. This process began with the decision to allow Eastwest Airlines to enter the state's trunk routes, which until then had been reserved for the two major airlines, Australian and Ansett.

The Queensland Government adopted an 'open skies' policy on 11 May 1987. This deregulated most of Queensland's internal RPT operations, except for the services mentioned below. Although there remains a requirement to acquire a licence, most commercial air transport services in Queensland are now open to competition: there is no restriction on the number of licences granted to operate scheduled or non-scheduled services on most routes.

In its submission to this inquiry, the Queensland Government stated (sub. 41, p. 6) that its policy is:

> ... to pursue economic deregulation 'as far as is practically possible'. This policy is being applied in the area of intrastate air services with the confirmed need for existing regulation being assessed.

The criteria currently applied to applicants for intrastate air service licences by the Queensland Government require them to possess:

- adequate insurance cover involving compliance with State and Commonwealth carriers' liability Acts;
- `good character and repute';
- satisfactory baggage handling, reservations systems and terminal access; and
- a letter from an accountant or bank testifying to `adequate financial capacity'.

Licences are restricted to a single unsubsidised operator on the Cairns-Weipa and Cairns-Horn Island routes. Restriction of access to these routes is contingent on the operator providing a daily jet service on the Cairns-Weipa route and a Dash-8 service on the Cairns-Horn Island route, and charging fares approved by the Queensland Department of Transport. The licences for these services expire at the end of 1992.

A single operator - Flight West Airlines - is paid an annual subsidy of approximately $2.7 million to provide scheduled services to 15 ports on the following routes in Western Queensland: Brisbane-Birdsville; Brisbane-Winton; and Townsville-Mt Isa. There is no restriction on the provision of non-scheduled services by other operators on these routes.

The Queensland Government has recently initiated reviews of the licensed services from Cairns and the subsidised services to western Queensland. The reviews are being undertaken by the Department of Transport in consultation with other government departments, industry participants, community groups and users. The findings of the reviews are expected later this year.

The direct costs associated with the Queensland Government's licensing of intrastate air services are somewhat less than $100 000 per year. Receipts from licence fees from the aviation industry amounted to approximately $36 000 in the 12 months to 31 October 1991. The Queensland Government stated that the fees relate to the types of services provided, not the number of aircraft operated. Current annual licence fees are $131 for non-scheduled air service licences, $261 for scheduled commuter air services with aircraft of up to 36 seats, and $1699 for scheduled airline services with aircraft having more than 36 seats. The Government stated that the option of removing licence fees is under consideration.

South Australia

South Australia is unique in that it has never implemented any form of state licensing of intrastate aviation. Thus, there is no requirement for a state licence to operate intrastate air services in South Australia. As is the case in Victoria, intrastate aviation in South Australia has been effectively deregulated since 1979.

Western Australia

The Western Australian Government operates a licensing system for intrastate aviation under the *Transport Co-ordination Act 1966* which provides for the review, control and licensing of transport services in the state. The Act enables the Minister for Transport to grant licences to operate air services, to impose conditions on licences, collect aircraft licence fees and pay subsidies to operators. Before a licence is issued, the Act requires that a number of matters be taken into account, including:

- the effect of proposed services on existing services;
- the possibility of improving existing services;
- the benefits to the public of the proposed service;
- the condition of airports to be used; and
- the `character, qualifications and financial stability' of the licence applicant.

Jet routes

Prior to 1983, a single operator was licensed for each non-trunk intrastate jet route. However, in 1983, four routes of the jet network linking Perth to Kalgoorlie, Geraldton, Port Hedland and Karratha were opened to competition. In the mid-1980s, Ansett WA faced competition from Eastwest, which operated jet aircraft on two routes. However, since the takeover of Eastwest by the Ansett group in 1987, and the termination of its operations in the Pilbara in 1988, Ansett WA has been the only operator of intrastate jet services. Some competition is provided by Skywest (which is also a member of the Ansett group) which operates turbo-prop aircraft on the Kalgoorlie and Geraldton routes.

Following expressions of interest from several airlines wishing to operate on the jet network in competition with Ansett WA, all of the intrastate jet network was opened to competition in March 1991. In addition to the four ports mentioned above, the deregulated jet network now comprises the medium density ports of Broome, Kununurra, Paraburdoo and Newman, and the low density ports of Carnarvon, Learmonth and Derby.

According to the Western Australian Government, its present policy enables any operator to obtain a licence to operate over all or part of the existing jet network, regardless of the type of aircraft used. Nevertheless, Ansett WA is still the only operator of jet aircraft on the jet network.

At the draft report hearings, the Western Australian Government stated that approximately 90-95 per cent of all intrastate passengers now fly on deregulated routes.

With regard to the ongoing need for a licensing system, the Government stated in its initial submission (sub. 31, pp. 4-5) that:

> The continuing need to obtain a licence recognises that some parts of the [jet] network are lightly trafficked, and as a result, there may need to be some government intervention in certain circumstances in order to maintain acceptable levels of service and cost. ... Any intervention that did occur would probably involve some control over fare setting on certain routes and would be aimed at ensuring that community services were maintained at levels acceptable to local communities.

The following conditions are attached to a licence to operate on the jet network:

- the service has to be operated according to timetables, fares and freight rates approved by the Minister for Transport;
- 30 days' notice is required to be given of any intention to withdraw passenger services from any part of the network; and
- a statement of gross earnings is to be submitted regularly.

Licence holders are required to pay an annual licence fee of 1 per cent of gross earnings.

The Government stated that, under normal circumstances, controls over timetables, fares and freight rates will not be exercised on those routes where there is effective competition. In these cases, airlines are only required to advise of changes in these matters without the need to obtain prior approval.

At the draft report hearings, the Government said that, because of the lack of competition on the state's jet routes, it is actively involved in fare control and, to a lesser extent, in looking for additional operators to provide services on these routes (transcript, p. 265).

> We have in the past even sought expressions of interest from prospective operators to operate a network, and ... the search for another operator is still ongoing ...

The Government said that it would withdraw from the control of fares once direct competition emerged.

Commuter routes

Except for the Perth-Rottnest Island route, the non-jet network consists of routes serviced by single operators licensed on a non-exclusive basis. The major licence holder is Skywest, which has licences for 9 regulated routes. Skywest stated that there had been a recent unsuccessful application for a second operator on the Perth-Esperance route (sub. 71, p. 5):

... the State Department of Transport undertook extensive research into the effect a second operator may have on existing services. It also sought the opinions of the local Esperance community on the introduction of competition into their air services. The State Government concluded that granting a second licence would have a detrimental effect on the level of service provided.

Under the licensing arrangements, fare increases and timetable changes require specific approval. Other licensing requirements are essentially the same as those for jet services. This regulatory policy will be reviewed by the Department of Transport in 1992-93.

The Western Australian Government subsidises commuter airlines on three routes licensed to sole operators in the West Kimberleys, the Pilbara and to Kalbarri and Denham (see Appendix C).

Charter services

Considerable restrictions are placed on charter flight licences in order to protect the operations of providers of RPT services. Specific flights cannot be advertised; the cost of flights must generally be paid in a lump sum as distinct from individual fares; and flights may not operate more than once a week over RPT routes.

Tasmania

In accordance with the State's *Traffic Act 1925*, the use of all forms of transport within Tasmania as public vehicles, including aircraft used for intrastate transport, requires State Government authorisation. Consequently, a licensing arrangement applies to commercial operations, such as agricultural spraying, charter operations and the carriage of freight, as well as to RPT passenger services. Although licences do not provide exclusive rights, the administration of the system has resulted in Airlines of Tasmania being virtually the sole provider of RPT passenger and freight services on all intrastate routes since 1982.

The Tasmanian Transport Commission, which is responsible for issuing licences, has the power under Section 17 of the Act to impose conditions and restrictions on licences to ensure that:

- conditions of service of employees are consistent with public safety and the efficiency of the service;
- fares and freight rates are `reasonable';
- `wasteful competition' with alternative forms of transport is avoided;
- timetables and ports of call comply with the Commission's requirements; and
- the `safety and convenience' of the public with respect to the use of aircraft is generally secure.

Further, the Commission is required under Section 58 of the Act to have regard to:

- the `suitability' of the routes on which a service shall be provided under the licence;
- the extent, if any, to which the needs of the proposed routes are already `adequately served';
- the extent to which the proposed service is `necessary or desirable in the public interest';
- the `needs' of the district or locality as a whole in relation to traffic; and

- the `suitability and fitness' of the applicant to hold the licence.

The Tasmanian Department of Premier and Cabinet stated that applicants who wish to provide intrastate services are free to apply for a licence under the *Traffic Act*. If there are no objections, a three-year licence would normally be granted.

In recent years, most applications have been opposed by Airlines of Tasmania on the grounds that the introduction of competition would lead to a reduction in the viability of services, both for the applicant and Airlines of Tasmania. Opposition to new entrants has even applied to a route where there was no existing service, viz Devonport-Flinders Island.

Intrastate aviation (and other public vehicle) licences are subject to a three yearly review. The last licence period expired on 30 June 1992.

There is provision for appeal to a tribunal against a refusal to issue a new licence. Applicants who unsuccessfully appeal are required to pay the costs of the successful party as well as their own costs.

Information concerning licence applications supplied by the Tasmanian Department of Roads and Transport indicates that five licences for intrastate RPT services have been issued since 1982. Licences have been issued to :

- Eastwest, November 1983 (for the Devonport-Wynyard route);

- Eastwest, July 1985 (Hobart-Devonport on Saturdays and Sundays);

- Aus-Air, December 1987 (Smithton-King Island);

- Par Avion, December 1987 (Launceston-Lady Barron); and

- Trans Continental, a potential entrant in the deregulated interstate aviation market, March 1991 (Hobart-Launceston).

The decision to issue a licence to Aus-Air was overturned by the Public Vehicle Licensing Appeal Tribunal in April 1988. Par Avion's licence was not officially endorsed because, according to the Department of Roads and Transport, CAA approval was not confirmed. The remaining RPT licences are current, although no RPT services are presently provided by the licence holders.

The latest application known to the Commission was made in August 1991, when King Island Airlines applied to operate a service between Launceston and King Island in conjunction with its Melbourne-King Island service. The application was rejected by the Tasmanian Transport Commission on the grounds that:

- the applicant did not demonstrate that the current service was inadequate in terms of timetable, fares or aircraft;

- the applicant did not demonstrate to the Commission's satisfaction that the stated new travel demand was real;

- the applicant did not demonstrate that any new service would be viable in the long term; and

- the proposed service would have a potentially serious impact on the existing operator, Airlines of Tasmania.

King Island Airlines lodged an appeal against this decision, but the appeal was not proceeded with on technical/legal grounds. The company stated that it has subsequently lodged a new licence application.

In view of the administration of the current licensing provisions, the only scope for direct competition from other RPT operators on Tasmanian intrastate routes is where the intrastate journey forms part of an interstate trip. For example, Promair provides a service from Port Welshpool in Victoria to Launceston via Flinders Island. Promair is allowed to carry passengers on the intrastate leg between Flinders Island and Launceston, but only if this journey forms part of an interstate trip. Intending passengers must prove that they are undertaking an interstate trip before commencing their journey.

Airlines of Tasmania's monopoly over intrastate air services does not extend to general aviation services such as joy flights and charter work. In these cases, special condition licences are issued if it is determined that they would not undermine the general viability of Airlines of Tasmania and the provision of its services. According to Airlines of Tasmania (sub 46, p. 2), charter operators:

> ... continuously operate services across our RPT route, both carrying passengers and freight ...

Airlines of Tasmania stated that its airfare increases are subject to the approval of Transport Tasmania, and that detailed costings have to be supplied to support requests for an increase in air fares.

The Tasmanian Development Authority stated in a letter to the Commission that Airlines of Tasmania was receiving financial assistance in the form of a fully secured loan of $150 000 granted in 1984. The Authority stated that interest rates for term loans in November 1991 were 1 to 1.5 per cent higher than the rate paid by Airlines of Tasmania (13.5 per cent fixed), so that the airline was in receipt of an after-tax concession equivalent to 5 cents per passenger trip. At the draft report hearings, Airlines of Tasmania informed the Commission that, in accordance with the loan provisions, interest on the loan was capitalised for a number of years. This drew the loan out to over $300 000. According to the Tasmanian Development Authority, the outstanding balance of the loan was $348 482 as at 14 November 1991.

Airlines of Tasmania stated that, as the fixed interest rate of the loan now exceeds the rates applicable to term loans, the interest terms attached to the loan could no longer be considered concessional. However, the current differential between the loan rate and commercial interest rates is not a relevant measure of the subsidy component in the Government's loan to the airline. The appropriate measure is the average margin between the rate of the loan and the rate that a borrower comparable to the airline would have paid to a bank for a similar facility over the period since 1984.

Northern Territory

All commuter air services in the Northern Territory were deregulated in January 1992. Prior to this, the licensing of intrastate aviation was subject to the *Northern Territory Aviation Act 1980.* This Act gave the Director of Transport and Works wide ranging powers to grant licences to aircraft operators offering scheduled, charter or aerial work services.

Section 9 of the Act required the Director to take account of:

- the necessity for the service proposed to be provided and the convenience that would be afforded to the public by the provision of the proposed service;
- the adequacy of the existing service for the conveyance of passengers or goods upon the routes, or within the area, to be served;
- the effect of the proposed service on the existing service;
- the character, qualifications and financial situation of the applicant; and
- any other matters that may be considered relevant.

No application or licence fees were applied.

Intra-territorial air transport routes in the Northern Territory can be divided into three categories: Darwin to Yulara via Katherine, Tennant Creek, and Alice Springs; Darwin to Gove, Groote Eylandt and Jabiru; and a number of services to remote communities.

Darwin-Yulara route

The Department of Transport and Works stated that Ansett NT was granted a five-year exclusive licence from August 1988 to operate not only the lucrative Alice Springs-Yulara route, but also the less attractive Darwin-Alice Springs route with the two intermediate stops. Several of these exclusive routes had additional operators providing supplementary RPT services, with the approval of Ansett NT.

In 1991, competition from interstate flights into Yulara operated by Australian Airlines caused Ansett NT to withdraw from the Darwin-Alice Springs service. Another operator was then licensed to operate the Darwin-Alice Springs service.

Darwin to Jabiru, Gove and Groote Eylandt

Services from Darwin to Groote Eylandt and Gove were licensed on an exclusive basis to Ansett NT between 1981 and 1988. No other operator was permitted to operate over this route without the permission of that company. Ansett NT, which was the only applicant when competitive tenders were called in 1988, surrendered its five-year licence for the route in 1991.

The Darwin-Jabiru route was deregulated in 1985 to encourage greater tourist traffic to Kakadu National Park. The traffic volume on this route is low owing to the relatively short distance between the centres and the improved road between them.

Remote area services

All other RPT routes in the Northern Territory were licensed to single operators prior to January 1992. Under the terms of the *Northern Territory Aviation Act 1980*, the RPT operators were also licensed as sole charter operators on the respective routes. However, the practice developed over time for the licensed charter operators to sub-let their operations for a percentage of the charter fee.

Deregulation of RPT services

The Northern Territory Government announced in July 1991 (Northern Territory Minister for Transport and Works 1991) that all commuter services would be deregulated as from January 1992. It is expected that the *Northern Territory Aviation Act* will be repealed later in 1992. Until the Act is repealed, there will continue to be a requirement for all air service operators to have a licence issued under the terms of the Act.

Australian Capital Territory

Intrastate aviation within the ACT is limited mainly to training and recreational flying. There has never been any licensing requirement for aviation conducted within the territory. Intrastate aviation in the ACT was effectively deregulated by the Commonwealth in 1979.

4 ECONOMIC REGULATION OF INTRASTATE AVIATION

A desire to provide stable and regular services at affordable prices underlies much of the regulation of intrastate aviation which has been introduced by state and territory governments. Although the extent of regulation has been reduced, varying degrees of control remain in several states. Such regulation benefits some operators and users of intrastate aviation services, but imposes costs on other users and on some other sections of the community. Deregulation would improve efficiency, provide users with air services which are more attuned to changing market conditions and enhance economic performance generally.

Consistent with developments in interstate aviation and in other countries, regulation of intrastate aviation by state and territory governments has been reduced over the last decade. Nonetheless, in Tasmania, New South Wales, and to a lesser extent Western Australia, significant 'economic' regulation of intrastate aviation remains (see Chapter 3). Such regulation restricts entry to (and exit from) the industry and stipulates conditions of service, including fare levels and structures, aircraft type, schedules and routes. State or territory regulation does not directly encompass safety matters. These are the responsibility of the Commonwealth Government (mainly the CAA) and are discussed in Chapter 6.

In assessing the case for intrastate regulation, this chapter considers the major objectives underlying regulation, examines aviation performance under varying regulatory environments, considers costs that result from regulation and draws conclusions regarding desirable changes. While the approach is to consider the key issues in turn rather than provide a case-by-case examination of each regulated state, the particular circumstances of individual states are considered. In so doing, it is recognised that the regulatory environment has been shaped by the considerable variation in geographical and demographic characteristics, the composition and structure of industry, and economic circumstances existing between the states.

4.1 Objectives of regulation

Economic regulation of intrastate aviation has existed for many decades. For example, in Tasmania it stems from the *Traffic Act 1925* which was enacted to ensure that, among other things, fares and freight rates were reasonable and that 'wasteful competition' with alternative transport modes was

avoided. While some participants considered that these objectives are equally relevant today, others viewed regulation as a means of fulfilling broader economic and social objectives. In contrast, some participants considered that regulation can no longer be justified on any of these grounds.

This chapter initially focuses on the major objectives of regulation of intrastate aviation. These relate to: the provision of essential services; stability; quality; fare minimisation; airport congestion; and safety. In some instances, these factors are perceived benefits stemming from regulation rather than being the primary motivation for its introduction.

Provision of 'essential' services

Governments have argued that some air services are 'essential'. While it is not clear precisely what criteria have been used to categorise a service as 'essential', the routes in question have generally been those serving sparsely populated areas. In some areas where roads are poor or non-existent, air transport provides the only realistic means of travelling to the closest regional centre. Examples include King and Flinders Islands and remote areas on the mainland such as the Channel country in western Queensland, remote properties in central Australia and northern parts of Western Australia. It is argued that it is essential that such areas have access to air services and that, in the absence of government intervention, no air service would be provided or, alternatively, that the service would not be adequate for the region's needs.

Fears that adequate air services will not be provided are generally based on one of two premises:

- The volume of traffic is small or irregular. Consequently, without government intervention it is contended that the potential returns will not be sufficient to entice an airline operator to provide a service.

- The volume of traffic is more than sufficient to enable a single airline operator to generate an adequate return, but insufficient to support two operators. Consequently, there is a concern that, in the absence of entry restrictions, more than one operator would wish to operate the service. In these circumstances, `destructive' competition could result in neither operator being able to operate profitably, leading to the eventual withdrawal of the service.

For example, the Tasmanian Government (sub. 33, p. 1) stated:

> In the field of regulated passenger services, the Tasmanian Government's primary aim is to encourage the stable promotion of a basic level of service to a number of remote areas of the State. At present, the carrier Airlines of Tasmania is the sole provider of regular intrastate passenger and freight services. The rationale for this situation is that the routes to be serviced within Tasmania are too thin to support competition.

Similarly, the Western Australian Government (sub. 31, p. 3) commented:

> The Government's policy for the non-jet network is aimed at encouraging initiatives which will result in greater opportunities for air travel. ... it has been judged that there is a legitimate need to regulate entry in order to maintain reliable, efficient and viable air services to and within regional areas of the State.

The Queensland Government (sub. 41, p. 6) stated:

> The Queensland Government position is that, whilst the provision of intrastate air services on an open and competitive basis is generally the appropriate means to ensure the most efficient and effective provision of such services, in some circumstances Government intervention will be required to ensure that small or isolated communities receive adequate air services ...

In some instances, governments have supported services to remote areas by providing subsidies. These services have mainly been to very small isolated communities and have involved relatively modest budgetary outlays. (The nature and extent of these are discussed in Appendix C.) However, essential service objectives in respect of more populated areas have been addressed mainly by regulation.

Regulation may, in principle, permit a service to be viable in one or both of two ways.

- Regulation may eliminate actual or potential competition and thus allow fares to be maintained at levels sufficient to generate a satisfactory rate of return. For example, regulation can confer exclusive rights on an operator to service a designated route. This may allow the operator to set and maintain fares at levels sufficient to make at least a `normal' profit.

- Regulation may entail providing an operator with exclusive rights over a network of routes, but with an accompanying requirement that all routes be serviced at a specified minimum level, including `essential' routes. By constraining competition over the network of routes, this arrangement permits an operator to cross-subsidise one or more thin routes by thick profitable routes. In simple terms, this can result in air fares on thin routes being below the incremental cost of providing the service, with fares on thick routes being above full cost. Thus, higher than normal profit margins on parts of the network enable an operator to provide other, less profitable (or even loss-making) services which, in the absence of regulation, would not be provided.

However, it need not follow that regulation is necessary, nor that it is the most efficient way of providing `essential' services. In an unregulated environment, services deemed to be essential may well be provided, and at a lower cost. Recent events in New South Wales, the results of deregulation in South Australia in 1979 and experience in other countries provide some support for this proposition.

In *New South Wales*, Hazelton Airlines has for some time been licensed to operate an extensive network of routes, a number of which involve services to relatively small towns (eg Brewarrina, Coonamble and Quirindi). However, in September 1991, Hazelton withdrew services from fourteen of the smaller ports in its network. The Government subsequently opened these routes to

competition. Despite fears to the contrary, this has not resulted in services being terminated (see Appendix F). Indeed, the New South Wales Department of State Development (DSD) advised the Commission that not only have no centres lost their air services, but fares have decreased on almost every route. (Fare levels are discussed in greater detail in subsequent sections of this chapter.)

Since deregulation in South Australia in 1979, the provision of services has changed: four ports served by scheduled services in 1977-78 are no longer served, but there were services to six additional ports in 1990-91. Looking specifically at those regions with the thinnest routes in the State, a similar situation has existed. The number of small ports served increased significantly immediately after deregulation. While there was a decline subsequently, the number of small ports served in 1990-91 remains higher than that prior to deregulation (see Table 4.1).

Table 4.1: **Service provision on thin routes in South Australia** [a]

Region	*Passengers*	*Ports served from Adelaide* [b]			
	1990-91	*1977-78*	*1982-83*	*1986-87*	*1990-91*
Iron Triangle	6 245	2	3	1	2
Lower Eyre	6 455	0	2	2	2
Renmark/Mildura	5 086	1	2	2	2
South East	0	0	3	0	0
Upper Eyre	7 204	2	5	4	4
Upper North	11 421	5	5	3	3
Total Ports	36411	10	20	12	13

a Includes Mildura.
b Direct and indirect services.
Source: DOTAC estimates.

Most of the information available to the Commission about deregulation in other countries suggests that thin routes generally continue to be served (see Appendix D). For example, services formerly provided by the trunk carrier in New Zealand were replaced by expanded services provided by regional operators using smaller aircraft. In Canada, lower density routes were devolved to feeder carriers operating more frequent services with smaller aircraft.

The concern about 'destructive' competition is that, in the absence of barriers to entry, competitors will enter and exit a market causing the incumbent's or their own financial failure, possibly resulting in no service being provided at all. However, this overlooks the dynamics of markets too small for more than one operator. Entry will only occur if a competitor believes it can displace the incumbent. New competitors may enter, some succeeding, some failing, some bringing down the

incumbent as well as themselves - but the underlying route characteristics will mean that there will always be scope for one operator to provide a viable service. In the medium term, it is likely that this will be recognised by both the existing operator and potential entrants. In the case of the existing operator, it would most likely be reflected in 'competitive' market behaviour which is intended to deter entry. This would involve the incumbent operator adjusting services so as to best meet users' requirements while containing fare increases. In the case of potential entrants, past failures and the performance of the incumbent are likely to strongly influence decisions about entry.

While these considerations suggest that the contribution that regulation can make to the provision of air services on 'essential' routes may be overstated, it cannot be denied that regulation may in some circumstances facilitate the provision of services that would otherwise not be viable. Equally, however, it is important to recognise that the use of economic regulation to provide such services can entail significant costs to the community. The costs associated with regulation are considered in Section 4.2.

Stability

Regulation of intrastate aviation is credited by many with creating 'stability' within the industry. For example, Airlines of Tasmania (sub. 14, p. 11) stated:

> Effective licensing provisions and other controls have achieved in Tasmania the objectives of the Act, ie to provide stable, efficient, economical air services to all areas of the Tasmanian community by protecting prime routes ...

Stability may refer to various aspects of aviation services including the network (in terms of service provision), ownership and service quality. It is seen as important because Australia's low population density has resulted in services to many areas being supplied by sole operators. Thus, any changes introduced, or forced upon, the sole operator can have significant repercussions for users as they do not have access to an alternative provider of air services. However, as noted in Section 4.2, changes in ownership, scheduling and quality are not unique to aviation - such changes are common in most other sectors of the economy.

So long as the regulated operator remains viable, regulation may promote stability in the sense of certainty of service provision and consistency of service quality. By restricting competition, regulation can, for example, eliminate one factor contributing to operator turnover. Similarly, in some jurisdictions there is a licensing requirement preventing immediate exit from a route (for example, notice of 30 days is required in Western Australia). Yet, whatever the regulatory environment, the nature of the industry tends to be one of change. This is particularly so in the commuter sector where, like small businesses elsewhere in the economy, there is a significant turnover of operators. The withdrawal of Hazelton Airlines from many regulated routes in New South Wales illustrates that, even with regulation, it is not possible to guarantee that a service will continue to be provided by the one operator. Neither is this desirable in itself. What is presumably of most importance in assessing stability is the nature of the service provided to the community, not who provides it.

In both unregulated and regulated states, operators have frequently changed, and service quality has varied.

- Australia-wide, the total number of commuter operators declined from 55 in 1979-80 to 41 in 1990-91. Only ten airlines remained continuously in operation throughout this period.

- From 1972 to 1989, during which time interstate aviation was extensively regulated, the number of ports served by the trunk operators (Ansett and Australian) decreased from over 300 to less than 50, and those served by commuter airlines increased from around 150 to close to 330.

- Following deregulation in South Australia in 1979, there has been a rapid turnover of operators - of the 10 operators in the South Australian market in 1991, only three were flying prior to deregulation (and trading under different names).

The extent of networks has not altered markedly as a consequence of operator turnover, although in most cases there has been a trend towards the use of smaller aircraft and some associated changes in the frequency of service. In some cases, withdrawing operators have not been replaced, leaving ports or routes unserviced. Nowhere has there been total stability.

As economic conditions change and as new transport technologies are introduced within states and in particular regions, it seems logical that the demand and supply of air services may also need to change, irrespective of whether services are regulated or not. For example, in Western Australia, Bunbury is no longer serviced by RPT operators, partly because of the competition provided by improved rail and road services to Perth. Similarly, the introduction of a faster ferry service has significantly reduced demand for air services between Perth and Rottnest Island. Indeed, it can be argued that, by deferring adjustment to change, regulation can sometimes result in the effects of change being concentrated in a relatively short period of time, and thus being more disruptive than would be the case if adjustments were not impeded by regulation.

Airlines of Tasmania (sub. 14, p.ÿ9) claimed that the deregulation of Tasmanian aviation would bring about `total destabilisation':

> ... such an impact, considering the very poor economies, would result in ad hoc air services, disjointed charter operations and would ultimately lead to the winding down of a regional airline in this State.

Similarly, Hazelton Airlines (sub. 72, p. 1) argued that:

> ... deregulation ... will destabilise the aviation industry and cause irreversible damage to the aviation infrastructure within this state.

However, given the mobility of resources in intrastate aviation, this scenario is questionable. For example, the NSW Farmers' Association (sub. 21, p. 8) argued:

> The air routes abandoned by Hazelton Airlines quickly received an alternative service. Whilst it is possible that over time there will be some rationalisation on these routes, the experience does show that air service resources can move relatively freely between operations.

This judgment is shared by the CAA (sub. 25, p. 18) which noted that:

> The commuter airline sector has a history of instability ... the regulation of intrastate aviation does not seem to have avoided instability within the sectors servicing those markets.

If the current licensing provisions were removed, some instability may occur in the short term as operators adjusted to the new environment. But, as discussed earlier, this could be expected to settle down as industry participants assess the nature of the market and the scope for profitable operations on different routes. This accords with the experience of those states and overseas countries which are totally unregulated, and even those partially deregulated. For example, despite some changes in operators, continuous service has been provided on most thin routes in South Australia since deregulation in 1979 (see Appendix F).

Quality

Regulation has been used to ensure the provision of services at what has been perceived as a higher (and more suitable) 'quality' than would otherwise occur - in terms of scheduling, equipment and reliability. For example, in announcing the maintenance of entry restrictions on intrastate routes into KSA, the New South Wales Government (sub. 80, p. 1) stated that:

> ... there is concern in many areas of the State that, in practice, [competition] would have an adverse effect on the levels and standards of service currently available.

The New South Wales Air Transport Council (1992, p. 5) subsequently released information on arrangements for future intrastate licences which stated:

> ... Aircraft proposed for use should generally be modern and pressurised... Preference will be given to jet aircraft on routes that can sustain them.

Similarly, the Queensland Government provides exclusive licences to the operators of services on the Cairns-Horn Island and Cairns-Weipa routes, contingent on there being a daily service by a specified type of aircraft (a Dash 8 and a jet aircraft respectively).

The question must be asked, though, whether government is well-placed to assess what quality of service will best accommodate users' demand. Can it adequately assess users' valuation of the tradeoffs between quality and fare levels? What constitutes quality of service: does it, for example, relate primarily to aircraft characteristics, frequency of service, reliability of service, or to all three?

Grafton City Council (sub. 10, p. 3) stated that an air service 'must be relevant to the community it serves, and meet all the criteria of frequency, punctuality, safety and comfort at the least minimum cost to consumer'. However, these dimensions of quality of service are highly interdependent. For instance, while the replacement of jet aircraft by non-jet aircraft on a particular route would increase flight times, it could also lead to more frequent flights and lower prices. This has been the experience following the deregulation of routes in a number of states. For example, since deregulation in South Australia, service quality has risen in terms of increased flight frequency and lower average load factors, but the average aircraft size is now smaller. At the initial hearings, the General Aviation Association (transcript, pp. 302-3) stated that most South Australian consumers would regard this as an improvement in the quality of service.

The form of regulation in some states suggests that governments view quality as being closely related to aircraft type. In particular, service by larger aircraft has been preferred (typified by the New South Wales Government's latest policy). However, the experience in South Australia implies that, on the basis of what users are prepared to pay, smaller aircraft and a more frequent service are preferred to the larger aircraft (and lower frequencies) which were formerly required by regulation in that State. For example, Duldig and Findlay (1990, p. 6) state:

> ... while average aircraft size has fallen by nearly a third since 1978 (and nearly halved since 1973), frequency has risen and load factors fallen. These outcomes suggest that the regulatory process prior to 1979 had the effect of severely distorting the available combination of aircraft size, frequency and loads. That system, we suggest, led to a bias towards a choice of relatively large aircraft. Consumer preferences appear to involve a shift towards smaller aircraft, despite the rise in costs per seat/km, in return for higher frequency.

At the draft report hearings, Hazelton Airlines agreed that, given the choice, passengers prefer more frequent services in smaller aircraft - but only to a certain point. It noted the existence of 'white-knuckled fliers' who could never be persuaded to fly in nine-seater aircraft.

Some inquiry participants questioned the capacity of regulation to improve the quality of intrastate aviation. For instance, the Municipality of Flinders (sub. 5, p. 2) commented on regulation and its effect on the quality of intrastate aviation in Tasmania.

> Under the current licensing system the holder of the monopoly is given no incentive to offer a better quality of service above the basic, upgrade type of aircraft used or [offer] attractive fare structures at various times. In short there is no incentive for the operator to smarten up his/her act.

On the other hand, some fear that a market-based approach would invariably lead to a deterioration in quality. However, there is some evidence to the contrary. While it is recognised that concurrent changes in other factors can also explain variations in quality, the following examples suggest that deregulation can lead to improvements in the range of service features.

- Evidence from South Australia suggests that, in that State, frequency actually increased under deregulation, and that bunching of services (parallel scheduling by competing operators) has not occurred.

- The Queensland Government (sub. 41, p.ÿ11) reported improved aircraft quality following deregulation:

  > Since deregulation of intrastate aviation in 1987 there has been significant expansion of services on many routes. Queensland regional airlines have increased services and re-equipped their fleets with larger, more sophisticated aircraft.

- Similarly, with some exceptions, the experience of interstate deregulation is one of improved overall service quality. As stated by the Bureau of Transport and Communications Economics (BTCE 1991b, p. 59):

  > After one year of deregulation consumers have benefited from increased quality of service with respect to: frequency of flights; non-stop services; on-time performance; choice of operators; and in-cabin and on-ground service. There has been a small decrease in quality of service for some consumers due to higher load factors and reduced accessibility to RPT services on some non-trunk routes.

  Pending the commencement of operations by Southern Cross Airlines, the choice of operators has been limited to two since the collapse of Compass Airlines, but other improvements appear to have been maintained.

The evidence in various overseas countries is also of improved service quality following deregulation. For example, deregulation in New Zealand has resulted in more flexible and competitive fares, improved scheduling and an expanded route network (BTCE and Jarden Morgan 1991).

Fare minimisation

An argument commonly advanced in favour of regulation is that it enables price - in this case air fares - to be minimised or controlled to the benefit of consumers. This argument is dependent upon regulation minimising costs (and thus fares) by shielding licensed operators from competition so as to enable them to realise economies of scale in aircraft size and economies of density. It is also dependent on there being sufficient incentive for sole operators to minimise costs, and on the existence of mechanisms to prevent sole operators from exploiting market power and increasing prices so as to make `monopoly' profits.

As is the case with other individual objectives, fare minimisation may involve a tradeoff with other goals. For example, the achievement of minimum fares may not be compatible with government objectives in relation to the desired quality of service (eg aircraft type or frequency).

Conflicting evidence

In submissions to the first round of hearings and also to the draft report hearings, a number of claims and counterclaims were made by airline operators about comparative fare levels. For example, Airlines of Tasmania (sub. 14, p. 4) provided data on air fares, on the basis of which it concluded:

> Our air fare structures and freight rate structures are the lowest of all regional carriers in Australia. This has been brought about by the fact that regulation of our very low density routes allows such air fare levels to apply.

While the Tasmanian Government (sub. 85, p. 3) also concluded that Airlines of Tasmania's fares were lower on average than those of other commuter airlines, it commented:

> While [the analysis] may cast doubt on the relevance of the Commission's findings on pre- and post-deregulation prices in Tasmania's case, the Government is nonetheless of the view that it would be more appropriate for competitive pressures in the market place to determine prices.

Claims that Airlines of Tasmania' fares were low were disputed by Promair. It claimed that the comparisons were invalid because they failed to take account of significant differences in aircraft types on the services for which fare comparisons were provided. In turn, King Island Airlines (sub. 54) supplied data to show that its fares (on a per-kilometre basis), and its freight rates in particular, were less than those available from Airlines of Tasmania.

Conflicting claims based on comparisons of air fares on regulated and unregulated routes were also made by other airlines, including Eastern Australia, Kendell, Hazelton and Skywest.

There are two major areas of difficulty in evaluating these claims. First, it is not clear that the routes selected for comparison are representative of the operations of the designated carriers. Second, the different findings of those participants who supplied comparative fare data may, to a significant extent, be explained by differences in factors which are not reflected in the comparisons. These factors include: sector length, equipment size and quality, load factors, airport congestion, airport charges, route densities, frequency, scheduling, extent of network, freight business, seating density and, perhaps most importantly, the extent to which the actual average fare paid varies from the 'standard' listed fare. In assessing the influence of the regulatory environment (and the number of competitors) on fares, it is important to compare reasonably like services.

Selection biases may be less likely where data on comparative fare levels are supplied by an independent party. Two participants that fall into this category are DOTAC and the New South Wales DSD:

- Based on a range of fare comparisons, DOTAC (sub. 30) concluded that there is some evidence to suggest that fares on deregulated intrastate routes were lower than fares on routes of similar lengths in regulated markets.

- The DSD surveyed air fares on those routes relinquished by Hazelton Airlines in September 1991, all of which were subsequently opened up to competition. Immediately after this change, it found that fares were the same on three services, but that on all other routes fares had declined, by margins of up to 14 per cent. A subsequent survey in April 1992 showed that, compared with standard fare levels prior to the change, fares on two routes were higher, fares were the same on one route, and fares on all other routes were lower than the fares existing at the time Hazelton withdrew. By July 1992, fares on five routes had fallen further, with no change in fares on other routes.

While these comparisons may overcome selection biases, they do not take account of the other factors which can influence fare levels.

Commission survey

In practice, it is not possible to take account of all factors which determine air fares. However, in an attempt to make more meaningful fare comparisons than those by participants, the Commission obtained additional data from a survey of intrastate airline operators. In particular, information was obtained on average fares (ie the revenue yield) in August 1991 on major intrastate routes. This provides a more meaningful measure of fares than can be obtained by using a single fare (standard or discount) for specific routes. Information was also sought on other factors which influence fares (eg aircraft type, load factors and landing fees).

Data were supplied on a confidential basis by twelve intrastate airline operators. The data were collected from each operator in respect of each of its most heavily patronised routes. The data covered both regulated and unregulated routes.

Analysis of the data demonstrates that regulation had a significant effect on air fares. Taking account of distance and, where possible, other factors which affect fare levels, the analysis suggests that, on average, fares were about ten per cent higher on regulated routes relative to unregulated routes. (Further details about the analysis are outlined in Appendix E.)

Other studies

A number of independent studies have also examined the impact of regulation on air fares. The studies generally support the proposition that air fares are, on average, likely to be lower if air routes are competitive.

Duldig, Findlay and Wong (1990) undertook a study for the NSW Business Deregulation Unit. At a similar time, Crowley and Findlay (1990) prepared a report for the South Australian Director

General of Transport. The studies show that, between 1978 and 1987, fares increased in real terms in New South Wales by 18 per cent, double the increase in South Australia where no state regulation applied. Crowley and Findlay (1990, p. 55) reported that short-haul fares on regulated routes increased much more than those in South Australia. Australia-wide, short-haul fares rose in real terms by 56 per cent between 1978 and 1987, primarily reflecting the adjustments to the short-haul fare formula in 1981 following the Holcroft Inquiry. Over the same period, fares in South Australia increased by only 9 per cent.[1]

The Western Australian Department of Transport submitted an illustrative analysis of aircraft costs for thin routes which it said were representative of a triangulated route serviced by, first, a sole regulated operator and, second, by two competing operators. The analysis suggested that aircraft costs - and hence fares - would be around 1 per cent lower if the routes were serviced by a sole (licensed) operator. As recognised by the Department (sub. 82, p. 6), the outcome is 'hypothetical and makes a number of assumptions'. More importantly, the analysis takes no account of costs other than aircraft operating costs. For example, it abstracts from terminal costs, administrative expenses and overheads. It could be argued that, because of scale economies, these costs would be lower if there was a sole operator. However, the experience since deregulation of interstate aviation suggests that competition (or the threat of competition) is likely to have a far greater effect in reducing non-aircraft costs than would the achievement of scale economies in a protected environment.

The long-term effects of deregulation of interstate aviation are not yet evident. However, the Prices Surveillance Authority, which has monitored air fare data on trunk routes since deregulation, has reported significant falls in average air fares (measured as average cents per passenger-kilometre) on most interstate routes. The PSA (1992a, 1992b) found that average fares fell most on those routes on which competition was most intense (ie routes flown by Compass Airlines). Although average fares on trunk routes have increased since the failure of Compass, in the March 1992 quarter they were still some 23 per cent below the level of the September 1990 quarter, the period immediately prior to the abandonment of the two-airline policy.

The effects on fares of deregulation overseas are consistent with the Australian experience to date and suggest that, in the long-term, lower fares will be sustained. The evidence from Canada, for instance, is of varied fare changes dependent upon market conditions. After deregulation, air fares generally fell considerably in the more densely populated southern part of Canada. In contrast, in

[1] The extent of the difference between fares in South Australia and the remainder of Australia is probably understated because the comparison is based on economy class fares and takes no account of the greater range of discount fares available in South Australia at that time.

the sparsely populated areas of the north, where new services were introduced, the availability of discount air fares was significantly less. Nonetheless, according to one study (Oum, Stanbury and Tretheway 1991), average fare yields fell by 18 per cent in real terms between 1978 and 1989. Similarly, air fares in the US generally decreased significantly after deregulation. One study (Kahn 1988) found that average yields fell in real terms by 30 per cent between 1979 and 1987.

Airport congestion

Several participants claimed that regulation is warranted to control the build-up of congestion at KSA. For example, the New South Wales Government (sub. 80, p. 8) stated that:

Access to KSA runways and to appropriate terminal facilities is insufficient to meet demands. In a deregulated situation, competition would be inhibited thereby limiting new entrant activity as well as the capacity for expansion by existing operators. Having regard to these factors, general deregulation could severely disrupt commuter services across the State.

The Government's stance was supported by the Rural Airlink Action Group (sub. 12, p. 2) which stated:

> Whilst [New South Wales] deregulation could bring benefits of cheaper fares and more frequent services to NSW rural centres, there is a real danger that the shoulder periods, either side of the peaks at Sydney Airport, will become saturated and cause the FAC to extend their surcharges into those shoulder periods. Consequently, small regional services will not be able to afford to operate in these shoulder periods, and access to Sydney Airport will be severely restricted to country travellers.

The argument is not so much one for regulation, but one against any significant change pending initiatives to alleviate capacity constraints in New South Wales or other areas where infrastructure congestion is a concern. Eastern Australia Airlines (sub. 17, pp. 7-8) expressed deeper concerns:

> The prospect of imposing significantly higher levels of demand on access to Sydney Airport through immediate or sudden deregulation of intrastate routes is alarming. It would have serious consequences on all airline operations through Sydney. ... Therefore we strongly recommend that the timing of a possible change to a deregulated intrastate aviation industry is geared to coincide with the availability of additional capacity at Kingsford Smith Airport. This will most likely first occur when a third runway is built.

The majority of movements at KSA are not associated primarily with intrastate aviation, but with the now-deregulated interstate aviation market. In principle, if congestion problems were to be addressed by using regulation to suppress demand, it could be argued that such regulation should apply equally to interstate and international flights. This is not an option in view of recent aviation policy changes. In any case, if airport congestion is a problem, regulation to limit intrastate aviation activity is unlikely to be an efficient solution. The problem of congestion at KSA, and efficient means of dealing with it, is discussed in some detail in Chapter 5.

Safety

An argument for regulation frequently advanced in the context of airline deregulation in the United States, but only identified in this inquiry by the Australian Federation of Air Pilots, is that stronger competitive pressures under a deregulated environment may lead to less safety-related expenditure. The argument presumes that deregulation forces operators to seek cost reductions, and that this will be reflected in reduced expenditure on maintenance, training and other safety-enhancing items, particularly those where any immediate decline is unlikely to affect safety in the short or even medium-term.

The opposite view is also advanced, commonly by airline management, that given the illegality, costs and implications for market share and ultimately for the financial viability of aircraft operators of being 'unsafe', safety will not be compromised. This argument presumes a strong link between the operator's viability and safety record.

Although a priori arguments exist both for and against any tradeoff between profitability and safety, Motha (1991, p. 1) concludes that:

> ... The substantial body of theory taken in conjunction with available anecdotal evidence and the results of some empirical studies suggest that it is very likely that in general, safety deteriorates to some extent under financial pressure. However, in the final analysis, the safety-profitability issue has to be analysed empirically.

Studies investigating the profitability-safety link in the United States generally have yielded inconclusive results, although Rose (1990) found a statistically significant link: lower profitability was correlated with higher accident and incident rates, particularly for the smaller (by United States' standard) carriers. On the other hand, evidence from the United States suggests that aviation deregulation and the resulting increased passenger and aircraft activity has been accompanied by a steady decline in the accident rate (Moses and Savage 1990). Rose (1989) shows that, if anything, the rate of improvement has accelerated since deregulation.

It is widely recognised that the safety performance of airlines in Australia is exceedingly good. This largely reflects the safety regulation and also the favourable flying conditions in Australia (in terms of weather and traffic density) compared with many other parts of the world. While the contribution of economic regulation to Australia's safety record cannot be determined, safety regulation should be sufficient to ensure that safety cannot be compromised, regardless of the economic regulatory environment. To the extent that greater competition provides an incentive for some operators not to comply fully with safety requirements, there may be a case for strengthening enforcement procedures. Chapter 6 considers the role of the CAA in providing regulatory and safety services in Australia.

4.2 Costs of regulation

The considerations outlined in the preceding section suggest that regulation has partially satisfied some of its objectives and realised some of the benefits attributed to it. However, evaluation of the overall effects of intrastate aviation regulation must also take account of the costs of regulation. Regulation constrains the manner in which intrastate aviation activities are undertaken and modifies the market environment in which such activities take place. In particular, regulation depends on the suppression of competition to achieve its objectives. This in turn removes a factor which, in most areas of the economy, provides a strong and continuing incentive for improved performance. Consequently, there is considerable potential for regulation to impose significant costs on users of aviation services and on the community generally, as well as on the industry itself. In particular, regulation of intrastate aviation may result in: operating inefficiencies and higher fares; cross-subsidisation; reduced consumer choice; limited adjustment to change; and administrative and other costs.

Operating inefficiencies and higher fares

The incentives provided by competition, or the threat of competition, to operate efficiently and to provide services that best accommodate users' demands were recognised by a number of airline operators at the draft report hearings. For example, King Island Airlines (transcript, p. 21) stated that:

> ... we shift according to the market and we have to maintain our edge, as it were, over our competitors. If we don't shift in response to the market then the market shifts from us.

In contrast to a competitive environment, regulatory barriers to entry provide the licensed operator with a protected market. There is no immediate danger that business will be lost to a competitor, or of price competition threatening the operator's financial viability (other than that which may be encountered from alternative transport modes). As a result, the incentive to provide services of any given quality at minimum cost can be reduced. Unwarranted cost increases can occur which, depending on the nature of any price monitoring, can be passed on to users in the form of higher prices.

At the draft report hearings, airlines protected from competition by licensing arrangements stated that there is pressure on them to perform efficiently. They indicated that their operations were subject to ongoing government scrutiny and that poor performance could lead to the revocation of their licences. Some operators pointed out that they do not hold exclusive licences and that other airline operators could apply for a licence to compete on their routes at any time. Skywest and Airlines of Tasmania also stressed that, as full verification of fare increases is an important component of government monitoring procedures, there is no scope for unwarranted fare increases. Skywest (transcript, p. 235) commented on these issues in the following terms:

> ... we enter into a market place as if we had competition. Now, if we abuse that privilege then we can expect competition and the State Government is not going to sit around and allow us to do that. The State Government is very mindful of the level of service and the level of air fare that we offer ...

Administrative mechanisms such as those outlined above undoubtedly subject licence holders to some disciplines to perform efficiently. However, their effectiveness depends on government monitors having access to detailed information not only about incumbent operators' performance, but also about their potential to improve, as well as about the likely performance of alternative operators and about users' preferences. These information requirements are highly demanding and, in practice, unlikely to be realised. Consequently, administrative mechanisms cannot be adequate surrogates for competitive pressure.

This is supported by developments in interstate aviation. Under the two-airline policy, Ansett and Australian were subjected to extensive regulation and performance monitoring procedures to ensure that they operated efficiently. The arrangements included rationalisation processes which were intended to optimise aircraft utilisation and airline operations generally, and fare-setting procedures which were designed to ensure that air fares reflected only efficient operating costs and were not determined on a cost-plus basis. Nevertheless, since the announcement of the cessation of that policy, and the emergence of competitive pressures, the major interstate airlines have succeeded in reducing both costs and air fares significantly (while also incurring significant financial losses in the process).

The Commission also considers that, under current licensing procedures in Tasmania and those that apply to the non-jet routes in Western Australia, the likelihood of another airline obtaining a licence to allow it to compete with an incumbent operator can be overstated. This is largely because, in assessing licence applications, account is required to be taken of the effect of proposed new services on the existing operator and existing services. Indeed, consistent with the prescribed licensing criteria, one of the grounds for Transport Tasmania's rejecting a recent licence application by King Island Airlines was that the 'proposed services would have a potentially serious impact on the existing operator, Airlines of Tasmania.' King Island Airlines (sub 77, p. 3) stated that:

> ... the one stumbling block was always the argument of Airlines of Tasmania that we not be granted a licence because to do so would have a detrimental effect on their business. If this is not the ultimate power of "veto", we do not know what is.

Even if account is taken of additional demand that would most likely be generated by a new operator, it is difficult, if not impossible, for a potential entrant to demonstrate that the incumbent's activities will not be adversely affected. The use of such a criterion - which in Tasmania was originally justified in the context of government provision of transport services - was interpreted by some participants as serving primarily the interest of the incumbent operator rather than the interest of the public.

The need for regulators to consider whether a particular route has enough traffic to accommodate an additional operator without impacting adversely on the incumbent not only considerably reduces the potential for entry, but could have the perverse effect of leading the incumbent to adopt pricing or scheduling strategies which restrict market growth to a 'safe' (entry-free) level. In this respect it is of some interest that traffic growth on unregulated routes has generally increased more (or market contraction has been less) than on comparable regulated routes (see Appendix F).

Contestability

As noted previously, the removal of regulatory barriers to entry need not lead to the emergence of direct competition on each and every route. The volume of traffic required to sustain more than one operator will vary. For example, where significant quantities of freight are carried - as is the case with King and Flinders Islands - passenger volumes needed to sustain competition would be less than on routes where limited freight is carried. Information provided in Appendix F shows that in many instances annual passenger volumes of less than 15 000 are sufficient to support more than one operator. This is substantially less than the figure of around 25ÿ000 identified by the BTCE (1988) and endorsed by Airlines of Tasmania. It is also significantly less than the volume of traffic on the routes between King and Flinders Islands and the Tasmanian mainland which are exclusively serviced by Airlines of Tasmania. Indeed, on the route between Flinders Island and Melbourne, Airlines of Tasmania competes with Aus-Air, yet the total number of passengers carried is less than 5000 a year.

It is nevertheless likely that many country routes may be too small to sustain competing operators. Some participants saw this as a problem. They considered that, unless deregulation resulted in an increase in the number of operators, there could be no gains because nothing would have changed. This reveals a fundamental misunderstanding of the nature of competition in open markets. As long as an air route can be serviced by any operator who considers it potentially profitable to do so, there is a very powerful discipline on an incumbent to perform efficiently and keep prices low. It is the potential for entry (known as market `contestability' - see Box 4.1) that is the underlying source of competitive pressure. This was recognised by the NSW Farmers' Association (sub. 21, pp. 8-9) which argued:

> If entry to and from a particular market is relatively free, then the market is contestable and the threat of entry will keep the incumbent 'honest'. The problem with the [NSW] regulated system is that the market has been neither competitive nor contestable.

Similarly, Kendell Airlines (sub. 26, p. 2) commented:

> In Kendell's experience, competition, either actual competition or threatened competition, ensures we operate our services as efficiently as possible. That pressure is not brought to bear on the protected operators, especially where they are able to operate with a cost plus regime devoid of fare control.

Box 4.1: **Concentration, contestability and 'effective' competition**

In discussion about aviation policy, as in many other areas, there is considerable confusion about what is needed for 'effective' competition - that is, the circumstances in which firms have little or no power to charge prices higher than warranted by the efficient costs of supply.

The textbook ideal of pure competition - involving many sellers of identical products - seldom corresponds to the reality of markets. In small economies, such as Australia, there will inevitably be many markets with few firms (high 'concentration'). Whether or not this is associated with significant market power essentially depends on how readily other firms can 'contest' the incumbent's market.

The 'contestability' of a market depends on the nature and extent of barriers to entry (and exit). This refers to any influences or arrangements that would impose costs on an entrant which do not apply to incumbents. The greater the freedom to enter and exit a market, the greater the competitive pressure on an incumbent to minimise costs and keep prices down. Failure to do so would create a profit opportunity which potential entrants would soon seek to exploit. In a contestable market, therefore, even a sole operator has very little market power.

In the case of aviation, the main barriers to entry - and thus to effective competition - have generally been of a regulatory nature, or to do with access to airport facilities under government control.

King Island Airlines observed at the draft report hearings (transcript, p. 38) that, in an open market, a firm's own clients, if dissatisfied, may actually encourage a potential entrant:

> So even if you have got the route on your own, if you don't keep the standards up there's always the threat that somebody can come in from outside - be brought in by a major customer ... a big business that might have a lot of freight to send or a lot of people to move that [an entrant] can use as a nucleus to set ... up on a route and grow from there.

Comparison of air fares on unregulated routes serviced by a single operator with those serviced by competing airlines support the premise that competitive pressures apply, provided there is threat of entry. For example, in the South Australian context, Starkie and Starrs (1984) argue that, with unrestricted entry, there is no apparent difference in the structure of fares on multifirm and single-firm routes. Crowley and Findlay (1990, p. 55) confirm this for later years, concluding:

> ... there is no significant difference between fare levels on routes with one operator and those with more than one operator, once allowance has been made for distance.

The contestability of Australian aviation markets varies. Clearly, those intrastate routes on which entry is presently precluded by regulation are not contestable. In the absence of such regulation, it emerged from Section 2.1 that the principal remaining barriers to entry are the limited availability of terminal facilities at some ports and sunk costs associated with investments required prior to commencing operations, such as in airport facilities and in staff training. The extent to which these

pose a problem for potential entrants varies among different segments of the market, being of least relevance to small airline and general aviation operators. It is widely acknowledged that short-haul intrastate aviation routes are generally highly contestable if unregulated. This is supported by the on-going entry and exit of operators observed in the commuter sector.

In intrastate aviation markets which are regulated and thus not contestable, there is reduced pressure to minimise costs. In the absence of effective price controls, fares are likely to be higher - not only because costs may be higher, but also because an operator protected from competition is in a position to use market power to increase fares and profit levels.

The evidence on air fares reported in Section 4.1 indicates that, in practice, fares are lower on average in a deregulated market environment. There is little doubt that deregulation would have a similar effect on air fares in the remaining regulated states of Australia. This is not to deny that in some instances fares could increase. One area where this could occur is on those routes which have benefited from cross-subsidisation under licensing arrangements.

Cross-subsidisation

The use of regulation to preserve or enhance certain services can also lead to considerable economic costs by creating the potential for 'cross-subsidisation' (Box 4.2).

Box 4.2: **Cross-subsidisation**

Cross-subsidisation commonly refers to excess charges paid by some consumers of a given product (such as air services) being used to subsidise other consumers. This raises the question of what is meant by 'subsidise'. The economic literature generally defines this in relation to the cost of production and selling, or alternatively, in relation to the price which could be attained in a competitive market. In the short term, a product can be regarded as subsidised if the returns achieved do not cover the marginal costs of its production. Explicit or implicit cross-subsidies can arise either as a result of different prices being paid for the same product by different consumers, or because a uniform price is paid for a product regardless of variations in the costs of delivery to different consumers.

For further discussion see IAC (1989, Volume 3, Appendix I, Attachment 1).

Cross-subsidisation can involve 'thick' profitable routes being used as an incentive to entice the licensed operator to upgrade services on thin routes to a standard which otherwise would not be provided. If this occurs, users of upgraded services are subsidised by users of other services who are overcharged. In turn, misleading prices affect patterns of supply and demand and, perhaps more

importantly, can in the longer term result in inappropriate investment decisions by aircraft operators and infrastructure providers. For example, it is possible that subsidisation could lead to investment at airports which would otherwise not be undertaken. Such investment could be at the expense of other airports which have more economically-sound investment opportunities.

In practice, it is difficult to identify where cross-subsidisation actually occurs. No detailed financial evidence was available which would allow the Commission to conclusively demonstrate that economic regulation of intrastate aviation is resulting in cross-subsidisation. However, other information suggests that cross-subsidisation has been a common means of ensuring service provision over some thinner routes. For example:

- The New South Wales Department of Transport and the Air Transport Council (1991, p. 3) stated that the regulation in New South Wales:

  > ... can provide support for marginal services by cross-subsidisation from profitable routes.

- In its submission, the New South Wales Department of Transport (sub. 32, p.ÿ 2) stated:

  > The changes announced by the New South Wales Government recognise that removing the previous restrictions on route entry will make it more difficult for cross-subsidisation to distort the intrastate aviation market.

- Ansett stated in the initial hearings (transcript, p.ÿ 120) that:

  > ... the fares in Western Australia ... are set according to a regime which is designed to have network revenues cover network costs so that providing services throughout that network is viable. ... there are some implicit cross-subsidies there ...

- Skywest Airlines stated at the draft report hearings (transcript, pp. 228-9) that its Perth-Esperance route (which lost $250 000 in the last financial year) is being cross-subsidised by other businesses:

  > They're getting a level of air service which they wouldn't get if it was deregulated.

- Kendell Airlines (sub. 26, p. 1) alleged that economic regulation in New South Wales and Tasmania has resulted in cross-subsidisation between regulated and unregulated routes:

  > ... operators licensed by [the New South Wales and Tasmanian] Governments are effectively able to charge fares on a protected monopoly or duopoly basis. Operators who have the benefit of such protection are not restricted from engaging in air transport activities elsewhere, particularly in interstate markets. Indeed, it is apparent they have used this protected position to cross-subsidise competitive activities against operators without such a comparative advantage.

Reduced consumer choice

The licensing requirements employed in some states have embodied implicit assessments by government of the type or `quality' of service that should be provided on regulated routes. As

already noted, quality is a nebulous concept that encompasses aircraft type, frequency of service, scheduling of flights and reliability, as well as network configuration and even the flexibility of fares. Decisions about quality invariably involve tradeoffs because of the interdependence between the various components of air services which contribute to quality. In most markets, consumers make such decisions themselves, for the compelling reason that they are best placed to evaluate the tradeoffs.

If governments are unable to assess adequately the combination of service characteristics which best satisfies users' requirements on each route, additional costs will be borne by users in the form of unwarranted service and higher than necessary fares. The NSW Farmers' Association (sub. 21, p. 9) stated:

> In effect, the [New South Wales] Air Transport Council has attempted to duplicate some of the functions being undertaken by the aviation industry itself. The individual airlines operating in NSW will already be assessing markets to determine the types of planes required and the frequency of flights necessary to service the markets. The Air Transport Council is either making the same decisions that the airlines would under deregulation or (as is more likely) is forcing the airlines to provide a service which they would not otherwise provide. This would impose a cost which inevitably is carried by travellers.

In the New South Wales context, the recent decision requiring aircraft of at least 18-seat capacity to be used for intrastate services to KSA, and jet aircraft to be used on some routes, reduces the prospects of competition on those routes licensed to more than one operator. In effect, the restriction constrains operators' ability to compete on the basis of aircraft size. It also denies users the chance of flying in smaller aircraft with a greater choice of flight times.

The cost associated with governments making inappropriate decisions about users' preferences can be avoided by increasing the scope for the type of service to be determined by users themselves. This can be achieved by removing regulatory restrictions and allowing airline operators the freedom to determine how best to meet market requirements. In these circumstances, if enough consumers want alternative schedules to those offered, there is scope for a competitor to enter and operate revised schedules. This does not necessarily mean that services appropriate to market needs will always be provided. However, competitive pressures associated with a deregulated environment would create a strong incentive for airline operators to provide services which best meet users' requirements. If they do not, they risk losing market share and face the prospect of being forced out of business. With a guaranteed market, there is less incentive for operators to modify their service in response to changes in demand patterns. As reported earlier, the increased responsiveness of aviation operators to users' needs under deregulation has been demonstrated both in Australia and overseas and, together with lower fares, has led to an expansion in the number of passengers carried (see Appendix F).

Limited adjustment to change

Any stability in intrastate aviation achieved by regulation is not costless. In particular, costs may arise because restrictions on entry reduce the necessity for operators to adapt to changed circumstances as quickly as they would in a competitive market. In other words, by moderating pressures for change, the achievement of stability may of itself impose costs.

Licensing provisions employed by state and territory governments have commonly specified routes, aircraft types and frequencies. This limits the flexibility of intrastate aviation operators to respond to changes in market conditions. This in turn can impede the adoption of cost savings strategies and the adjustment to services and fares required to meet changing market requirements. A discussion paper prepared by the New South Wales Department of Transport and the Air Transport Council (1991, p. 3) recognised that the licensing arrangements in New South Wales are inflexible and can prevent operators adjusting their operations so as to properly cater for seasonal and other fluctuations in demand. It stated:

> A regulatory system is inflexible in the present day high-cost equipment and operating environment. Operators are inhibited in their ability to quickly make substitutions and switch aircraft to more productive routes where losses or low load factors are encountered on licensed services.

Change - or at least the potential for such - is a normal feature of competitive markets and, indeed, is an important ingredient in economic growth. Changes in ownership, services and quality are common in most other sectors of the economy, particularly in those characterised by a large number of small businesses. The capacity for a market to absorb change allows new technologies to be introduced and new initiatives to emerge. However, if operators are insulated from competition, there is reduced pressure for change: innovations such as new fare packages or the introduction of new aircraft types may not occur as quickly as in competitive markets, or indeed at all.

Administrative and other costs

Significant costs may also be associated with the operation of a regulatory system. For one thing, there is a cost associated with the administration of licensing schemes and with aviation operators complying with regulatory requirements. In some states, licence fees appear to bear little relationship to administrative costs. For example, the annual licence fee in Western Australia is one per cent of gross earnings. Such fees are effectively taxes as they provide revenue in excess of that needed to administer the regulation. Australia North West Airlines (sub. 68, p. 5) argued that the licence fee comprises a significant tax:

> The IATA world average profit for airlines is 3-5% of revenue, so the 1% levy on revenue is effectively a tax equivalent to 20-33.33% on profit, ie the highest in the land.

The New South Wales Department of Transport estimated that licence fees payable by RPT operators in New South Wales totalled about $275 000 in 1990-91.

The administrative cost incurred by governments substantially understates the total cost as it takes no account of the costs incurred by airline operators in communicating with regulators, preparing applications and contesting licensing determinations. For example, King Island Airlines which operates interstate flights between King Island and Victoria in competition with two other operators, presented evidence relating to its application to operate intrastate flights between King Island, Launceston and Wynyard/Burnie. It stated, and substantiated with appropriate documentation, that the total cost to the company of the process of licence application and initial hearing was in the order of $18ÿ000 - primarily relating to legal expenses. Airlines of Tasmania stated that its costs in opposing the application were around $5000 or $6000. The extremely subjective nature of some licensing requirements militates against a quick (and relatively low cost) resolution of many applications and appeals.[2]

Compliance costs are related to a more general phenomenon occurring in regulated markets known as `rent seeking'. If a firm's prospects can be significantly affected by a regulatory system, or changes to that system, it is inevitable that managerial and other resources will be diverted from normal productive activities to lobbying and communicating with government. Such activities, even where profitable for a firm, represent a waste of the economy's resources. This cost is very difficult to quantify but, in some cases, would be substantial (see Buchanan, Tollison and Tullock 1980).

A further `systemic' problem that has often been observed in regulated markets is a tendency for the regulator to identify more closely with the client industry's needs than with the interests of the wider community, and to unwittingly support incumbent firms over potential entrants (Stigler 1988). This can be reflected in the exercise of discretion under existing regulations and in the maintenance and evolution of the regulatory system itself. The extent to which this may have occurred in regulated intrastate aviation markets in Australia is unclear. The monitoring procedures employed in Western Australia and Tasmania do, however, provide opportunities for such relationships to develop. According to Skywest and Airlines of Tasmania, there is frequent contact between airline management and state bureaucrats. For example, Airlines of Tasmania stated at the draft report hearings (transcript, p. 116) that:

> ... because we have that loan with the government ... a small committee ... meets twice a year and is made up of treasury, tourism and transport; a group of people where we sit down and look at all the problems and/or whatever is deemed necessary for the airline.

[2] For example, to obtain a licence in Queensland, applicants are required to be of ‘good character and repute’. Similarly, in Western Australia, account must be taken of the ‘character, qualifications and financial stability of the licence applicant’.

4.3 Conclusions

Intrastate aviation in South Australia, Victoria and the territories is no longer subject to economic regulation. However, in Tasmania all commercial aviation activity is regulated. Considerable regulation remains in New South Wales. The non-jet network in Western Australia, which accounts for about five per cent of passenger movements in the State, is also regulated.

The objectives of economic regulation of intrastate aviation have not always been clear. There is also some ambiguity about the success of regulation in meeting the objectives that it is most commonly perceived as serving. More importantly, any benefits provided must be weighed against the potential for regulation - and the associated diminution in competitive pressure - to impose considerable costs. Costs which may result from regulation impact significantly on intrastate air travellers - mainly in the form of higher fares and levels of service which do not adequately reflect users' requirements. In addition, to the extent that intrastate aviation operations are not undertaken at least cost, resources which could be used productively elsewhere in the economy are wasted, to the detriment of the community generally.

The relevance and effectiveness of economic regulation of intrastate aviation in the present day environment is particularly questionable. The aviation industry is now more mature than it was a decade or so ago. The demand for aviation services has expanded considerably. Changes in competitive transport modes have also affected intrastate aviation. For example, improved roads have made private and public road transport more attractive in many areas of Australia. The deregulation of bus and coach transport in some states has led to increased competition from this sector of the market. Similarly, the deregulation of interstate aviation has created an expectation within the community that all aviation operators - including intrastate operators - should provide a low cost service and be more responsive to users' demands.

These developments have combined to change significantly the nature of the market for intrastate aviation services. In conjunction with increased ownership links between operators of interstate and intrastate services, they have led to the development of what is in effect a national aviation market. This has resulted not only in a larger market, but a more competitive and efficient one. Recent decisions by the Commonwealth Government to merge Qantas and Australian Airlines and to form a single Australasian aviation market will accelerate these trends. These changes in aviation policy are consistent with the broader policy objective of increasing competitiveness in the economy generally by removing barriers to entry and constraints which impede the formation of integrated national markets.

Several states and the Northern Territory have recognised the gains of deregulation. However, on-going regulation in New South Wales, Tasmania and, to a lesser extent, Western Australia is retarding the capacity of intrastate aviation operators to respond to the changes that are occurring.

Judging from experience in other countries and from the recent deregulation of interstate aviation, on-going regulation is also holding back the stimulus to the air transport industry and to economic growth in regional centres that would accompany deregulation. Examples of the lower traffic growth on regulated commuter routes compared to unregulated routes, reported in Appendix F, support this contention.

Concerns of individual states

Governments and licence holders in each remaining regulated state generally perceive special circumstances in their state which warrant the maintenance of at least some degree of regulation. In the case of Tasmania and Western Australia, the claim primarily centres around the need to guarantee stable air service to isolated communities which have limited alternative transport options (eg King and Flinders Islands in Bass Strait and Esperance and Norseman in Western Australia). It is argued that traffic on such routes is insufficient to support more than one operator and that removing existing regulation would consequently disrupt air services, and possibly result in no services being provided. For example, in the case of Western Australia, Skywest Airlines (sub. 71, p. 7) claimed that:

> While deregulation may have proven successful in the smaller, more populous states of Australia, evidence suggests that the success would not be repeated in Western Australia considering its size and long-haul, thinly-populated routes. The State Government's current policy reflects a clear understanding of these unique conditions.

While each state clearly has an overall set of circumstances which can be said to be unique, all have individual features in common with some other states. For example, outlying communities in South Australia (such as Coober Pedy and Ceduna) can claim to be as isolated as some communities presently serviced by regulated operators in Western Australia and Tasmania. However, regulation has not been necessary to support air services to these isolated communities in South Australia - and there has not been on-going disruption. As noted previously, the experience in South Australia after deregulation in 1979 shows that while there has been some change in operators, the intrastate network has remained relatively stable.

Some of the regulated routes in Western Australia and Tasmania are relatively thin routes and traffic volumes may not support more than one operator. However, the Commission does not consider that this in itself justifies regulation. As discussed above, it is the contestability of a market (route), not the number of operators, which underlies incentives to improve performance. Consequently, for most commuter routes, the removal of regulatory barriers to entry would result in services being subject to competitive pressures, even if the service continued to be provided by a sole operator.

In any case, the volume of traffic required to support more than one operator can be overstated. For example, Airlines of Tasmania, which stated that all of its routes operate on a stand-alone basis

(including Queenstown which had a total of 1993 passenger movements in 1990-91), claims that intrastate traffic volumes to King and Flinders Islands (around 13 000 to 15 000 passengers annually in recent years to each island) are insufficient to sustain more than one operator. However, the Melbourne-King Island route (with a similar annual traffic volume) is presently serviced by three operators (Aus-Air, Kendell Airlines and King Island Airlines). Appendix F shows that there are many other routes throughout the country with passenger numbers below 15 000 which support more than one operator. It is also interesting to note the experience in New South Wales where the routes which have been opened to competition over the last year have been among the State's thinnest routes. Of the fourteen affected ports, the largest total annual number of passenger movements is 5000. Routes to five of the ports serve less than 1500 passengers annually. All of these routes are currently served by one and, in some cases, two or three operators.

In the case of Western Australia and Tasmania, it was also argued that strict monitoring procedures and the possibility that licences would be revoked or not renewed prevents licence holders from exploiting the monopoly power provided them by the licensing arrangements. The Commission agrees that these administrative mechanisms can help to reduce costs which might otherwise arise from regulation, but for reasons given previously, does not consider that they can provide the same discipline that competition brings.

Airlines of Tasmania informed the Commission that it is not only subject to performance monitoring and fare approval by government authorities, but also has its shareholders concentrated in one of its main markets, Flinders Island (with 48 per cent of total paid-up capital). The Managing Director of Airlines of Tasmania observed at the initial public hearings (transcript, p. 61):

> ... I am under great pressure to justify all costs because those shareholders too have to live with the other members of the community, and so we see ourselves as part of the community ...

While this factor undoubtedly has some influence on the airline's performance, at least in respect of its Flinders Island service, it cannot provide ongoing discipline equivalent to that provided by competition. In addition, the advanced age of some of Airlines of Tasmania's aircraft suggests that there may soon be a need to raise additional capital for replacement equipment. If so, this could dilute the shareholding of Flinders Island residents further and result in an increase in both costs and fares. It is also relevant that the Commission was informed at the initial hearings that some 200 members of the Flinders Island community (about 30 per cent of the voting population) petitioned the Tasmanian Government in support of a licence application for a second operator to the island (transcript, p. 86).

In defending the current regulatory environment, Airlines of Tasmania (sub. 46, p. 2) argued that '... prior to 1982 extensive deregulation existed within Tasmania' and claimed that the experience had proven unsatisfactory. While it is true that intrastate RPT services were provided by more than

one operator prior to 1982, it is not correct to equate this with deregulation. Intrastate aviation was (and still is) subject to the *Traffic Act 1925*. Thus, RPT services could only be supplied by operators licensed by the State, and the prospect of additional entry was thus heavily constrained. It should also be noted that the failure of an airline is not an indictment of deregulation. Entry, exit and business failure are all normal features of a competitive market, the outcome of which is that the most efficient firms, delivering the best service, will generally prevail. Such an environment has never existed in intrastate aviation in Tasmania. It is therefore inappropriate to draw parallels between the experience prior to 1982 and that which could be expected if the current regulations were repealed.

In New South Wales, the changes announced in June 1992 will potentially allow greater competition, but the number of operators on major routes will be limited to two - except for the Lord Howe Island route on which three are to be permitted. The New South Wales Government (NSW Minister for Transport 1992) has not supported full deregulation at this stage because it:

> ... would result in unacceptable congestion at Sydney Airport and jeopardise services to some smaller communities.

To the extent that the new measures in New South Wales lead to effective competition among the licensed duopolists - an important proviso - they should improve efficiency. However, the case for not proceeding to full deregulation is not convincing. The experience of the two-airline policy which applied to interstate aviation until 1990 suggests that the prospects of meaningful competition are small.

The desire to protect the interests of small communities is subject to the observations made in relation to Western Australia and Tasmania - in other words, there is little to suggest that air services would deteriorate, especially as many of the licensed New South Wales routes carry over 20ÿ000 passengers annually. Moreover, there would appear to be some inconsistency in permitting open competition on those routes relinquished by licensees (such as occurred with the thin routes vacated by Hazelton Airlines), but preserving regulation on other thin routes which the regulated operator wishes to maintain. One interpretation of this approach is that the new policy is oriented more towards the interests of existing licence holders than the communities they service.

If governments determine that a particular route requires some form of intervention in order to maintain services or, as appears to be the case with many New South Wales routes, to ensure a specified level of service, this is most efficiently achieved by means of a direct subsidy rather than restrictive licensing arrangements. Direct funding avoids the potential for cross-subsidisation, is not reliant on entry restrictions and, being incorporated in a government's annual budget process, is more transparent. The New South Wales Government, however, does not consider direct funding appropriate. It stated (sub. 80, p. 2) that:

> Rather than paying subsidies, full costs should be recovered from the users not Government. ... Provided that ... cross-subsidisation is avoided, and travellers from small towns are prepared to pay an appropriate premium for their chosen level of service, there is no reason why these services should not receive a measure of protection.

The Commission disagrees with this proposition. In circumstances where licences are allocated against criteria which encompass fare levels, and where licence holders are allocated licences for quite extensive networks and routes (as has occurred in New South Wales), the probability of avoiding cross-subsidisation between routes is small. Moreover, if it is considered that individual communities are willing to pay 'an appropriate premium for their chosen level of service', why would the service not also be viable in the absence of restrictions on entry? If a route can be operated profitably by a licensed operator without resort to cross-subsidisation, it should also be capable of being serviced in an unregulated environment.

The Commission's views about congestion are outlined elsewhere in this chapter. In essence, it considers that maintaining a degree of regulation on part of New South Wales' intrastate aviation network is not an appropriate or efficient way of addressing congestion problems. To the extent that deregulation would lead to increased congestion at KSA, it is more efficient for priorities to be allocated by market mechanisms - such as peak period pricing - rather than have them imposed by regulation which, by necessity, reflects administrators' perceptions of airport priorities.

The Commission accepts that there is considerable variation in circumstances between the states. Nevertheless, it considers that the costs of continuing to regulate intrastate aviation outweigh the benefits. It considers that the removal of all economic regulation would improve efficiency and lead to the provision of intrastate air services which are more closely attuned to users' requirements.

This view is consistent with the recent deregulation of interstate aviation and initiatives to remove or relax regulation in most states and territories of Australia (as well as overseas). Deregulation was also the preferred option of most participants in this inquiry that expressed views on the issue.

Licensing

In some states (eg Queensland and New South Wales), a requirement to obtain a licence continues to apply to 'deregulated' routes. In each state, licence criteria encompass both financial and technical requirements.

The licensing criteria are exceedingly difficult for administrators to apply objectively and there is no evidence to suggest that licensing criteria have prevented or reduced the incidence of corporate failure in the airline industry. The provisions of the Corporations Law ought to impose sufficient discipline on operators to ensure responsible financial conduct. Similarly, concerns to protect

passengers (and other creditors and shareholders) from financial losses of airlines are more appropriately met by direct measures (such as consumer protection legislation) rather than indirectly by maintaining regulation. Moreover, to the extent that licences remain, they provide governments with the potential to use them as revenue-raising devices - as appears to have happened in Western Australia.

The Tasmanian Government (sub. 85, pp. 2-3) stated that:

> To ensure that an appropriately high quality and reliable service is maintained for both residents and tourists, the Tasmanian Government is of the view that a "licence to operate" arrangement would still need to be in place even in the event of full deregulation of intrastate aviation. It is envisaged that this licensing arrangement would be used to ensure that in addition to meeting safety standards, and in addition to the disciplines imposed by the market, operators would have the further discipline of Governmental interference if they did not meet sufficiently high standards of quality and reliability that are expected by the public.

During the transition to deregulation, a requirement to obtain a state licence could reduce the possibility that the activity of aircraft operators may impact adversely on other groups in the community (eg reduce tourism by creating an impression that the state's transport services are inadequate). However, in the longer term it would be more efficient to employ state-wide measures such as consumer protection legislation. This would avoid the possibility of licensing being used as de facto regulation. The experience of South Australia and Victoria, in which there are no state licensing requirements, suggests the sufficiency of broader measures, together with Commonwealth licensing for technical and safety-related matters.

As discussed above, if governments deem that essential services would not be provided without some form of government intervention, such services would be more efficiently supported by direct subsidies rather than by restrictive licensing provisions. As stated by the Victorian Government (sub. 60, p. 2):

> ... times have changed and the process of industry economic reform needs to be pursued to encourage the situation where the price of air services more directly reflects the cost of the service being provided and cross-subsidisation is virtually eliminated. There are likely to be other acceptable solutions to guarantee services on thin routes where there remains a social need for air travel.

An element of competition could be introduced by allocating rights, and determining subsidy levels, by competitive tender. As governments would presumably continue to be concerned that services be available at 'reasonable prices', bids could be invited for the supply of specified air services at stipulated fares for a specified period. To increase the discipline on the successful tenderer, the subsidy arrangement should be of limited duration - no longer than three years. A somewhat similar process is already in operation in Queensland. These issues are discussed in more detail in Appendix C.

Deregulation of intrastate aviation should encompass the removal of all regulation, including any requirement that an intrastate aviation operator obtain a licence from a state/territory agency before commencing operations. If some services that otherwise would not be provided are deemed to be 'essential', the service should be directly subsidised by government.

Timing and phasing

In its draft report, the Commission sought further information and comment on the length of the notice period which should be provided prior to deregulation.

King Island Airlines (sub. 54, p. 3) argued that deregulation should be immediate:

> The quicker deregulation of intrastate licensing occurs the quicker the financial benefits will flow on to the consumers.

Other participants argued that, regardless of the merits of deregulation, it should not occur immediately. The reasons advanced included: the need to recoup investments made on the assumption that regulation would continue; the current depressed state of the economy; and congestion at KSA.

Some operators servicing regulated routes, such as Airlines of Tasmania and Hazelton Airlines, noted that they had undertaken significant investment in order to comply with licensing requirements. They stated that they would be severely disadvantaged if existing policies were immediately terminated. While both argued strongly against deregulation, each initially contended that up to three years' notice of withdrawal is warranted in the event that the existing regulatory provisions are removed.

However, it is not clear to what extent deregulation would lead to losses on existing investments. As discussed in Chapter 2, operators in the intrastate aviation industry do not face large sunk costs relative to producers in many other industries. The major assets, aircraft, are readily transportable. Although prices attainable for used aircraft are relatively low at present, aircraft purchased for particular regulated markets which may no longer be appropriate could be sold for use elsewhere in Australia or overseas. Moreover, unlike certain other regulated transport modes, intrastate aviation licences are not tradeable and have no tradeable values. Aviation licences are thus different to taxi licences which may be sold for tens of thousands of dollars, so that immediate deregulation of the taxi industry could see owners of taxi licences incur substantial losses. Notwithstanding these comments, it is recognised that there may be transitional losses for some licensed operators, particularly those who have invested heavily.

In response to the draft report, Hazelton Airlines argued that proceeding with full deregulation in the current economic climate would be a recipe for disaster. The Commission disagrees with this contention. It considers that the present depressed economic conditions strengthen rather than weaken the case for deregulation. As illustrated by the deregulation of interstate aviation, the lower air fares and more innovative travel packages which would be expected to accompany deregulation of intrastate aviation would stimulate tourism and boost economic activity generally.

It has been argued - for example by Eastern Australia Airlines at the draft report hearings - that deregulation of intrastate aviation would exacerbate congestion problems at KSA. While this provides a legitimate reason for government action, the maintenance of regulation to constrain the number of intrastate aviation users is, as noted above, an inefficient means of addressing congestion problems. Where airport capacity is fixed in the short term, it is more efficient to overcome congestion by using measures directed at the source of the problem, aircraft generally, not just aircraft flying on intrastate routes.

The Commission is accordingly of the view that deregulation should proceed as quickly as possible, but it recognises that some time would be required by both aircraft operators and infrastructure providers to plan and implement necessary changes. On this point, Eastern Australia Airlines stated that it would be disadvantaged if deregulation in New South Wales was progressive because the aircraft it is required to operate on remaining regulated routes would not be particularly suitable for operations on deregulated routes. Consequently, Eastern advocated that deregulation apply throughout New South Wales from a set date. If deregulation were staggered, there is also the possibility that licensed operators would have an advantage on deregulated routes because they may be able to subsidise their activities on these routes from their activities on the remaining licensed routes. For both of these reasons, the Commission agrees that deregulation should occur on a set date throughout a state.

One consideration which influences the timing of deregulation within a state is the term of existing licences. Ideally, deregulation should occur without the need to revoke licences. This would be necessary if the expiry date for a licence is later than the date chosen for deregulation.

The expiry date for current licences varies between states. In Tasmania, licences are triennial, with the last licence period concluding on 30 June 1992. The Commission understands that the existing licences are to be reviewed, and that this will not be completed until later this year. The expiry dates of licences in New South Wales are staggered over the period to November 1994. However, following the recent changes in the licensing arrangements, the Air Transport Council is to review most licences over the next few months, with the aim of issuing new three-year licences valid from January 1993. In Western Australia, licences for the regulated non-jet network are renewable annually on 1 July.

The Commission considers that it would be appropriate for operators in each state to be provided with 12 months' notice of deregulation, and for deregulation in each state to occur by 31 December 1993. This should allow sufficient time for aircraft operators and infrastructure providers to prepare for deregulation and, given the licence review arrangements outlined above, should largely avoid the need for licences to be revoked earlier than has presently been signalled by governments. The Commission recognises that, in the case of New South Wales, the achievement of deregulation by 31 December 1993 would involve the allocation of 12-month licences in January 1993, rather than the three-year term foreshadowed by the New South Wales Government.

Delaying the outcome of deregulation will not necessarily make the transition any easier for operators or users. For example, the New South Wales Department of Transport and the Air Transport Council (1991) commented that:

> Providing excessive advance notice of a deregulation date would lead to premature disruption of some services as equipment and marketing resources were being run-down or prepared for new directions.

The Commission recommends that in any particular state or territory all regulation be withdrawn at one set date. This would require that fixed-term licences expiring before the designated date be extended. The Commission recommends that twelve months' notice be provided of the impending deregulation. It should be possible for states to be in a position to implement the withdrawal of all regulation by 31 December 1993.

Competition policy

High concentration of ownership is already evident in the aviation industry, with the Ansett group and Australian Airlines dominating interstate markets and controlling over 80 per cent of the intrastate market (see Chapter 2). Indeed, some participants argued that concentration is currently too high. For example, Hazelton Airlines (sub. 28, p. 5) argued:

> The dice are effectively 'loaded' against regional airline operators in NSW, particularly those who remain independent.

Hazelton Airlines (sub. 72, p. ii) further stated:

> True and open competition cannot be attained because of the marketing and distribution power held by the two major airlines Ansett and Australian.

As already discussed, concentration need not of itself imply significant market power. It is the contestability of markets which is critical: a contestable market will have competitive disciplines even if it is served by only one operator. Although contestability on intrastate routes would be greatly increased once the present regulations are lifted, it does not necessarily follow that there will be more than one operator on all routes. On 'thin' routes there may only be scope for a single operator. However, the threat of entry should provide an incentive for sole operators to minimise fare levels and provide services which best accommodate users' requirements. Consequently, the possibilities of airline operators, first, possessing significant market power and, second, misusing it, would be small on most intrastate routes.

However, as noted in Chapter 2, the current structure of the industry may facilitate anti-competitive practices. Deregulation thus needs to be accompanied by measures to ensure that the scope for such practices is minimised. As the Commission has not identified any characteristics associated with

intrastate aviation that would warrant special procedures to provide a safeguard against the misuse of market power by aircraft operators, the legislative provisions which apply to industry generally - including those administered by the TPC and PSA - would appear adequate.

Provision of common user terminals, announced in the One Nation Statement, ought to assist in reducing entry barriers and making intrastate aviation activities more contestable (see Chapter 5). While only affecting some intrastate routes, the recent announcement that the domestic market will be open to New Zealand carriers will also increase competitive pressures. Allowing other foreign airlines flying to Australia to carry domestic passengers and a further easing of the foreign investment restrictions would facilitate this process.

4.4 Summary of recommendations

The Commission's assessment is that the costs of continuing to regulate intrastate air services outweigh the benefits. It considers that the removal of such regulation would improve efficiency, boost economic activity and lead to services which are more closely attuned to users' requirements. Consequently, the Commission recommends that:

- all economic regulation of intrastate aviation activity by state and territory governments be abolished;

- if governments deem that some services are `essential' and, in the absence of regulation would not be adequately provided, such services be supported by direct government subsidies; and

- in any particular state or territory, all regulation be withdrawn at one set date, twelve months after notice of withdrawal is provided and no later than 31 December 1993

5 PROVISION OF AIRPORT INFRASTRUCTURE

Intrastate aviation activity, and aviation generally, relies heavily on the services provided by airports. If the services are inadequate or are inappropriately priced, the efficiency of the aviation industry as a whole will be impaired. Some measures to improve airport performance have been introduced, but further reforms are required to ensure that airport services are produced at least cost and that pricing policies promote the efficient use of airport facilities.

Airports provide a range of services to the aviation industry and to users of air transport. This includes the landing, take off and parking of aircraft, as well as the handling and transfer of passengers, baggage and freight. The facilities provided at airports are shared by a diverse range of users, including operators providing international, interstate and intrastate passenger, freight and other aviation services. Intrastate aviation is a major user of these facilities and airport charges represent a significant proportion of intrastate aviation costs.

There are three principal categories of aerodrome ownership in Australia: namely FAC airports, Commonwealth aerodromes and other aerodromes. The FAC operates 23 of Australia's major airports while the Commonwealth Department of Transport and Communications operates another 23 aerodromes - six other aerodromes are owned by the Department of Defence and used for civil and military purposes. The remaining licensed aerodromes (approximately 350) are either operated by local authorities, state government instrumentalities or private interests (eg Broome, Hamilton Island and Proserpine). Box 5.1 provides a profile of airport operations.

As the majority of Australia's airports are owned and operated by government, it is relevant to note that recent reviews have identified deficiencies in the operation of many government owned enterprises. To a large extent these deficiencies stem from a lack of commercial pressures to perform that exist in private enterprise, such as the threat of takeovers and bankruptcy. This has sometimes led to inappropriate investment and costly production methods. Similar inefficiencies have been identified in the past operation of airports. For example, the (then) Minister for Transport (Australia, House of Representatives 1985) stated that the establishment of the FAC would go 'a long way towards rectifying' problems associated with the previous management of airports, namely, that:

> ... governments in the past have unduly influenced the priorities for aviation infrastructure development for reasons unrelated to economics or efficiency.

Box 5.1: **Profile of Australia's airports**

Number of airports

Locally owned and other aerodromes	350
Commonwealth aerodromes (incl. defence)	29
Federal Airports Corporation airports	23

Federal Airports Corporation

size:

assets (as at 30/6/91)	$1736	million
employment	1402	
revenue	$413	million
aircraft movements	3.7	million
passengers - domestic	32.9	million
passengers - international	11.8	million

financial performance:

(year ending 31 March)	return on assets	dividends remitted
1988-89	7.6%	$12.8 million
1989-90	7.1%	$8.0 million
1990-91	8.3%	$12.4 million

The Government implemented a number of measures during the 1980s to improve the performance of Commonwealth owned airports. These involved placing the management of major airports on a commercial basis and, in the case of many other airports, transferring ownership to local authorities. A decision to establish a national authority to operate the six major capital city airports was undertaken following a Department of Aviation task force review (Minister for Aviation 1984). This announcement was followed in 1986 by decisions to establish the FAC and to adopt a policy of full cost recovery for aviation facilities and services provided by the Commonwealth (Minister for Aviation 1986). This latter decision was made in response to the Bosch Report (1984) into aviation cost recovery. It represented a significant departure from previous approaches to the operation of airports where the provision of aviation facilities was subsidised by $1.5 billion between 1974 and 1986 and a cash based accounting system was used to 'monitor' financial performance.

This chapter addresses concerns of participants at recent changes in the provision of airport services and their impact on intrastate aviation. In addressing these matters, the major focus is on the principles underlying the efficient provision and pricing of Australian airports, rather than on the detail of actual prices, costs or revenue applying to any single airport or airport user.

The next section outlines the role of governments in airport operations. Subsequent sections discuss ways to recover airport costs (5.2), the structure of airport charges (5.3), access to terminals at FAC airports (5.4) and the need for competitive discipline (5.5).

5.1 Relationship to government

Governments in Australia and elsewhere have historically been the owners and operators of airports. This probably reflects past constraints on the ability of the private sector to acquire the necessary land and to finance airport infrastructure.

The economic rationale for retaining government involvement is that an airport operator may possess significant market power, and may use this power to restrict an airport's capacity, increase landing fees and earn monopoly profits. Market power arises because, within limits, it is generally less expensive to expand the capacity of existing runways than to establish a new, separate facility. The extent of market power depends on the efficient capacity of an airport relative to the total market demand for the airport's services.

Abuse of market power may be limited through government ownership together with specified pricing strategies. Alternatively, airports could be operated by private organisations subject to government scrutiny. However, the cost and effectiveness of such scrutiny would need to be compared with gains which may arise from private ownership.

Federal Airports Corporation airports

Under its charter, the FAC is responsible for the operation of federal airports, as well as the provision of terminal facilities and other commercial services carried out at those airports (see Box 5.2). In addition, the FAC may provide consultancy and management services to persons who operate, or propose to operate, airports. However, the FAC's responsibilities do not extend to investigating the need for new Federal airports and it can only cease to operate an airport with Ministerial consent. Following a recent Government decision, the FAC is now also required to ensure airport security. The provision of safety and air navigation facilities at airports - such as air traffic control, non-visual navigation aids and fire-fighting services - are the responsibility of the CAA.

The FAC must endeavour to earn a 'reasonable' return on assets, currently set at a 7.5 per cent per annum real rate of return based on earnings before interest. It must pay the Commonwealth reasonable dividends, which may be an amount either recommended by the FAC or set by the Government. A review being undertaken by the Commonwealth is presently examining the FAC's target, including the basis of the target (eg whether it should be before interest and tax, or assessed on some other basis) and how the FAC's performance should be evaluated in relation to the target. The review will take into consideration the Government's expectation to earn a commercial rate of return on its investment in its GBEs which is 'at least commensurate with the long term bond rate plus an appropriate margin for risk'.

Box 5.2: **Major functions of the Federal Airports Corporation**

Under its Act, the FAC can levy aeronautical charges on the landing and parking of aircraft; the embarkation and disembarkation of passengers; and on the handling of cargo. The FAC is unable to levy aeronautical charges on the provision of services negotiated on the basis of a contract, lease or licence; revenue generated in this fashion is collectively described as non-aeronautical revenue. This statutory distinction between aeronautical and non-aeronautical revenue has formed the basis of defining the FAC's aeronautical and non-aeronautical activities. These broadly consist of:

Aeronautical activities

- runways;
- taxiways;
- aprons and general aviation parking areas;
- facilities to transfer passengers and baggage from aircraft to terminals (eg airbridges);
- visual navigation aids.

Non-aeronautical activities

- leasing land to allow airlines to provide
- terminal gates and aircraft maintenance facilities;
- leasing space in common user areas for trading and retail outlets;
- leasing land for car parks, hotels, offices, warehouses and cold storage.

The FAC is liable for Commonwealth sales and income tax and state payroll taxes, though it is exempt from other Commonwealth, state and territory taxes - the FAC's liability for income tax came into effect from 1 July 1991. It may finance its operations by borrowing from the Commonwealth or by seeking external sources of funds; the Commonwealth may guarantee (at the FAC's cost) any such external financing. The FAC is required to prepare corporate and financial plans annually, detailing expected expenditures, receipts, profit, rate of return, dividend and other performance indicators.

The FAC is required to perform its functions in accordance with Commonwealth policies and may be directed by the Minister, in the public interest, to perform certain functions. The FAC is to be reimbursed for complying with such directions, except in those cases where the direction is 'in accordance with the general policy of the Commonwealth Government'.

The FAC's aeronautical charges are subject to scrutiny by the PSA and the Minister may disapprove of any alterations in charges prior to their implementation. Non-aeronautical charges are not subject to ministerial scrutiny, but are subject to normal commercial negotiations.

Commonwealth and other aerodromes

To reduce the operating costs and improve the efficiency of regional aerodromes, the Commonwealth has encouraged the transfer of Commonwealth aerodromes to local authorities. Estimates provided in the Bosch Report (1984, p. 55) indicated that maintenance and operating costs had been reduced by approximately 70 per cent following the transfer of ownership to local authorities. The major savings were achieved by sharing staff and equipment between the aerodrome and other council activities.

Prior to 1990, the Commonwealth encouraged local ownership by agreeing to contribute, under the terms of the ALOP, to aerodrome funding (eg by improving and upgrading terminals and runways) in exchange for ownership responsibility being transferred (free of charge) to local owners. However, in 1990, the Commonwealth announced its intention to withdraw, over a period of 5 years, from its involvement in Commonwealth and locally owned aerodromes (Minister for Shipping and Aviation Support 1990). Approximately 40 per cent have since transferred to full local ownership. The Commonwealth recently announced its intention to provide additional funding (approximately $20 million) to enable the transfers to be completed by 1992-93, two years ahead of schedule.

Local communities have been invited to take over the management and operation of Commonwealth aerodromes. Local owners of aerodromes covered by ALOP have been encouraged to accept full financial responsibility for their aerodromes. For its part, the Commonwealth will write off its past investment in the aerodrome and consider grants for essential works to ensure that the aerodrome is in good condition at takeover. The Minister for Shipping and Aviation Support (1990) indicated that:

> If an aerodrome is uneconomic because its costs exceed revenues, the Commonwealth will consider providing, on individual assessment, a capitalised social benefit subsidy. For those ALOP aerodromes where the offer is not accepted by local owners, the Commonwealth will consider ceasing funding support ...

A range of views was expressed by participants on the Commonwealth's proposal to withdraw from its involvement in regional aerodromes. The Tasmanian Government (sub. 85, p. 4) provided support for local ownership, stating:

> As a general principle it is agreed that local owners and managers are better able to provide services in tune with local needs and are more likely to keep a closer control on costs and airport charges.

Other views generally reflected participant's assessment of the impact of the Commonwealth's reduced financial involvement on the continued viability of their own operations. Kendell Airlines (sub. 26, p. 4), for example, supported local ownership of regional airports arguing that:

> ... local authorities can operate these airports more efficiently than a national body. Local knowledge, local accountability and the ability to more efficiently use local resources assists in achieving this aim.

Airlines of Tasmania (sub. 14, p. 14) provided conditional support for local ownership stating that airport facilities on:

> ... King and Flinders Islands should come under the control of the local municipal councils only after considerable upgrading by the Commonwealth of both airports has taken place.

Other participants were less supportive of local ownership. The Minister for Transport in Western Australian argued that the State Government had 'yet to decide whether the Commonwealth's position is acceptable.' The Western Australian Government's concern is that the Commonwealth's use of a cash-based accounting system to determine offers to local owners would understate the funding required to maintain the financial viability of many aerodromes. For instance, many non-cash costs (eg depreciation) would be excluded in evaluating an aerodrome's running costs.

Ord Air Charter (sub. 2, p. 3) argued that:

> ALOP should not be forced on small country shires who have no possibility of affording the upkeep of an airstrip and yet the airstrip is of vital need because of distance, RFDS [Royal Flying Doctor Service]/Medical and unserviceability of roads.

Improving commercial arrangements

Corporatisation of the FAC and the transfer of Commonwealth aerodromes to local ownership should improve the performance of airports by making airport managers more responsible for control of costs and by placing airport operations on a footing more consistent with that of other commercial operations. Under the new arrangements, services provided by airports should better reflect users' demands.

However, a number of airports owned by state government authorities do not have to pay Commonwealth taxes (eg sales and income tax). For example, the Queensland Government (sub. 41, p. 12) stated that:

> ... Cairns and Mackay airports currently have a number of advantages, as State Government Authorities, over any private airport operator, most notably exemption from a range of Commonwealth taxes (including company and sales taxes).

In addition, borrowings by these airport authorities are government guaranteed, although they are subject to Loan Council borrowing limits. The Queensland Government indicated that these advantages may be reduced by Queensland Government's corporatisation policy.

Airports which are exempt from Commonwealth, state or local government taxes and charges, or receive concessions unavailable to commercial operators, are provided with a competitive advantage over other airports and other economic activities which are liable for all government charges. The Commission considers that publicly owned airports should not be advantaged by such exemptions. State governments should place on a fully commercial basis all bodies under their control which operate airports (eg port authorities). This would involve them paying all relevant state taxes and, in lieu of paying Commonwealth taxes, an equivalent amount to state treasuries. They should also be required to meet a real rate of return target and remit dividends to state treasuries or, where relevant, to the appropriate local government authority.

Independence of the FAC

As part of its corporatisation program, the Commonwealth has established transparent mechanisms for the Minister to provide directions to the FAC, and for the FAC to be compensated for complying with such directions. For example, the Minister can only provide directions to the FAC in relation to matters which are in the public interest and in some cases (eg airport upgradings) following an inquiry. The FAC is entitled to be reimbursed for complying with directions, at an amount determined by the Minister, although it may not necessarily be compensated for complying with directions that are 'in accordance with Commonwealth policy'.

The commercial independence of the FAC may be compromised by these arrangements since it is unclear as to which directions are in the public interest and which are 'in accordance with Commonwealth policy'. The Commonwealth has also retained the right to determine whether new airports should be built. Moreover, the arrangements for providing directions to the FAC do not cover every eventuality which may impact on the commercial independence of the FAC. For instance, the FAC was obliged to establish new terminal facilities at Darwin and Alice Springs airports when those airports were transferred to it from the Commonwealth. However, the FAC (1990, p. 41) stated that these airports were transferred at a 'substantial discount' to reflect this obligation and other ongoing liabilities (see also DOTAC 1989, p. 60 and Mills 1991b). In addition, delays in the Commonwealth exercising any of its responsibilities will inject additional uncertainty into the FAC's operations. This uncertainty has an attached commercial cost which will be reflected in the FAC's performance.

The Commission recognises that the Commonwealth should play a significant role in monitoring the performance and approving the goals of the FAC, as would a major shareholder of a commercial organisation. The Commonwealth, via the TPC, also has responsibility to ensure that the monopoly powers of the FAC are not abused. Moreover, through other regulation, the Commonwealth also attempts to ensure that any costs which may be imposed on the community (eg environmental costs) are taken into consideration in the operating and investment decisions of airport owners. On the other hand, it is the role of the FAC's Board to establish the Corporation's goals and to submit them to Government for approval. The Board and management of the FAC are also responsible for the day-to-day operation of Federal airports and ensuring that goals and performance targets are met.

It is clear that the Commonwealth Government has a role as the owner and as an 'umpire' in relation to the FAC. However, in performing these functions there exists some potential for a conflict of interest. For instance, the Commonwealth can be required to make judgements on airport activities which have an environmental impact on nearby residents. However, such judgements may also have a significant impact on the FAC's financial performance in which the

Commonwealth, as sole shareholder and a major creditor, has a direct interest. In the absence of separate and clearly transparent administrative processes to direct all facets of the FAC's operations, there exists the possibility that aviation infrastructure developments will be made 'for reasons unrelated to economics or efficiency' and that the aviation industry will be required to pay for such developments.

The full benefits associated with corporatisation would more likely be achieved by clearly separating the Commonwealth's roles as the shareholder and as the umpire upholding the community's interests. At present, only those aspects of pricing of aeronautical services covered by the Prices Surveillance Act and market power covered by the TPA are subject to independent and separate scrutiny. Even though it is the Cabinet which makes the major decisions affecting aviation policy, a single Minister (and one government department - DOTAC) has responsibility for developing aspects of policy for airports generally and administering the regulations to implement policy. In liaison with others, this same Minister and department share responsibility for monitoring the performance of one of the major players - the FAC.

Consideration should be given to separating responsibility for the development of aviation policy from the assessment of FAC performance. This could involve the Minister for Finance or the Treasurer assuming full responsibility for performance monitoring. Airport policy generally could continue to be the responsibility of the Minister of Transport and Communications, other than for significant policy decisions which are considered by the Government as a whole. The Board and management of the FAC should continue to be responsible for ensuring that performance targets are met. Separate government agencies should continue to oversee the FAC's compliance with matters relating to its monopoly powers (eg the TPC and PSA). The FAC should also be subject to those environmental requirements and assessment procedures that apply to economic activities generally. The FAC should not be compensated for undertaking these activities as they represent a normal cost associated with operating a business.

Decisions relating to the operation of existing or new airports should be clearly based on commercial and economic considerations and, ultimately, be the responsibility of the FAC. However, if the Government directs the FAC to establish new facilities, to provide community services or to undertake other actions to meet political considerations (including matters 'in accordance with Commonwealth policy'), such decisions should be processed under separate administrative mechanisms.

The FAC should be fully compensated for complying with Ministerial directions, including matters 'in accordance with Commonwealth policy'. Compensation should be by direct payment rather than by modification to the FAC's asset values, rate of return target or by reducing its dividend requirement.

5.2 Cost recovery

The Bosch Report (1984) noted that the level of aviation cost recovery during the 1970s was below 66 per cent. This resulted in a revenue shortfall of $1.5 billion between 1974 and 1986. Bosch (1984, p. 14) concluded that:

> ... there is virtually no possibility of achieving 100 per cent cost recovery under the present arrangements.

To improve the level of cost recovery, the report recommended the Commonwealth 'adopt a policy of full recovery of attributable costs over a period of, at most, ten years' and that the 'interest rate for cost recovery purposes should be the long term bond rate'.

The report also highlighted that, during the 1970s, 44 per cent of all infrastructure costs were attributed to small commuter airlines and general aviation, but only 15 per cent of these costs were recovered from this sector of the industry. For regional airlines, 30 per cent of attributed costs were recovered. The report recommended that alternative procedures for allocating costs be developed based on aircraft weight.

A number of participants expressed concerns about airport cost recovery. These concerns related to performance monitoring, subsidisation and cross-subsidisation of airport activities, and asset valuation. This section considers these issues in turn.

Performance monitoring

Adoption of cost recovery and target rates of return have been central to Commonwealth and state government initiatives to improve the performance of GBEs. These measures provide transparent mechanisms which can assist in monitoring and identifying deficiencies in a GBE's performance. They also assist in developing investment decisions at airports and allow the community as a whole to earn a rate of return on its assets. This ensures that both the owners and the users benefit from the efficient construction and operation of airports.

Consistent with its approach to reforming GBEs and many other government activities, the Commonwealth has set the FAC three financial objectives:

- to place airports on a sound commercial basis so financial performance can be measured;
- to produce an adequate return on airport investment, subsequently set at 7.5 per cent. This target was before interest and, by implication, tax, since the FAC was not at that time liable for income tax; and
- to improve revenue from non-aviation activities while taking account of other objectives.

To meet the financial objectives set by the Commonwealth, the FAC has: implemented an accrual accounting system to identify non-cash costs (eg depreciation); established each airport as a separate profit centre; and adopted commercial rates of return for all non-safety related investments.

The FAC has more than covered its costs since 1987. Over the twelve months to April 1991, the FAC earned a profit before interest of $116 million, representing an 8.3 per cent return on assets compared with a 7.1 per cent return for the previous year. In the following three months the FAC earned an additional profit of $38 million. The FAC's assets were revalued upwards by $238 million (as at 30 June 1991). Thus, for the 15 month period ending 30 June 1991, it reported an 8.9 per cent return on assets - the chairman's report indicated that this represented a 7.1 per cent return on an annualised basis. The FAC paid the Commonwealth a dividend of $15.5 million, representing an annualised 2.4 per cent return on equity for the 15-month period.

Revenue generated from the FAC's non-aeronautical activities has been a significant factor in determining its financial performance. Between 1988-89 and 1989-90, the FAC's non-aeronautical revenue increased by 7.6 per cent, whereas aeronautical revenue increased by one per cent. Currently, non-aeronautical revenue represents approximately 60 per cent of the FAC's operating revenue.

It is clear that the changes introduced in recent years have improved many aspects of airport operation. In particular, the FAC over its first three years of operation has largely achieved all of the financial objectives set by the Commonwealth. However, questions remain as to whether the FAC has been able to meet its financial objectives merely by using its market power to increase prices, and whether the FAC operates in an economically efficient manner, both in terms of least cost operation and charging for the use of its various facilities.

Non-financial performance targets

Non-financial performance targets can mimic some of the pressures that a competitive market would bring to bear on an organisation's costs and assist in performance evaluation. For instance, analysis of productivity can highlight the appropriateness of airport investment and operational decisions; in particular, whether the airport is operating at least cost and whether service quality has changed. Comparisons between airports and with international best practice may also provide some guide to operating efficiency.

In response to the draft report, the FAC denied that it has used its monopoly power to achieve its financial targets. In support of this claim, the FAC argued that the rate of increase in charges has been the lowest for its aeronautical activities, where the potential for monopoly power is greatest, and that the FAC has achieved its financial targets largely by bringing its non-aeronautical activities into line with commercial practice. Moreover, the FAC highlighted evidence which suggests that some airport costs have declined through:

- a 25 per cent reduction in staff numbers which occurred on the establishment of the FAC; and

- the introduction of a streamlined system of awards.

There is also evidence to indicate that the facilities provided at airports have improved. For instance, the FAC has:

- approved $1.6 billion of capital works in a program of up-grading facilities such as runways, taxiways and terminals; and

- sought to develop its commercial (non-aeronautical) activities at general aviation airports.

There is other evidence, however, which seems to point in the other direction:

- At a time when most GBE's have been reducing staff, the number employed by the FAC has increased in recent years. Excluding the 149 staff associated with the FAC's acquisition of an additional six airports during 1989-90, staff numbers increased from 1050 to 1253 over the three years to June 1991; an increase of some twenty per cent. Most of this increase (126 persons), occurred in the first three months of the FAC's operations as it employed staff to fill vacancies which existed on establishment.

- Aircraft movements per employee at FAC airports (excluding the six acquired in 1989-90) fell by over 7 per cent in the same period.

While the latter comparisons could suggest that efficiency is not improving, such evidence in isolation is not conclusive. For example, performance has been influenced by such factors as the pilots' dispute in 1989 and the increase in air travel since interstate deregulation in 1990. While any organisation should be expected to cope with changing economic conditions, these factors complicate comparisons of performance over a short period of time. Nevertheless, it is the role of performance monitoring to isolate factors which are characteristic of an airport and cannot be improved (eg weather conditions) from those which reflect managerial efficiency.

The FAC indicated that it currently uses approximately thirty performance indicators for internal management purposes, but that these indicators are not yet sufficiently developed to be made available for external scrutiny. The FAC (sub. 29, p. 36) stated:

> ... as yet it has proved impossible to establish meaningful comparisons within the industry ... Non financial performance measures are still being examined and the Corporation is involved in discussions with the joint States/Commonwealth Task Force on this subject.

The performance of an airport depends on nearby geographical features, on local weather conditions, on the mix of aviation activity undertaken and on the range of facilities provided, all of which can vary considerably between airports. As a result of these factors, the FAC (sub. 59, p. 9) argued that comparisons between:

> ... similar airports is difficult, and comparison between different types of airports is not valid.

These difficulties inhibit useful comparisons between particular facets of airport operations. However, provided there is an adequate range of measures, the set of measures as a whole should allow meaningful comparison between airports and between the FAC and other GBEs. Moreover, it should be possible to determine whether one airport is improving its performance faster than another. Therefore, while differences between various airports (or for that matter between various electricity, rail or water utilities) complicate comparisons of performance, governments need to ensure that such differences are not used as an excuse to avoid the development of appropriate performance monitoring mechanisms.

In the absence of competition, it is difficult to judge if the FAC is operating efficiently. To help assess the FAC's performance, a range of performance indicators for each of its airports should be introduced and made publicly available. The choice of appropriate indicators should be facilitated by the work of the Steering Committee on National Performance Indicators. The regular publication of performance indicators will enable the management and Board of the FAC, the Commonwealth Government and other interested parties to judge whether the FAC's operations are being conducted efficiently and that its monopoly position is not being exploited. The operators of Australia's other aerodromes should also introduce performance monitoring.

Financial targets

The principle financial target used for monitoring GBE performance is a rate of return target. Rates of return can be calculated in one or all of the following ways: profit (earnings) after interest and tax expressed as a percentage of shareholders' funds (equity); profit before interest and tax expressed as a percentage of assets; and profit after interest and tax expressed as a percentage of sales.

While the FAC's 7.5 per cent real rate of return target is based on total assets, there was some confusion among participants as to whether earnings were after interest and tax. This is partly attributable to the fact that the FAC has only become liable for income tax from 1 July 1991. This issue is being addressed by an Inter-Departmental Committee of Commonwealth officials, the report of which will be provided to the Minister for Shipping and Aviation later this year.

The Commission considers that a rate of return target, calculated before interest and tax, is the most appropriate basis for assessing the earnings performance of the FAC as it ignores the ramifications of the methods adopted in financing businesses and their respective variable income tax liabilities. These potential anomalies do not arise if the rate of profit return is set and measured before interest and tax. The introduction of an income tax liability may necessitate the FAC earning above its current 7.5 per cent rate of return target, if it is to maintain the current balance between debt and equity funding.

The Commission notes the Commonwealth's objective for the FAC to earn a return on its investment which is 'at least commensurate with the long term bond rate plus an appropriate margin for risk'. However, the Commission is not in a position to indicate what would be an appropriate level of risk premium and, hence, an appropriate rate of return.

The Commission considers that Commonwealth, state and local governments should provide their airport authorities with target real rates of return calculated on earnings before interest and tax expressed as a percentage of net assets.

Airport cost recovery strategies

Although supportive of the user pays principle, participants expressed reservations about the level of airport cost recovery. Some of the concerns covered general issues associated with measures to fully recover the costs of airport infrastructure. However, some participants also expressed reservations about cost recovery strategies employed at FAC and regional airports.

Level of airport cost recovery

Several participants voiced concerns that airports, and aviation generally, appear to be leading the way in the reform of transport in Australia. The need to improve airport performance was not denied, but the strategies adopted to achieve reform through full cost recovery were questioned. For instance, the Australian Airport Owners' Association (sub. 11, p. 1) argued that:

> Complete withdrawal of Commonwealth air transport subsidies is inconsistent with their provision of subsidies to road and rail transportation systems.

This view was also expressed by a number of participants in more isolated areas of Australia. For instance, the Municipality of Flinders questioned the principle of full cost recovery when the Island's 'residents pay Federal taxes and excise which fund infrastructure such as road, rail and metro transport' to which they have no access.

These observations reflect general recognition that, while airports are either achieving rate of return targets or are expected to achieve full cost recovery in the near future, the same may not be said about competing modes of transport, such as rail. Most governments, however, are increasingly seeking to reduce subsidisation of transport infrastructure and services. In the mean time, it is the Commission's view that differing levels of subsidisation between competing transport modes should not prevent costs being recovered for aviation infrastructure. If cost recovery were deferred until it could occur simultaneously across the entire transport sector, the reform process would become unmanageable and further reform could be stalled.

Some participants expressed concern that cost recovery objectives result in aircraft operators paying for airport infrastructure which is surplus to the industry's needs. Particular reference was made to past investments undertaken for non-economic reasons. For instance, Kendell Airlines (sub. 26, p. 2) stated that:

> ... the industry should only pay for that infrastructure which is provided on an efficient and effective basis appropriate for the needs of the industry.
>
> For too long infrastructure in the form of airport and airways facilities has been provided not so much on an efficiency basis but rather having regard to other issues, such as local community aspirations or the winning of votes, particularly where regional airport upgradings were involved.
>
> ... there appears to be continual and substantial inefficiencies in the aviation regulatory bodies and infrastructure providers. While great efficiencies are being achieved in the industry with deregulation, these organisations retain their monopoly status. Characteristically, they are cost plus, inflexible, slow to react and overmanned.

In response to similar criticisms in the past, DOTAC indicated that the Commonwealth's past investment in regional aerodrome infrastructure is written off on their transfer to local owners and on withdrawal from ALOP. Further, grants provided on the transfer or withdrawal of aerodromes will be used for essential maintenance work and are not attributable to the industry. Moreover, the value of some assets transferred to the FAC at the time of its formation were discounted in recognition that some investment was premature (the Brisbane airport terminal being an important example).

The Commission supports the view that airports should be required to recover costs and meet a target rate of return. However, the aviation industry should not be liable to pay for airport infrastructure which has been provided for non-economic reasons or to appease a particular community interest group.

Where it is evident that investment in airport infrastructure has been inappropriate (eg the construction of runways to higher than necessary design standards or terminals which could be regarded as 'gold plated'), asset values should be reduced in order to reflect earnings potential rather than construction costs. However, at the same time, the industry should not be in a position to demand that governments provide airport developments in the future, and then subsequently argue that it should not fund any inappropriate investments because economic conditions have changed.

Participants were also critical of the ability of airport owners to earn profits, particularly at times when airlines face the prospect of losses. These concerns were raised in the context of local aerodromes where, as argued by Flight West Airlines (sub. 13, p. 19):

> ... the apparent absence of cost control ... gives rise to uncontrolled price escalation.

Similar concerns were expressed about FAC airports. Ansett (sub. 15, p. 11) was particularly critical of recent rent increases:

> Pursuit of a target rate of return of 7.5% real before tax and interest year in year out (regardless of economic fluctuations) has been translated into enormous increases in rentals (rather than aeronautical charges) which operators have had difficulty in absorbing.

Given the nature of airport operations, concerns about airport operators abusing their monopoly powers are understandable (this issue is discussed further in section 5.3). However, it is clearly in the community's interests that an appropriate return is achieved on investment in airport infrastructure. Moreover, it need not follow that airport operators should achieve below target rates of return simply because airport users are experiencing financial difficulties. In general, the financial performance of airports should be linked to the demand for airport services: when demand is high, or when an airport is operating near to capacity, the airport should at least earn its target rate of return. On the other hand, it may be appropriate for an airport operator to lower its rate of return in the short term if this decision helps maintain users' viability and thereby improves the airport's longer term profitability.

Governments should require the FAC and other airport owners to achieve a designated rate of return target on average over a number of years, rather than be required to achieve it every year, irrespective of the timing of 'lumpy' investments or of fluctuations in demand.

Under-recovery of costs at FAC airports

The FAC has been set a corporate objective of achieving a 7.5 per cent return on assets. In moving towards this target, improvements in the level of cost recovery on some activities and at some airports has lagged behind that of others. While the FAC's major capital city airports have been profitable, its general aviation airports have incurred substantial losses. Over all its airports, the FAC has not yet achieved full recovery of aeronautical costs. Over the whole of its airport network, it achieves a cost recovery rate of approximately 75 per cent on its aeronautical costs. In meeting the target rate of return, this under-recovery is offset by the profitability of its non-aeronautical activities. The FAC indicated the under-recovery of aeronautical costs varies between individual airports. A few airports are close to full recovery of aeronautical costs (notably Sydney and Melbourne), while others are still a long way off (Bankstown currently recovers only thirty per cent of its aeronautical costs). The FAC expects that recovery of aeronautical costs will improve as airport running costs fall and as aeronautical charges rise in nominal terms.

In its draft report, the Commission raised the possibility that the FAC may be using its monopoly position to achieve higher than normal returns on non-aeronautical activities (see also section 5.3). If this were the case, under-recovery of aeronautical costs along with the FAC's achievement of its rate of return target suggests that cross-subsidisation occurs. The FAC disputed this suggestion, however, arguing that its non-aeronautical charges are commercially based, that arbitration provisions exist for the negotiation of leases and that some leases (eg duty free stores) tie airport prices to city prices.

To the extent that the FAC's non-aeronautical activities make a normal profit and the FAC as a whole achieves its rate of return target, under-recovery of aeronautical costs may alternatively suggest that the FAC's target rate of return is too low (assuming that assets are valued correctly). Evidence available to the Commission did not allow it to establish whether under-recovery of aeronautical costs reflects cross-subsidisation or a low target rate of return. In either case, the under-recovery of aeronautical costs indicates that such activities are receiving an implicit subsidy.

It is widely recognised that subsidies, whether financed by taxes or by excessive charges on others, distort the pattern of demand from one which reflects the underlying resource costs and users' willingness to pay. In the case of aeronautical services, charges which do not recover long term costs could, by stimulating demand, bring forward the need for additional runways and associated facilities. If under-recovery of costs attributable to aeronautical activities were financed through higher than normal commercial returns on non-aeronautical activities, the incentive to construct terminals and other facilities would be reduced, creating further inefficiencies. It could, for example, serve to delay the introduction of common-user facilities. This would impede contestability and retard the development of aviation generally.

A number of participants considered that cross-subsidisation of aeronautical activities by non-aeronautical activities was appropriate. The Aircraft Owners and Pilots Association (sub. 61, p. 6) argued that:

> Without the airside operations many of the non aeronautical activities would not exist. For example, aircraft refuelling and maintenance businesses are completely dependent on aircraft operations. ... Hence it can be argued, and often is, that it is only reasonable for part of the airside infrastructure costs to be borne by the ground side operations.

However, this argument presumes that non-aeronautical activity is totally dependent on aeronautical activities. It is more appropriate to view them as interrelated activities. While aircraft refuellers and maintenance businesses are obviously dependent on aircraft, it is also the case that airside operations are dependent on refuellers and the many other activities undertaken at airports. Similarly, while terminals would not exist if there were no aeronautical operations, it is also true that airlines could not function without terminal facilities. Such interdependencies are common elsewhere in the economy: they allow enterprises to concentrate on core activities and allow specialists to provide ancillary services. For example, manufacturers of personal computers depend on suppliers of software, and vice versa. However, the suppliers of computer software and hardware both expect to earn a return on their investments. A similar situation exists with the use of contract maintenance staff to repair breakdowns in an industrial plant; and the manufacturers of motor vehicles and their suppliers of components.

While airports can be viewed as integrated operations, the major airport activities involve separable investment decisions. The separation of ownership of aeronautical facilities from non-aeronautical activities at many airports is testimony to this. Similarly, while investments in additional runway

and terminal capacity are both influenced by forecasts of future demand, the strength and width of the runway pavement will be independent of the quality of the terminal facilities (eg the quality of design, construction materials and fittings). This separability in investment in airport infrastructure is reflected in the variety of combinations of runways, terminals, maintenance and storage facilities provided at airports (ranging from airstrips with very few non-aeronautical facilities to international airports with extensive non-aeronautical facilities).

A number of participants argued that it is common international practice for non-aeronautical facilities to cross-subsidise aeronautical facilities. DOTAC (sub. 78, p. 11) argued that:

> ... cross subsidisation of aviation facilities by airport based non-aeronautical activities is commonly used as a means for airports to fund the development of facilities. Operators of major airports throughout the world are developing their airports as industry growth centres, with such developments seen as complementary to airport activities as well as enhancing and diversifying their revenue bases.

While overseas practice is relevant, it is not in itself an argument for following suit. Australian governments need to take decisions in the nation's own interest. Governments in Australia have recognised the distorting effects of cross-subsidies on demand and investment in a range of economic activities, and have attempted to remove them to improve the efficiency of the activities involved. To support participants' claims for the maintenance of cross-subsidies in one particular sphere of government activity - airport operations - it would be necessary to identify factors which suggest that airports should be treated as an exception. Participants were unable to identify any economic factors which suggest that this is the case (though political considerations may be important).

The Commission considers the full recovery of aeronautical costs to be important, yet does not see it as a short term imperative. As stated by the FAC (sub. 59, p. 6):

> ... a precipitate move to full cost recovery pricing of aeronautical charges at this point in time would need an increase in the region of 50% in our overall aeronautical pricing structure ... Such increases would have a dramatic effect on our customers and their customers ...

Full recovery of aeronautical costs should be a medium term goal. Within this time frame, the FAC should try to achieve this objective by reducing costs rather than by merely increasing charges. Full recovery of costs for all activities would enhance, not detract from, the commercial development of airports in an economically efficient manner.

A number of participants indicated that, while the FAC was profitable overall, only seven of its airports were profitable during the 15 months to June 1991. The three major airports (Sydney, Melbourne and Brisbane) generated profits of $105.5 million. Over the same period, the FAC's general aviation airports generated collective losses of $11.3 million. In addition, Darwin and Essendon airports incurred, in total, losses of $8.8 million. It was argued that this under-recovery represents a significant cross-subsidisation of the smaller airports, which adversely affects the provision of RPT services from the larger airports.

It must be noted, however, that for a number of years the FAC has had the objective of achieving full cost recovery at each of its airports. For instance, the FAC (1990, p. 8) indicated that its loss making airports 'are either on or ahead of target towards attaining profitability.' The Commission supports this objective since it increases the discipline on the FAC by placing limits on its scope to pad costs, undertake uneconomic infrastructure developments and exploit its market position to cross-subsidise various activities.

It also needs to be recognised that under-recovery of costs at particular airports in any one year need not imply cross-subsidisation between airports. For instance, new investment is generally 'lumpy' since increments of new capacity (eg runways or taxiways) frequently cannot be matched closely to increases in demand. Hence, the efficient timing of new investment may result in congestion just prior to, and excess capacity following, the investment. Therefore, rate of return and cost recovery targets for individual airports should be set in a similar fashion to that which applies to the whole organisation; that is, the target should be achieved, on average, over a number of years. It can be expected that an airport's rate of return will fluctuate over this period; in particular, the rate of return may fall immediately after an investment and gradually rise, as demand grows, until an additional expansion in capacity is warranted. On the other hand, when established airports operating at near capacity - such as those at Bankstown and Moorabbin - continually operate at a loss, this suggests that airport operating costs are too high or landing fees and other charges are too low.

The Commission supports FAC measures directed at eventually eliminating under-recovery of aeronautical costs. While recognising that every airport activity need not achieve the same rate of return, each separable activity should, over time, achieve full cost recovery. The Commission also concurs with the FAC objective of achieving full cost recovery at each of its airports.

Spill-over benefits at regional aerodromes

A range of participants argued that full cost recovery (including a rate of return) was inappropriate for many regional and general aviation airports. Some argued that aviation is not the only beneficiary of airports, and that airports generate benefits which 'spill-over' into the wider community. For instance, the Aircraft Owners and Pilots Association of Australia (sub. 61, p. 3) maintained that airports:

> ... generate local employment and revenue for the benefit of the community. Without access to a nearby airport many businesses would be forced to relocate elsewhere. This does not mean that aircraft operators should not contribute to the cost of maintaining the facility, quite the contrary, but the management of the airport must consider the airport in the totality of the community requirement and not just as an isolated expense which must be cost recovered directly from the day to day user.

Some participants argued that, because diverse elements of the Australian community benefit from airports, they should contribute to the cost of their operation through subsidies. For example, it was pointed out that airports facilitate tourism, provision of flying doctor services and contribute to national defence objectives.

Airports clearly provide benefits to sectors of the community other than airport users. However, such linkages are common to many, if not all, economic activities. For example, coal mines, pulp mills and chemical factories are all significant employers in regional economies. They attract other industries to the area and support an array of local suppliers of inputs. On a smaller scale, shopping complexes provide locational advantages for nearby residents which are reflected in house prices. Because of the proliferation of such linkages, it is generally not possible for governments to support all industries which claim 'special needs', merely because they support other areas of economic activity. To support the case for continued airport subsidisation, there would need to be evidence to show that airports generate 'exceptional' benefits - benefits beyond those to which other forms of economic activity can lay claim.

There are reasons to believe, first, that the benefits from continued subsidies would be limited and, second, that associated costs would reduce any net gains. For instance, an airport can benefit a regional centre by facilitating the supply of many goods and services. While it is clear that the consumers of these goods and services benefit from the airport, it may appear that they do not contribute to the airport's costs. However, consumers contribute indirectly, since the purchase prices of goods and services will normally reflect all production and distribution costs, including airport landing charges.

In other circumstances, airports may generate spill-over benefits for local industries where it is more difficult for prices to reflect all of the benefits and costs; for example, a nearby tourist resort or hotel may experience increased demand as a result of airport investment. Yet, many of these spill-over benefits could be captured by the airport operator through its trading activities. The airport operator could choose to engage in some of the advantaged activities at the airport. Alternatively, it could develop joint ventures or other commercial arrangements with businesses which specifically benefit from the airport's activities. Such arrangements already exist between some airlines and tourist operators and in many other spheres of commercial activity. In these circumstances, there would be no case for a subsidy.

Negotiating arrangements to share these benefits is difficult when the beneficiaries are diverse (eg when a community needs an airport for flying doctor services or national defence). However, in these cases a more efficient solution would be to adequately fund the RFDS so it can pay the full cost of the facilities it uses, rather than subsidise airport operations. Similarly, where a defence need is identified, direct payments should be made from the defence budget.

Some local governments signalled the importance of an aerodrome to their region. For example, the Australian Local Government Association (sub. 65, p. 1) argued that:

> Small rural communities are economic units in themselves, especially in the more remote regions. While many operations such as local airports may not of themselves be viable, in the remote rural context such resources can make a vital contribution to keeping the community as a whole viable. Part of the role of Local Government in remote and rural Australia is to juggle the community resources so that the needs of local people and local industry and commerce can be met.

This view is reflected in the willingness of local councils to provide financial support to their aerodromes. The Lismore City Council (sub. 23, p. 6) stated that since the aerodrome provides services to the wider community it:

> ... should not have to recover 100% of the cost of operating an aerodrome as Council apportions the benefit to the commercial, sporting and tourist industries of its area. Up to 30% subsidy from that sector of the community to operate the aerodrome must be expected.

One of the objectives of local ownership is to provide the surrounding community with a greater say in the operation of their aerodrome. However, rural communities need to be aware that subsidisation may impinge upon the efficient operation of airports. Subsidies may, for example, encourage the over provision of airports in a region, may remove the discipline on efficient investment decisions imposed by a rate of return target and may mean that not all commercial opportunities are exploited. As a result of these factors, the financial demands on local communities could be excessive.

Airport owners also need to recognise that residents in neighbouring regions which use the airport will benefit from the subsidies they fund. In addition, it is likely that different aircraft activities will generate different levels of benefits to the community. Ideally then, the level of subsidy would not be equivalent for all operators, but would be greatest for those who generate the most significant spill-over benefits. For instance, a town may receive significant benefits from RFDS activity, whereas any spill-over benefits from private aviation activity might be virtually non-existent. If this were the case, landing charges for private aviation could be set to cover all attributable costs, while landing charges for RFDS could be set at a lower level.

The Commission considers that the benefits an airport provides to a regional economy will not be significantly different from the benefits generated by many other economic activities. An innovative commercial approach to airport management may frequently enable the airport to share in these benefits without recourse to subsidies. Nevertheless, if a local community insists on subsidising an airport, appropriate performance monitoring procedures need to be in place to ensure that operating costs are minimised.

Valuing airport assets

In establishing the FAC, the Commonwealth had to determine an appropriate capital structure for the Corporation and to value the assets to be transferred. Initial estimates of the assets' value were based on both a physical examination as well as on a discounted cash flow model. The Bureau of Transport and Communications Economics (1990, p. 10) stated that:

> In establishing the initial asset valuation for the FAC, a discounted cash flow model (of the stream of future net income) was adopted, in preference to a commercial valuation of all assets taken over, including airport land. Had the latter method been adopted, a commercial rate of return would have necessitated either subsidy or increased charges.

DOTAC added (sub. 78, pp. 12-3) that, while accepting that the discounted cash flow model be used to value the assets, Commonwealth officials were unable to agree on: the form of the fixed asset register; the level of the government loan; and the interest arrangements to minimise the FAC's initial costs. These issues were settled by the Treasurer and the Ministers for Finance, and Transport and Communications. The assets transferred to the FAC were valued at $1096 million, with the Commonwealth's equity set at $648 million and the FAC's debt to the Commonwealth set at $400 million.

Since it commenced operations, the FAC has continued to update its asset values. The choice of valuation methodology, and therefore asset values, are important since asset values have a significant impact on the efficient operation of airports, its new capital expenditure decisions, the financing of such works and on an airports' earning capacity. They also have important implications for airport charges.

Asset valuation is often more difficult for public sector corporations than for private sector companies. The assets of public sector corporations, which are largely associated with infrastructure investments, are rarely bought or sold and there is no share price that can act as a guide to asset values.

Accurate asset valuation is also more important for a GBE than for its private sector counterparts because it is not fully exposed to market disciplines. For example, the share price of a publicly listed company reflects the earnings potential of its assets. Poor management and the inefficient use of a company's assets will tend to depress its share price, making it vulnerable to takeover. The price paid in a takeover will reflect the new management's view of the earning potential or realisable value of a company's assets. By rewarding good decisions and penalising bad decisions in this way, market forces assist in determining the value and best use of an asset.

Since airport operators are largely public sector organisations, they are not exposed to many market disciplines. Consequently, administrative mechanisms must be relied on to value assets correctly. Asset values are sensitive to long term demand. If demand increases, asset values are also likely to increase. Depending on capacity utilisation, this could indicate that an airport should expand its activities. Conversely, if demand decreases, asset values are likely to decrease. If, as a result, airport land is valued below its use in an alternative activity, this could indicate that the airport should be contracted, or perhaps even closed. Decisions on expanding or contracting airport activities also need to take into consideration a range of other factors, including the not inconsiderable development costs and risk in converting land from one use to another (see Box 5.3).

Box 5.3: **Site valuation of Essendon airport**

A Joint Commonwealth/Victorian State Government study (1991) considered the future airport needs of the Port Phillip region. The study examined a number of options based on the closure of Essendon airport and the development of alternative facilities. While the study indicated the closure of Essendon airport would result in a net cost of $50 million, it also highlighted many of the practical difficulties associated with airport valuation.

Currently, Essendon airport is valued at $33 million. An initial examination, undertaken for the purposes of the study, indicated the airport site would be valued at $87 million (at 1990 prices) if it was redeveloped for residential purposes. Subsequent investigations revealed a number of assumptions needed adjusting, resulting in a downwards revaluation of the airport site.

Industry and financial advice found that, for land redevelopment projects, a 35 per cent rate of return is appropriate, not the 20 per cent initially used. Such a rate of return reflects both the cost of finance (ie debt and equity) and project risk (eg changing economic conditions and reliability of cost and revenue estimates). This adjustment alone approximately halved the initial site value of Essendon airport.

In addition, the initial site estimates either underestimated or excluded a number of redevelopment costs. For instance:

- Subsequent investigations revealed the presence of asbestos and polluted soil. Removal of these contaminents was judged to cost $5 million and could even be several times higher - the original estimate for environmental clean-up costs was $1.9 million.
- Land tax and council rates ($20.5 million) and stamp duty ($2.4 million) were excluded from the initial redevelopment cost estimates. All of these government charges would be reflected in a lower price a land developer would be willing to pay for the Essendon airport site. However, those charges which are revenue raising taxes are transfers to government and would not normally be considered in a cost benefit study.

The evaluation also highlighted remaining uncertainty in relation to demolition costs and expected land resale prices. The revised estimates placed a value on the Essendon airport site of between $25 and $55 million, with a best estimate of $37 million. The site estimates did not include existing buildings (valued by the study at $67 million) which would be unsuitable for other purposes.

If asset values are manipulated or inaccurately estimated, airport performance may be obscured by yielding inaccurate rate of return estimates. More importantly, however, airport managers rely to a large extent on the accurate valuation of assets in order to help determine when, and at what location, various airport activities should be expanded or contracted. Incorrect current values of airport assets can lead to the uneconomic and inefficient use of assets and cross-subsidisation

between various airport activities which, over a period of time, can penalise users and the aviation industry generally. This situation could persist indefinitely since there are no automatic corrective mechanisms applying to public enterprises.

A number of asset valuation methods exist. The objective in adopting a particular asset valuation method should be to enhance management decisions relating to the economic and efficient use of airport assets. While, to some extent, all valuation methods possess deficiencies, this does not reduce the need for accurate asset valuation. In this context, the Commission notes that current FAC practice may not be consistent with this principle since recent valuations have been capped.

In principle, the value attached to an asset should reflect the greater of either its current use or the highest valued alternative use, less any appropriate development costs and an allowance for risk.

5.3 Structure of airport charges

Airport charges are important determinants of the efficiency of investment in airport infrastructure and of the efficiency with which airport services are provided. This section outlines current airport pricing practices and assesses these practices against the benchmark of 'efficient' pricing principles (see also Appendix G).

A number of regional airlines estimated government charges to represent between 10 and 20 per cent of their operating costs and ticket prices. For most operators, the bulk of payments to government consist of CAA charges for the provision of navigation and safety services. Nonetheless, landing charges represent a significant component of cost, especially for smaller airlines. For example, Lincoln Airlines indicated that it costs $25 for a Cessna 402 and $69 for a Saab 340 to land at an FAC airport. These charges represent approximately $4.80 and $2.70 per passenger in the respective aircraft. The FAC stated that its costs 'are by no means the highest', as landing fees charged by local authorities for a Saab would be $120 at Devonport, $227 at Tamworth and $445 at Broken Hill.

Pricing practices and issues at FAC airports

FAC landing charges are based on an aircraft's 'maximum take off weight' (MTOW). The FAC's flexibility to levy charges is constrained by its own Act and by PSA monitoring. For instance, the *Federal Airports Corporation Act 1986* (section 56(10)) stipulates:

> An aeronautical charge shall not be fixed at an amount that exceeds the amount that is reasonably related to the expenses incurred or to be incurred by the Corporation in relation to the matters in respect of which the charge is payable and shall not be such as to amount to taxation.

Currently, FAC charges are uniform across a wide range of airports, although there is some differentiation between groups of airports and categories of aircraft.[1] The FAC's aeronautical charges include landing charges for airlines, a General Aviation Infrastructure Tariff (GAIT), peak and shoulder period surcharges at KSA and parking charges for some types of aircraft (see Box 5.4).

Box 5.4: **Aeronautical charges at FAC airports**

The FAC's aeronautical charges include:

- a landing fee of $5.72 per tonne at international and regional airports plus a $0.90 per tonne surcharge for large (over 20 tonne) domestic passenger aircraft. These rates also apply to general aviation aircraft at international airports, subject to a $25 minimum landing fee - general aviation aircraft are exempt from landing fees at regional airports;
- a weight based General Aviation Infrastructure Tariff (GAIT) allows general aviation aircraft unlimited use of regional and general aviation airports for a fixed period (ie either daily, monthly, 6 monthly or 12 monthly);
- a $250 surcharge for aircraft using Sydney airport during peak periods (ie weekdays between 8 am and 9 am and again between 6 pm and 7 pm), as well as charges during the shoulder periods for aircraft not operating regular public transport services; and
- an $8.00 per day parking fee for general aviation aircraft at international airports.

Most participants did not comment on the structure of the FAC's landing charges. Of greater concern to participants was the peak period surcharge which applies at Sydney's Kingsford Smith Airport.

Pricing practices and issues at Commonwealth and other airports

At the 29 aerodromes owned and operated by the Commonwealth, landing charges apply to the generally larger avtur fuelled aircraft. During 1991, location specific landing charges were introduced, and progressively increased from $4.66 per tonne MTOW to a maximum of $10.00 per tonne. Commonwealth landing charges also apply at locally owned aerodromes which are part of the ALOP - for avtur aircraft these increased during 1991 from $2.33 per tonne to a maximum of $5.00 per tonne. Currently, the maximum charges are imposed at most Commonwealth and ALOP aerodromes. It is intended that landing charges will continue to increase until the costs at specific locations are met. However, a ceiling on charges will apply at 'non-viable' aerodromes.

[1] The airport categories introduced by the FAC consist of: group 1 or international airports (ie Sydney, Melbourne, Adelaide, Perth, Brisbane and Hobart); group 2 or regional airports (ie Launceston, Canberra, Coolangatta, Darwin, Townsville, Mount Isa, Alice Springs, Tennant Creek and Essendon); and group 3 or general aviation airports (ie Bankstown, Camden, Hoxton Park, Archerfield, Jandakot, Parafield, Moorabbin and Cambridge).

Some of the cost of the use of Commonwealth and ALOP aerodromes by smaller avgas fuelled aircraft is recovered through an excise on avgas. Irrespective of whether avgas aircraft use FAC, Commonwealth, ALOP or fully locally owned aerodromes, 2.01 cents per litre is attributed for aerodrome cost recovery. DOTAC stated that the present situation reflects a decision made in 1987 whereby the Government accepted an industry suggestion that the rate of avgas excise be increased in preference to the introduction of landing charges for avgas aircraft.

At state and locally owned aerodromes, a more diverse range of aeronautical charges apply. Some aerodromes recover operating costs either through weight based landing charges, per head passenger taxes or a combination of both. For example, at Mackay, aeronautical charges consist of a $4.66 per tonne landing fee (for aircraft weighing between 4 and 45 tonnes), a freight charge (1.6 cents per kilogram) and a $5 per passenger (domestic) terminal charge.

Hazelton Airlines stated that landing charges at local aerodromes range between $3 and $6 per tonne. The General Aviation Association indicated a similar diversity exists with passenger taxes (ie a $16 passenger tax applies at Ceduna whereas a $7 tax applies at Port Lincoln).

DOTAC argued that the recent increases in aerodrome charges are directed at placing aerodrome ownership on a more commercial basis. Kendell Airlines claimed that:

> Further increases are planned until the whole annual amortised capital and recurrent expenditure figure of the Commonwealth is recovered. To achieve this some airports such as Wagga Wagga will have landing fees of $22.51 per 1,000 kgs ($278.45 per Saab).

A number of participants were critical of the recent increases in aeronautical charges. The Cootamundra Shire Council (sub. 27, p. 1) contended that:

> ... increased landing charges at Cootamundra Aerodrome will destroy the viability of the industry located thereon and will be directly responsible for the decline of a typical small rural community.

The General Aviation Association (sub. 24, p. 7) argued that the increased landing charges at the locally owned Port Lincoln aerodrome:

> ... will not result in a loss of service to Port Lincoln but may result in the curtailing of services to ports further out on the same route.

The General Aviation Association was also critical of the avgas excise. It argued that smaller aircraft operating in South Australia are required, through the avgas excise, to contribute to cost recovery at Commonwealth and ALOP airports, even though there are no such airports in the state. The Association stated that approximately $300 000 is paid annually and that, in addition, its members pay landing fees at the locally owned aerodromes which they use throughout South Australia.

The Association contrasted the situation with larger avtur aircraft which pay no fuel levy and only contribute to aerodrome cost recovery when they use the facilities. The Association argued that

either the avgas excise be waived for intrastate operations in South Australia or the amount of the excise paid by South Australian operators be rebated. A similar situation exists for avgas aircraft that mainly use FAC airports. Such aircraft pay the excise as well as either landing fees or the GAIT charge.

In response, DOTAC argued that the levy was never viewed as an entirely equitable way of recovering costs and that it would be phased out as aerodromes are transferred to local ownership. For example, the levy was reduced from 2.966 to 2.01 cents per litre on 7 May 1992 and will be removed altogether once the transfer of ALOP aerodromes to local ownership has been completed. The Commonwealth anticipates that this will occur during 1992-93.

Assessment of airport pricing practices

Aeronautical charges

As outlined in Appendix G, efficient pricing at airports would, in principle, incorporate a number of components to reflect the various costs associated with airport use; for example, marginal usage costs (eg wear and tear), congestion and noise costs, and a charge to achieve cost recovery targets (see Box 5.5). The relative significance of the components, and hence landing charges, would differ between airports and over time.

Box 5.5: **Efficient pricing principles**

Efficient resource use is achieved when output prices closely reflect the marginal cost of efficient production and distribution. At this point, the cost to suppliers associated with the production of an additional unit of output is equal to users' valuation of that extra output. However, a large proportion of the total costs of running an airport are fixed and unrelated to additional use. Hence, pricing based on marginal costs alone (eg runway wear and tear) would result in the airport operating at a loss.

Two alternative pricing policies which permit costs to be recovered, while minimising efficiency losses associated with departing from marginal cost pricing, are 'two-part tariffs' and 'Ramsey-based' charges.

- *Two-part tariffs* involve charging a fixed (or `access') fee to all users, as well as a usage charge based on marginal cost.

- *Ramsey pricing* involves charging different prices to different groups of users, depending on how sensitive their level of demand is to price variations. This can permit prices to be set which will recover costs, while minimising changes in usage. Under this approach, charges for airport use which is relatively responsive to price variations would closely reflect marginal cost (eg small aircraft), while users that are relatively unresponsive to variations in price would be charged higher prices (eg large aircraft and/or employed on longer routes).

Implementation of airport charges which perfectly reflect efficient pricing principles would be very demanding in terms of information requirements and the degree of 'fine tuning' required. As a practical matter, there is a need to trade off the benefits from implementing complex charging arrangements against the associated administrative costs and informational constraints. Frequently this results in pricing on the basis of simplified rules. Hence, an assessment of airport prices requires judgements on the administrative costs associated with implementing a more complex pricing structure.

With these considerations in mind, the current practice at major airports of charging according to aircraft weight has a number of attractions. Weight approximates many of the direct costs associated with aircraft movements. For example, the required strength of, and wear and tear on, runways and taxiways depend on aircraft weight, as well as tyre contact area and an aircraft's landing gear. Similarly, there is a general relationship between weight and the length of runways needed.

Pricing according to aircraft weight is also a reasonable approach to recovering the fixed cost component of an airport's aeronautical activities. Imposition of an additional charge to achieve cost recovery targets can lead to inefficient usage if some operators decided not to use an airport, even though they may be willing to pay a landing fee which covers the costs directly associated with their use. This difficulty is minimised if the largest portion of the burden of recovering airport costs falls on those aircraft operators which are least likely to alter their pattern of airport use. Charges could be based on proxies for operators' willingness to pay, such as aircraft weight (eg MTOW), available seat-kilometres (ASKs) or revenue passenger-kilometres (RPKs). While ASKs and RPKs probably better capture an aircraft's revenue generating capacity and distance travelled (and, hence, the operator's ability or preparedness to pay), they would be more costly than MTOW to administer. For example, similar aircraft may have different seating configurations and passenger-freight combinations, while an RPK measure would require airlines to submit detailed information on ticket prices for each passenger for each flight. MTOW also provides a rough approximation of distance travelled since larger planes are frequently used for longer flights.

Alternatively, a two-part tariff would require aircraft operators to pay landing fees which reflect usage costs and an access fee to recover other costs (ie fixed costs and overheads). The access fee would be a fixed amount per period, irrespective of usage. A two-part tariff would be similar to the GAIT charges currently used by the FAC, except that it would be airport specific and would also incorporate a landing fee.

The choice between landing fees based on weight and a two-part tariff largely comes down to practical considerations. In the case of a two-part tariff, the usage charge would recover only a small proportion of aeronautical costs at uncongested airports because the marginal cost of individual aircraft movements is relatively small. Consequently, cost recovery would require either charging large access fees, thereby excluding infrequent users (eg some international airlines), or introducing a wide selection of two-part tariffs which would be costly to administer.

Landing fees based on weight that apply at the major Australian airports are likely to reflect many of the costs associated with airport usage while minimising adverse impacts on demand. They are also more easily administerable than other usage-based charging systems. Consequently, they provide a reasonably efficient method of achieving cost recovery targets.

In its draft report, the Commission proposed that MTOW based landing charges should replace, or supplement, the existing GAIT charges which apply to general aviation aircraft at the FAC's regional and general aviation airports. In response, the FAC (sub.ÿ59, p. 8) indicated that:

> ... the administrative difficulties of capturing the data necessary for MTOW-type charges at general aviation airports makes such a system financially inefficient at this time. However, the matter is continually under review.

The FAC went on to argue that since most of the movements at airports such as Bankstown are training related (ie `touch and go'), the introduction of movement related charges would result in a dramatic decrease in use. This view was echoed by the Royal Federation of Aero Clubs of Australia (sub. 73, p. 1) which vigorously defended the current pricing mechanism on the basis that:

> The present system of GAIT charges was adopted as being the most equitable and cost effective after exhaustive research into many possible alternative charging methods, including movement charges. The RFACA is completely opposed to any change to this system, such as the introduction of landing charges, which would have a severely detrimental affect on our members and all flying training schools operating at the airports in question.

Consideration of both of these matters - administrative costs and the impact on usage - are important in devising pricing structures and the level of landing charges. The FAC is understandably reticent to introduce pricing changes which are not only more costly to implement, but are strongly opposed by the more vocal segments of the general aviation sector. It needs to be recognised, however, that there are wider economic benefits from usage-related pricing which will generally not be adequately taken into account. It is also the case that the training school members of aero clubs are the groups most advantaged under the present GAIT system of charging.

Apart from the general issue of under-recovery, the main drawback with the GAIT is that it takes no account of costs associated with usage - frequent users and infrequent users pay the same. Moreover, it makes no allowance for variation in costs and usage at different airports. The GAIT would only be appropriate if all airports have the same costs and characteristics and if the cost of an aircraft movement was zero. Since neither is true, the GAIT will tend to favour high cost airports and those activities involving frequent movements. This can lead to investment distortions, such as

the premature need for new airports, as well as penalising RPT or charter operations. Currently any variations in the incidence of the GAIT are likely to be overshadowed by the low level of the GAIT charges, given the substantial under-recovery of costs. However, this under-recovery cannot persist and, as it is redressed, these allocative issues will become increasingly apparent to users.

The economic gains from better pricing, all else being equal, will be related to the amount of aviation activity affected. In other words, for a given charging structure, the gains are likely to be greatest for the heavily utilised airports. Nonetheless, the benefits need to be weighed against the costs of implementation, which will also tend to rise with the amount of aviation activity (and thus monitoring) involved. Unfortunately, the Commission has very little information which would allow it to determine the net benefits (or costs) at particular airports of replacing the GAIT with landing charges.

At lightly used airports, such as those operated by some local councils, the benefits gained from pricing according to use could well be outweighed by the costs of additional labour and other resources required to record landing details. However, the administrative costs would differ between categories of aircraft operations; for instance, it is easier to identify, and charge for, the movement of RPT aircraft than for general aviation, since RPT activities operate to fixed schedules and generate CAA flight strips. Thus, even at unmanned airports, it may be cost effective to apply landing charges to RPT aircraft. For other (smaller) aircraft, fixed access charges may be the most efficient pricing method. To facilitate cost recovery, the level of the access charges could differ according to aircraft size and/or activity.

At other than lightly trafficked airports, the case for implementing specific landing charges will vary according to categories of aircraft and the circumstances of different airports. For instance, in order to levy terminal navigation charges, the CAA collects movement details on all avtur aircraft at airports at which there are control towers. Therefore, by acquiring this information from the CAA, it is possible the FAC could cost effectively introduce landing charges for avtur aircraft at 20 of its 23 airports; the only exceptions being the airports at Tennant Creek, Hoxton Park and Cambridge which do not have CAA manned control tower facilities.

It is also likely that, for some airports, the additional costs from implementing landing charges would be small relative to existing costs and the volume of traffic affected. While this may not apply to Bankstown, the case cited by the FAC, airports such as Launceston, Alice Springs or Canberra are considerably less busy. Indeed at some of these airports it may be possible for existing staff to record the additional details on aircraft movements needed to implement landing charges.

There may be concern that the introduction of landing charges at some airports but not at others will create other inequities and distortions in use. However, the current charging arrangements already vary greatly among airports. For instance, general aviation aircraft which use FAC and locally owned airports currently pay landing charges, passenger taxes and GAIT fees depending on the airports they use. Such reforms should be seen as steps toward achieving a more efficient pricing system at all airports, as opportunities become available.

It should also be noted that the cost of the monitoring needed for the introduction of landing charges will decline as technological developments make it easier to identify aircraft. Technological developments have already reduced the cost of administering user charges for many utility services and, in some cases, have facilitated the introduction of road user charges. There may also be scope for sharing resources and information with the CAA. Many locally owned aerodromes have been able to introduce landing charges by 'contracting-out' its administration to a private company which purchases flight details from the CAA.

In the absence of more detailed information, the Commission is unable to determine whether there would be net benefits from extending landing charges for general aviation to those FAC airports where substantial additional resources would be needed. It considers that the FAC should implement such changes, however, at those airports where the additional administrative costs are small relative to overall airport costs. The scope for sharing resources and introducing automatic monitoring and charging systems should be explored.

The introduction of landing charges would not preclude the provision of discounts to frequent users in order to ensure that an airport's capacity is fully utilised. For example, it may be good practice to apply a lower rate for training schools in order to maintain their business at an airport, as long as it covers the direct costs associated with their usage.

Currently, the annual GAIT charges can provide (say) a 1.5 tonne general aviation aircraft with unlimited use of all FAC general aviation and secondary airports at a cost of as little as $2.50 per day. In view of such low access charges, it is hardly surprising that all FAC general aviation airports operate at a loss. Therefore, if landing charges are not introduced at a number of FAC general aviation airports, there will still be a need to increase the existing charges so that they can operate profitably. The Commission considers that access charges should reflect the variation in services provided by airports and differences in demand patterns. This could be expected to result in some variation in access charges between airports, as distinct from the current uniform GAIT charges.

There is some concern that, if charges increase, demand will be reduced substantially. However, there would seem to be some scope to raise airport access fees for general aviation without suppressing economic usage. The current charge, while still low, represents a significant increase over the zero charge that applied five years ago. According to the FAC, the increase has had no

noticeable depressive effect on demand; indeed, airport usage by general aviation increased subsequent to its introduction. Variation among airports in access charges might lead to some reallocation of demand, particularly for the more price sensitive training activities, but this may be desirable as it would allow airports (such as Bankstown) to cater better for higher valued users (including RPT and charter). As noted in the case of landing charges, if overall usage were adversely affected, access fees could be differentiated among activities.

If landing charges are not introduced at some FAC airports, the Commission considers that GAIT charging should be replaced by airport specific access fees for prescribed periods of use. These should in time be raised to levels necessary to achieve recovery of efficient costs at the airports in question.

As noted previously, the avgas excise is used to recover some of the operating costs of Commonwealth airports and to fund grants to ALOP aerodromes. Under this arrangement, avgas fuelled aircraft which do not use Commonwealth or ALOP aerodromes are disadvantaged. The excise, and the extent of the disadvantage, will decline as Commonwealth aerodromes are transferred to local owners and as other aerodromes are withdrawn from ALOP. A fuel excise rebate scheme (such as that which applies to diesel fuel for farmers) would eliminate the distortions created by the avgas excise. However, a comprehensive scheme may no longer be cost effective to implement, as it is anticipated that all aerodromes will be transferred during 1992-93. It may also be difficult to identify all avgas users which do not use Commonwealth or ALOP airports.

Landing charges at congested airports

When an airport is congested, landing charges would be inefficient if they were based only on an aircraft's weight, since weight does not reflect the costs that one airport user imposes on another. During congested periods, the landing or take-off of one aircraft means that another aircraft is denied the same opportunity. To determine which aircraft would benefit the most from using the airport, landing charges should ideally apply on the basis of runway time used. The level of the charge should reflect the extent of the delays one aircraft imposes on all others. At congested airports, a weight-based component of the landing charges should only reflect the costs an aircraft imposes on the airport (eg wear and tear of the runway).

In January 1991, as part of a strategy to reduce delays which 'reached a level during 1988 which was generally considered unacceptable' (FAC 1991b, p. 1), peak period landing charges were introduced at KSA. The strategy to combat congestion included other elements such as: improved CAA air traffic services which allowed the simultaneous operation of the intersecting runways (SIMOPS); construction of rapid exit taxiways; and discussions with airlines to reduce cluster scheduling. The broad thrust of these initiatives has been to increase the capacity of KSA and to improve the utilisation of that capacity. The FAC (1991b, p. 17) stated that the main aim of peak period charges:

> ... was to encourage the movement of general aviation and regional airline traffic out of the peak periods to reduce delays.

A review of the surcharges conducted by the FAC (1991b) concluded that:

- peak period surcharges have resulted in a significant number of regional flights being rescheduled out of the peak periods (the charges have had little effect on interstate flights and no noticeable effect on international flights);
- there has been approximately a 25 per cent reduction in delays associated with movements during the peak periods;
- the periods over which the charges apply appear correct; and
- if peak period pricing does not continue, delays are likely to increase during the peak periods.

Since the introduction of peak period prices, and despite the conclusions of the FAC review, a number of regional airlines and other groups have argued that the need for peak period prices at KSA has yet to be proven. In a submission to this inquiry, the New South Wales Farmers' Association argued that many of the claimed benefits of the peak period surcharges in clearing congestion are attributable to the other measures introduced at around the same time. A number of participants (eg the Rural Airlink Action Group and the Second Sydney Airport Coalition) maintained that the peak periods are now underutilised and that traffic in the shoulder periods now exceeds the level of the old peak periods. On the other hand, the FAC indicated that peak period movements are close to KSA's current capacity, which is in the vicinity of 52 movements per hour. In contrast, the Second Sydney Airport Coalition argued that up to 65 movements per hour can be achieved with SIMOPS.

Other participants argued that the peak period surcharge discriminates against smaller aircraft and affects their ability to offer same day services to rural centres. Flight West Airlines indicated (sub. 13, p. 17) that:

> ... the additional cost of the surcharge per passenger on a typical wide body aircraft at peak period would be in the order of $1.00, while the cost per passenger on a typical 30-seat regional airliner would be $8.33.

On a smaller nine seater aircraft, the cost is in the order of $28 per passenger. To avoid the periods, Hazelton Airlines argued that it is not simply a matter of adjusting schedules, as such changes also have implications for the capital utilisation of aircraft and air crew utilisation, particularly in view of air crew duty time considerations.

The present peak surcharges do impact significantly on small aircraft. However, in general, landing fees, including peak and shoulder period surcharges, should reflect the willingness of aircraft operators to pay for the use of an airport. Where congestion exists, these charges should enable those aircraft which derive the greatest benefit to land and take-off, irrespective of aircraft type or the nature of the activity in which it is engaged. The willingness of an operator to pay the surcharge is an appropriate indicator of the benefits that accrue to aircraft landing in peak periods. While this approach is used in the peak period at KSA, shoulder periods charges only apply to general aviation aircraft.

There appears some doubt about whether the congestion and delays experienced before the near simultaneous introduction of changes in operating procedures and the introducing of peak and shoulder period charges at Sydney's KSA necessarily warrant the imposition of the current surcharges over the presently defined peak and shoulder periods. Some evidence presented to the Commission suggested that aircraft movements are now greater during the shoulder period than during the former peak period. It was also argued that, with the present peak surcharge, there is some capacity for smaller aircraft to use the intersecting runway without significantly reducing the airport's ability to cater for larger aircraft. This suggests that the peak period surcharge for smaller aircraft on the east-west runway could be lower than on the main north-south runway.

In practice, an analysis of the need for congestion charges requires more detailed information. For instance, the capacity of KSA is dependent upon the mix of aircraft types using the airport (the simultaneous operation of the intersecting runways is limited when the majority of movements are large aircraft), the sequence in which large and small planes are accommodated, and other factors such as weather conditions. A further complication is that the increase in demand which would occur if the surcharge were reduced or removed is unknown. Consequently, movement data alone are insufficient to determine whether the present surcharges are warranted.

In its draft report, the Commission suggested that it was in the public interest, and in the interest of the FAC, that a review of peak period charges be undertaken by an independent consultant. There was widespread support for this proposal from participants other than the FAC and DOTAC.

The Commission considers that peak and shoulder period surcharges at KSA should be reviewed by an independent consultant in order to maximise credibility with airport users. The study should consider both the level of the charge and the period over which it should apply. The level of the surcharges should be no higher than required to match peak period demand with airport capacity. If peak period surcharges are found to be warranted, the exemption from shoulder period charges that currently applies to regular public transport services at KSA should be removed.

Regulatory oversight of airport charges

A range of regulatory and other measures are in place to limit the abuse of monopoly power and to encourage competitive behaviour by firms in the economy generally. For instance, the TPA guards against the use of market power, arrangements which lessen competition, exclusive dealings, price discrimination and some mergers. In addition, the PSA has broad powers to investigate and control prices. In the case of aviation, more direct measures are also used to limit the exercise of monopoly power - this is most obviously reflected in government ownership and operation of airports, and through Ministerial oversight of increases in aeronautical charges.

In the course of this inquiry, a number of participants expressed concerns as to whether these existing provisions were sufficient. These were raised in the context of access to airport terminals (discussed further in section 5.4), and exemptions which apply under the TPA and PSA Act (eg for some government bodies) and the Federal Airports Corporation Act (ie the FAC's non-aeronautical charges are exempt from PSA scrutiny).

Given the commercial orientation now required of GBEs, government ownership of airports may no longer be sufficient to eliminate the possible exercise of monopoly power by airport operators. In this context, the FAC argued that it has no market power in relation to its non-aeronautical activities and that its rates are commercially determined. Nevertheless, it would be advantageous if the general provisions of the TPA and scrutiny of charges by the PSA were expanded to encompass all airports, whether they be FAC, Commonwealth, state, local or privately owned and operated.

Disputes between airport owners and a lease holder may be resolved, to the commercial advantage of each party, through existing mechanisms. The FAC also indicated that there exists scope for the involvement of third parties to resolve any disputes which may arise between the FAC and a lease holder. However, these procedures will not necessarily protect other airport users from the exercise of market power. For instance, the airport operator's market power derived from its aeronautical activities can be transferred to those operators of non-aeronautical services which must be undertaken at an airport (eg terminal gates and aircraft maintenance facilities). This market power can be used by the operators to earn 'monopoly profits' by charging higher prices to airport users. Equally, airport owners can demand higher prices for the lease of land or facilities and so extract monopoly rents. The extent of the market power depends on the scope for entry to undertake non-aeronautical activities elsewhere at the airport.

There are a number of non-aeronautical services which do not need to be undertaken at an airport. These services, which include retail outlets, office space and certain engineering, storage and catering facilities, are subject to additional competitive pressure from businesses located just beyond the airport's boundaries. Despite this, there is significant potential for market power in some of these activities because of their proximity to the runways and terminal buildings.

The pricing policy adopted by the airport operator will determine how the benefits of any market power are distributed between the airport operator and the service provider. More important than who gets the monopoly profits, however, is the question of how this may affect the provision of airport services. For instance, airport operators have an incentive to restrict competition between

lease holders in order to increase the potential to charge higher rents. Competition may be restricted either by offering exclusive franchises or by restricting the release of land for terminal buildings and other aircraft facilities.[2] Irrespective of who appropriates the monopoly rents, airport users will be worse off. As noted previously, the FAC argued that it has no market power in relation to its non-aeronautical activities and that its rates are commercially determined.

The exposure of FAC non-aeronautical charges to PSA scrutiny would decrease the likelihood of the FAC using its market power. However, DOTAC (sub. 40, p. 3) saw a number of obstacles to the FAC's lease agreements being referred to the PSA:

- lease arrangements are normally viewed as `commercial in confidence' and thus are not subject to public scrutiny;

- it would be unworkable for the PSA to vet or approve each of the FAC's leases (approximately 2700); and

- DOTAC understands that lease arrangements are not covered by the PSA's powers as currently defined in relation to goods and services.

However, these difficulties do not appear insurmountable, at least for monitoring lease arrangements where the potential for monopoly pricing is greatest (those activities which cannot practicably be located outside the airport). The PSA is accustomed to dealing with confidential material that encompasses large numbers of transactions.

The Commission considers that airport operators and businesses located at airports should not be able to create and use their market power to earn above normal rates of return. Where there is significant potential for the abuse of market power, charges for non-aeronautical activities levied by airport operators, airlines and other lease holders should be subject to scrutiny by the PSA (as is the case in other areas of the economy). The potential for misuse of market power is reduced if airport operators do not grant exclusive franchises. Moreover, impediments to PSA scrutiny of landing charges at airports should also be removed. These changes would require the Commonwealth, state and local governments to remove exemptions from the Trade Practices Act and the PSA for all publicly owned airports within their jurisdictions.

An alternative to these proposals could be the introduction of more direct controls over airport pricing. This could take the form of price capping mechanisms which have been introduced for Telecom, gas distribution in New South Wales and for many of the recently privatised utilities in the United Kingdom. Price capping regulation (eg CPI-X) guards against the exercise of monopoly powers by allowing an enterprise to increase prices at a rate which is equal to inflation (CPI), less an allowance for efficiency improvements (X). Efficiency improvements in excess of `X' are encouraged by allowing the enterprise to retain the additional profits generated in this manner.

[2] In 1987, the New Zealand High Court determined that the Auckland Regional Authority (the operator of the Auckland Airport), by using its dominant position, had attempted to restrict entry into a market by providing exclusive franchise arrangements for two car rental companies. The exclusive franchise arrangements had been provided in an attempt to maximise rents (see *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd).*

However, the Commission considers that price capping measures should only be considered in the event that airports are unable to develop meaningful performance indicators, and that existing competitive forces and PSA scrutiny are unable to provide an effective safeguard against the misuse of market power.

5.4 Access to terminals

Prior to the establishment of the FAC and the deregulation of interstate aviation, the Commonwealth renegotiated the airport terminal leases held by Ansett and Australian airlines. The Commonwealth's objective in renegotiating the lease agreements was to ensure the success of deregulation by providing security of tenure to the existing airline operators in a way which allowed new operators some access to existing terminals. DOTAC (sub. 30, attach. 3, p. 42) indicated that:

> ... the leases held by the two airlines at that time generally gave those airlines exclusive rights to their terminals well beyond the start of deregulation, and in some cases, such as Sydney, well into the next century.

The renegotiated lease arrangements were designed to provide a minimum level of facilities to new entrants following deregulation. It was envisaged that, in the longer term, aircraft operators would build their own terminal or approach the FAC for the provision of facilities on a fully commercial basis. More specifically, the renegotiated leases:

- provide Ansett and Australian airlines with 20 year leases for the terminal areas they occupied at the time the leases were signed, plus additional development land (approximately 150 per cent of the then existing terminal area);
- transfer the cost and risk of terminal development from the FAC to the airlines;
- require the FAC to match any terminal developments undertaken by the airlines before 1998 with associated infrastructure development (eg aprons and taxiways);
- require the FAC to purchase, or arrange for the purchase of, the terminal facilities on the expiry of the leases;
- allow for periodic rental reviews; and
- require Ansett and Australian airlines to make available, on application, two gates at both Sydney and Melbourne and one gate at Adelaide, Perth and Coolangatta to other airlines. Ansett is also required to make a gate available at Launceston.

After applications for terminal space were submitted by potential entrants, the order of priority for access to these facilities was determined by the Minister in May 1990.

A number of participants related their dissatisfaction with the terms of the renegotiated lease arrangements. For instance, the FAC stated that the lease arrangements have a considerable impact on its planning, finance and operation. In particular, the leases tie it into infrastructure

developments based on the perceived needs of the major airlines rather than on the FAC's projections of growth and assessment of need. The FAC stated that the additional charge on landing fees for domestic airlines was introduced to cover these infrastructure costs. It indicated that the surcharge may differentiate between carriers and locations in the future.

Dissatisfaction with the lease arrangements has also been expressed by some airlines. Despite the fact that some 'new entrant' airlines (which were allocated terminal gates in 1990 under the renegotiated leases) have yet to exercise their right to use existing terminal gates, other prospective airlines have been denied terminal access.

Moreover, the Commission understands that a number of independent airlines have been reluctant to negotiate terminal access with the major airlines. This reluctance is based on a desire not to release sensitive commercial information to potential competitors. There may also be a perception that the conditions of access will not be equitable, given that the terminal is controlled by a competitor.

DOTAC noted that many of the existing intrastate operators have established commercial links with the major airlines. These links provide intrastate operators with access to terminal gates and ground handling facilities, thereby avoiding the need to negotiate under the present lease arrangements.

A number of independent airline operators argued that the lease arrangements make it difficult for them both to remain independent and to gain access to suitable terminal facilities. For example, Hazelton Airlines stated that tarmac parking and passenger handling facilities for regional airlines at KSA is currently inadequate and that practical alternatives to the present arrangements are not available.

Flight West Airlines argued that the terminal leases have provided Ansett and Australian airlines with a virtual monopoly on space at key terminals. Flight West would prefer to operate independently of either operator, but has been forced to use Ansett terminal and handling facilities at Brisbane and, in turn, at other major Queensland airports. Flight West considers that these arrangements have made the airline commercially vulnerable. For example, Flight West stated (sub. 13, p. 20) that when it:

> ... inaugurated a direct service recently from Brisbane to Canberra, Ansett's immediate response was to threaten to withdraw airport terminal handling services. Ultimately, Ansett applied an increase which averaged at about 100% in terminal handling charges at all ports where they conduct our ground handling.

Flight West's difficulties have arisen despite the existence of significant, and currently unused, capacity at Brisbane's domestic terminal.

Assessment of terminal access issues

There is widespread recognition that the success of the deregulation of interstate aviation depends to a large extent upon terminal access for new airlines. Terminal access is also central to the further development of competition in the provision of intrastate aviation services. If access to terminal facilities at key airports is not adequate, effective competition may be inhibited because of limitations placed on the ability of existing operators to expand their activities and the ability of new airlines to commence operations.

The major airlines have invested heavily in the current terminal infrastructure. It is reasonable for them to make a return on this investment; either from their own activities or by sub-leasing facilities (eg charging for the use of gates and ground handling facilities). Competition will be inhibited, however, if it is more difficult, or more costly, for new airlines to gain the same level of terminal facilities as the incumbents. A number of factors suggest that this may be the case. First, airports are now expected to achieve cost recovery targets whereas previously airports were partly funded by government subsidies. Second, Australia's airports have largely been designed and constructed in an era when there were two major domestic airlines. These factors, along with the terminal leases, limit the ability of airport operators to provide new terminals on a par with the existing terminals.

Provision of common user terminals is an important means of limiting the market power of incumbent airlines. Large common user terminals are normal for international airports and also exist at some domestic airports. For example, the Cairns Port Authority indicated it was easily able to accommodate Compass Airlines by reworking its existing common user domestic terminal. However, common user terminals are normally not the preferred option for either the airlines or the airports. It is more difficult for airlines to establish a separate corporate identity in a common user terminal. For their part, airport owners take on considerably greater risk by building and operating a common user terminal rather than renting the land and allowing airlines to build and operate their own terminals (which is virtually risk free).

The Commonwealth (One Nation 1992, p. 103) has recently indicated that it will:

> ... support the development by the Federal Airports Corporation (FAC) of common user facilities at Sydney and Melbourne airports and will discuss with the FAC the provision of such facilities at Adelaide, Perth and Coolangatta (other major airports have sufficient terminal capacity).

The Government did not specify its contribution to these facilities, which 'will be subject to commercial negotiation'.

Construction of viable common user terminals may well be needed to address the main remaining constraint on the contestability of a deregulated aviation market. However, subsidisation of such facilities may have undesirable side-effects if they either disadvantage the existing airlines which constructed their own terminals or disadvantage those airports which do not receive government

funds (eg Cairns). On the other hand, without a government directive, the FAC may be too conservative in evaluating the viability of user facilities. In its draft report, the Commission suggested that if the FAC, or any other airport operator, is unwilling to construct and operate a common user terminal, an alternative would be to enter into commercial arrangements to allow a private organisation to provide such a terminal. The FAC (sub. 59, p. 19) indicated that, provided facilities are consistent with the long term development of its airports, it:

> ... is always willing to consider options proposed for the construction of any facilities at its airports which are financially viable. It is equally willing to examine propositions for development of facilities on its airports by third parties on a leased land basis.

At the draft report hearings, the FAC (transcript p. 195) indicated that, as yet, it has not been 'inundated' with offers from private interests to construct airport terminals.

The airport lease arrangements are also subject to the provisions of the Trade Practices Act which prohibit the misuse of market power. In practice, however, there could be some constraints on its ability to prevent all abuses of market power. First, the Act may ensure that access is available, but greater difficulty would be encountered in determining the conditions of access. Second, difficulties can be encountered in proving misuse of market power. Under the current provisions, an airline would have to prove that lease arrangements or access to a terminal had been impeded for the purpose of damaging their commercial operations.

5.5 The need for competitive discipline

The previous sections highlight a number of changes to airport cost recovery and pricing strategies, as well as the application of pro-competitive laws, which should improve the efficient operation of airports. However, on their own, these proposals do not address a fundamental source of inefficiency in the provision of airports - the lack of effective competition. In Chapter 4, the Commission argued that greater competition would lead to a more efficient provision of intrastate air services. The Commission considers that this also applies to the aviation industry's infrastructure needs.

The structure of airport costs will limit the extent to which competition could be expected to develop. Clearly, significant competition cannot develop between airports at distant locations or in remote regions. As stated by the FAC (sub. 59, p. 4):

> ... When it comes to competition for travellers it is commonly accepted that it is destinations which compete and not airports.

However, some airports within a region currently compete for aviation activity. For example, the Tasmanian Government (sub. 85, p. 4) indicated that:

> ... in addition to the local island and mainland airports serving distinct local areas, there is also a degree of competition between the four major airports at Burnie (Wynyard), Devonport, Launceston and Hobart for various interstate passenger and freight services. This competition is most noticeable along the North Coast.

Competition also occurs between airports in north-east New South Wales, while the growth in traffic at Cairns airport has been at the expense of Townsville.

Greater competition could be fostered between airports in both the Port Phillip region and around Sydney. Airports could compete for the business of general aviation and airlines which operate small aircraft. Competition among airports could also develop for the provision of some non-aeronautical activities (eg engineering services, such as at Avalon). Creating some competition between airports would particularly favour those intrastate aviation operators which use aircraft capable of landing at a variety of airports.

The benefits of competition stem from the constraints it places on the ability of airport operators to engage in cost-plus pricing. More effective competition between airports may see them attempting to attract aircraft movements away from their rivals by offering lower landing fees or rental charges. By making better use of existing capacity, competition may also delay the need for additional airport capacity, thereby resulting in savings in infrastructure costs.

Competition may also encourage airports to focus on niche markets by offering facilities which better meet the needs of individual, or specialist classes, of aircraft operators. In this way, competition between airports would provide the opportunity for new and existing operators to remain independent of their rivals.

Only very limited competition currently exists between airports. The FAC owns and operates the primary and secondary airports in all of Australia's state capitals. The only competition generated so far has been a result of the operation of airports by independent state government instrumentalities and the transfer of Commonwealth aerodromes to local owners; in particular, in those regions where a number of airports currently operate (eg north-east New South Wales).

In its draft report, the Commission suggested that the Commonwealth could examine the possibility of divesting ownership of some, or all, of the FAC's airports. This could commence, for example, with the secondary capital city airports (eg Essendon, Moorabbin, Bankstown and Archerfield). This would involve establishing a number of separate, and competing, government business enterprises to operate these airports. Alternatively, the initiatives currently in place to transfer Commonwealth airports to local ownership could be broadened to include some, or even all, FAC airports. This could involve the transfer of their operations to either state governments or to local authorities.

The Commonwealth could also sell (or lease) airports to private interests. By increasing the diversity of ownership, this could create more productive competition than might arise among publicly owned bodies.

There may also be scope for an airport manager's responsibility for operating runways to be separated from the provision of non-aeronautical services. Currently, publicly owned airports provide aeronautical services as well as leasing land and buildings to enable private sector companies to provide non-aeronautical services. One rationale for the continued public provision of these latter services is the market power connected with each activity. Since an airport's runway activities generate considerable market power, these could continue to be undertaken by a GBE. But much less market power is generated by non-aeronautical activities. Thus, it is possible that responsibility for these activities could be passed to a range of private sector interests. The coordination of airport development would then be determined by the commercial interests of, and negotiation between, the various parties. As occurs in other activities, zoning guidelines would apply.

Retention of centralised ownership was advocated by the FAC and DOTAC, whereas a broad cross-section of participants supported the proposal for more diverse ownership arrangements. Some argued that airport operations, and hence airport users, suffer as a consequence of the FAC's management and pricing policies; in particular, its cross-subsidisation of airports. The Government of Victoria (sub. 60, pp. 2-3) argued that:

> The Federal Airports Corporation ... cannot be sensitive to and respond adequately to the requirements of Melbourne Airport ... Melbourne Airport, as with most other major Australian airports, can only operate efficiently if it has absolute control on the use of its assets and has freedom to set its own commercial parameters to best meet the real needs of the region.

This was denied by the FAC which argued that it:

> ... does not ignore innovative commercial deals and development proposals from potential investors are always fully examined ...

The Committee for Melbourne reinforced the Victorian Government's (sub. 60, p. 3) view that Melbourne Airport be 'owned locally by a combination of private and public interests'. The Tasmanian Aero Club (sub. 52, p. 1) also supported the suggestion that FAC airports be transferred to local ownership, adding that:

> FAC charges are seriously affecting GA operators. We observe inefficiencies and poor management practices at most FAC airports.

While private ownership would increase competitive pressures and place additional constraints on airport operating costs, these benefits may be offset by some higher costs associated with private ownership. For instance, diversified ownership arrangements may result in the loss of some savings that are generated by a centralised airport administration. In this context, the FAC (sub. 59, p. 4) argued against the separation and privatisation of its airports on the basis that:

> ... diseconomies of scale will occur because of the need for duplication of presently centralised services such as aeronautical charging, taxation and administration procedures, reduced borrowing ability and higher borrowing costs.

However, many of these costs could be minimised if the separated and competing airports chose to 'contract out' some of the centralised administrative tasks. For example, many councils have engaged an outside agency to charge aircraft for the use of their facilities.

Also, where airports are transferred to private interests, the Commonwealth may need to provide additional regulatory resources to constrain market power and ensure that non-discriminatory access is provided to all aircraft operators (subject to the availability of capacity). Ansett (sub. 47, p. 4) stated that while PSA scrutiny may prove to be satisfactory, some form of oversight is:

> ... absolutely vital in the case of airports which have substantial market power, in the event that they are transferred to private ownership.

On the basis of the information presented to this inquiry, the Commission considers that there is scope to improve the performance of some FAC airports through more diverse operational arrangements. In the first instance, a number of the FAC's smaller airports should be leased or transferred to state governments or private sector interests. Included in this category are the secondary airports in the capital cities. Separate operation of these airports could stimulate competition with the primary airports for some intrastate aviation and non-aeronautical activities. Since the airports in question are relatively small, this would not involve a significant loss of scale economies or require substantial additional regulatory oversight.

5.6 Summary of recommendations

Arrangements governing the ownership and operation of airports have recently been changed through the establishment, and subsequent corporatisation, of the FAC, as well as through the transfer of Commonwealth airports to local ownership. These administrative changes have significant potential to improve the performance of airports in Australia. However, as a comprehensive analysis of airport operations has yet to be undertaken, it is unclear if these administrative changes have achieved a reduction in airport operating costs. In addition, for a number of reasons, it has been virtually impossible to monitor on a consistent basis the performance of the FAC over its first years of operation.

As emphasised by a number of participants in this inquiry, some concerns persist. Most of these are related to the adjustment the aviation industry has experienced in recent years (eg through increases in landing fees and large increases in lease payments associated with the achievement of rate of return targets). Other concerns centre on deficiencies in pricing, cost recovery and investment. In the Commission's view, the following changes are needed to improve performance further:

- State governments should place on a fully commercial basis all bodies under their control which operate airports. This would involve them paying all relevant state taxes and, in lieu of paying Commonwealth taxes, an equivalent amount to state treasuries. They should also be required to meet a real rate of return target and remit dividends to state treasuries or, where relevant, to the appropriate local government authority.

- Consideration should be given to separating responsibility for the development of aviation policy from the assessment of FAC performance. This could involve the Minister for Finance or the Treasurer assuming full responsibility for performance monitoring.

- The FAC should be fully compensated for complying with Ministerial directions, including matters `in accordance with Commonwealth policy'. Compensation should be by direct payment rather than by modification to the FAC's asset values, rate of return target or by reducing its dividend requirement.

- The Commonwealth should expedite the transfer of ownership and full responsibility for the funding of airport operations to local authorities.

- Commonwealth, state and local governments should provide their airport authorities with target real rates of return on assets, based on earnings before interest and tax; this should relate only to assets which are necessary to allow them to perform their functions efficiently.

- Cost recovery should be an objective for all airports.

- While aeronautical and non-aeronautical activities need not achieve the same rate of return, each separable activity should over time achieve full cost recovery.

- The value of airport assets should reflect the greater of either the asset's current use or the highest valued alternative use (less any appropriate development costs and allowance for risk).

- The FAC should extend the use of landing charges for general aviation at those airports where the additional administrative costs are small relative to overall airport costs. The scope for sharing resources and introducing automatic monitoring and charging systems should be explored.

- At those airports where landing charges are not introduced, the FAC should replace GAIT charges with airport specific access fees for prescribed periods of use.

- The peak and shoulder period surcharges that apply at Kingsford Smith Airport should be reviewed by an independent body. The study should consider both the level of the charge and the period over which it should apply. The level of the charges should be no higher than required to match peak demand with airport capacity. If peak and shoulder period charges are found to be warranted, the exemption for shoulder period charges that currently applies to regular public transport services at KSA should be removed.

- Terminal leases and charges for non-aeronautical activities undertaken at airports should be subject to scrutiny by the PSA and the TPC.

- Where viable, common user facilities should be provided at all major airports.

- Competition between airports should be fostered through more diverse ownership arrangements. In the first instance, a number of the FAC's smaller airports should be leased or transferred to state governments or private sector interests - included in this category are the secondary airports in the capital cities.

The Commission considers that the adoption of these measures would lead to more efficient provision and use of aviation infrastructure.

6 REGULATORY FRAMEWORK FOR AVIATION SAFETY

As CAA charges for airways facilities and for safety-related services can constitute up to 15 per cent of commuter airline costs, they are a significant factor affecting the competitiveness of intrastate aviation services. It is therefore important that the CAA's services are produced at least cost and are priced appropriately. The CAA has commenced the implementation of initiatives that will significantly lower its costs. These include reducing staff numbers by approximately 50 per cent over a five year period. While some changes have been made to pricing practices, the present charging arrangements involve a degree of cross-subsidisation between services and between users of the same service. This can significantly reduce efficiency.

The Commonwealth has responsibility for the provision of air navigation services and for regulating the safety of domestic aviation. The cost of undertaking these activities is considerable - in the order of $600 million annually in recent years - and is increasingly being borne by aircraft operators. Consequently, the efficiency with which air navigation and safety-related functions are undertaken and the manner in which the industry is charged for such services can materially affect intrastate aviation, as well as international and interstate aviation activities.

In the past, aviation safety has been handled by various Commonwealth Government departments, most recently by the Civil Aviation and the Transport and Communications departments. However, since 1988 the CAA has been primarily responsible for aviation safety, although the Bureau of Air Safety Investigation is involved in accident investigations. Consequently, the main focus of this chapter is on the role and functions of the CAA.

6.1 Role and operations of the Civil Aviation Authority

The CAA was established as a Commonwealth statutory authority on 1 July 1988 under the *Civil Aviation Act.* It became a Government Business Enterprise following the passage of the *Civil Aviation Amendment Act 1990 on 20 June 1990.*

The CAA has a nine member board consisting of a Chairperson, a Deputy Chairperson, a Chief Executive Officer and six other members. All are appointed by the Minister for Transport and Communications, although the Chief Executive Officer is appointed by the Minister on the recommendation of the Board.

Under the Act, the Minister retains certain powers relating to the Authority's operations. These provide for ministerial control over matters such as borrowings and the approval of charges. The Minister can also give the Authority directions as to the performance of its functions although, under the Act, directions in regard to the CAA's regulatory functions can only be of a general nature. Where the Authority can satisfy the Minister that it has suffered financially as a result of complying with a ministerial direction, it is entitled to be reimbursed. It is subject to TPC scrutiny and, since April 1991, its statutory charges have been subject to surveillance by the PSA.

Key functions

Broadly speaking, the CAA's activities can be categorised as relating to: safety regulations and standards; air traffic services; and rescue and fire fighting services.

- *Safety regulations and standards*: The Authority is responsible for establishing the regulatory framework, assisting industry to work within that framework and, where necessary, taking corrective action to ensure that safety is not compromised. The Authority issues Air Operator Certificates (AOCs) to commercial operators, without which aircraft are not permitted to fly. AOCs relate only to matters of safety. It also undertakes a wide variety of assessments, inspections and examinations, mainly relating to aerodromes, aircraft, flight crew and maintenance staff, and provides appropriate permits and approvals. The CAA is currently devolving some of these latter responsibilities to individuals and organisations licensed to act on its behalf.

- *Air traffic services:* The CAA's activities encompass the control of aircraft within controlled airspace and the provision of a traffic information service to aircraft in other areas.

- *Rescue and fire fighting service* (RFFS): This is provided at international airports under the terms of the Chicago Convention. It is also provided at 10 domestic airports with the objective of providing RFFS for about 90 per cent of domestic and international airline passengers using Australian airports.

In discharging its functions, the CAA makes no distinction between intrastate and interstate aviation.

Financial arrangements

The Authority is required to achieve full cost recovery and pay a `reasonable dividend' to Government. Since its inception it has been required to achieve a target real rate of return of 7.5 per cent on assets employed in its activities collectively, apart from those principally associated with most safety regulatory functions and search and rescue services.

The Government has announced that the CAA will be subject to income tax from July 1991. As in the case of the FAC, it is not clear what effect, if any, this will have on the Authority's real rate of return target. The target rate of return for both enterprises has been under review by officials of the Commonwealth Departments of Transport and Communications, Finance, Prime Minister and Cabinet, and the Treasury.

The majority of safety functions has been undertaken by the CAA on a 'contract' basis. Under this arrangement, the Commonwealth Government, rather than users, has met the cost incurred by the CAA in carrying out most of its safety-related responsibilities. In recent years, this has involved the Commonwealth subsidising these services to the extent of $70-80 million annually.[1] However, in the 1990 Budget, the Government announced that funding of safety functions, other than search and rescue, would be progressively reduced over a three year period commencing in November 1991. After receiving legal advice that the costs of these safety activities would need to be recovered by taxes rather than by direct CAA charges, implementation was deferred until July 1992.

The CAA subsequently announced that, following a review of resources, the cost of the activities to be covered by the new tax would be reduced to about $42 million in 1992-93. In accordance with the phasing provisions, it announced that about $15 million would be raised from the aviation industry in that year by means of an aircraft licence fee which would vary according to end-use and aircraft weight. However, in April 1992 the CAA advised the industry that, because it had reduced the cost of its safety regulation functions at a faster rate than anticipated, only $10 million rather than $15 million would be raised from the industry in 1992-93. Implementation of the new safety tax was subsequently deferred in May 1992 following an announcement that the Commonwealth is to 're-examine its decision on future cost recovery for aviation safety regulation' (Minister for Shipping and Aviation 1992).

The CAA's charging policies are subject to conditions incorporated in its legislation. These conditions and the basis for CAA charges are outlined and discussed in Section 6.3.

Recent financial performance

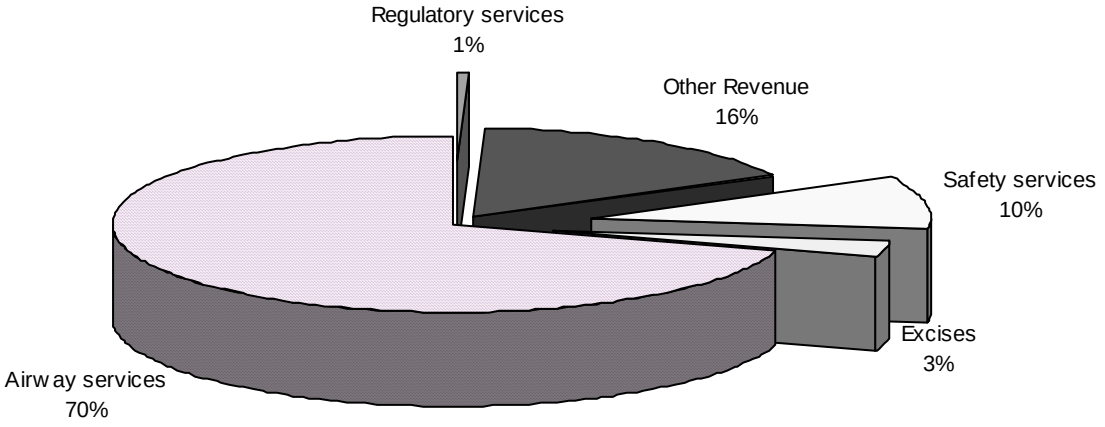
In 1990-91, the book value of the CAA's assets totalled a little under $800 million, of which buildings ($164 million) were the largest component. Revenue received was $685 million, about 5 per cent higher than anticipated. Approximately 80 per cent of revenue was for airways charges (see Figure 6.1). Payments from the Commonwealth Government under the safety contract and

[1] The Commonwealth has paid the CAA for the following services: the development of safety standards and monitoring of compliance; the shortfall in cost recovery associated with the implementation of safety standards; the maintenance of the capability to undertake search and rescue; undertaking live search and rescue; and membership of, and representation at, the International Civil Aviation Organisation and the Commonwealth Air Transport Council.

payments for regulatory services (ie inspections, approvals etc) accounted for around 11 and 1 per cent of total revenue respectively. Less than 4 per cent of the CAA's total revenue came from domestic operators of avgas aircraft. The overwhelming majority of these aircraft are engaged in intrastate general aviation operations.

Operating profit in 1990-91 was $3.3 million, compared with a loss of $13.2 million in the previous year. A reduction in asset values of around $32 million, following a revaluation, had a detrimental effect on the CAA's operating profit in 1990-91, while the CAA's return in 1989-90 was adversely affected by the pilots' dispute. The CAA achieved a return on assets well short of its target rate of return in 1990-91. The CAA recommended to the Minister that a dividend of $1.66 million be paid in respect of that year.

Figure 6.1 **CAA revenue, 1990-91**
(percentage)



Source: CAA (1991, p. 44).

The CAA cited initiatives which have been implemented to improve its financial performance and reduce its charges. These include:

- reshaping the management structure to give the Authority a more commercial focus and to more efficiently meet customer needs;

- introducing other initiatives which are intended to reduce staff numbers by about 3500 over a five-year period. This represents a reduction of approximately 50 per cent compared with staff employed at June 1991;

- pursuing a policy of `revising or removing the many regulations which add to costs but do not add to safety in an effective way' (CAA 1990, p. 1); and

- modernising equipment and introducing operational changes. For example, streamlining safety regulatory activities by devolving to the industry certain safety-related activities (eg approval of aircraft modifications).

These changes are intended to help transform the Authority `from a large inefficient bureaucracy into a cost effective and productive organisation' (CAA 1991, p. 7).

The impact of CAA charges on airlines is considerable. The CAA (sub. 25, p. 15) commented:

> The CAA's airways charges currently constitute between 5% and 10% of the overall costs of major airlines. The percentage is believed to be higher for the commuter airlines (10% - 15%) which typically have lower non-operating costs.

However, the CAA said that the changes which have been implemented have permitted it to reduce airways charges in real terms each year since 1988. The CAA estimates that, by holding increases in charges to below that of the CPI, it has `saved' the aviation industry nearly $200ÿmillion over the four years of its existence. On the other hand, charges for regulatory services have increased significantly in real terms. According to the CAA, this primarily reflects the Government's policy of phasing-in full cost recovery for these services.

Significant cost savings have also been foreshadowed in future years. In its submission to the draft report hearings (sub.ÿ55, p.ÿ1), the Authority stated that it:

> ... has now announced financial plans for 1992/93 and 1993/94 involving reductions in operating costs exceeding $150m in total.

The CAA stated that the reductions proposed for 1992-93 will enable it to reduce its airways charges for avtur aircraft to a level below what they were in nominal terms in 1987-88.

In its draft report, the Commission sought participants' comments concerning the possibility of accelerating the implementation of reforms foreshadowed by the CAA so that the benefits of the changes could be realised sooner. Virtually all participants that expressed views on this issue opposed any increase in the rate of future change. The CAA indicated that there is little scope to increase the pace of change without jeopardising the transition to new technologies and reducing aviation safety. This view was generally supported by other participants. For example, the Aircraft Owners and Pilots Association of Australia (sub. 61, p. 8) commented that:

> Many of these changes are long overdue, however they are now occurring so quickly that parts of the industry are having difficulty in keeping abreast of them ... . Any acceleration of the rate of change could exceed the industry's ability to safely comply with the new requirements.

The Queensland Government (sub. 84, p. 3) stated that:

> It is the Queensland Government's view that the CAA is reducing its level of service whilst reducing its costs without full and proper consultation with the States ...

Ansett (sub. 47, p. 7) noted that:

> ... we see it as more important that the changes were successfully implemented within the announced time scale rather than that they were expedited to the point where their ultimately successful implementation was put at risk.

The Commission accepts these assessments, but would stress the need to continue monitoring the scope for any additional savings that would not impact adversely on the CAA's service delivery. The CAA's ability to reduce the cost of its safety contract activities significantly below that initially envisaged, and hence reduce the charges proposed to be levied on aircraft operators by some $5 million, indicates the potential payoff to such monitoring.

6.2 Relationship to government

Through the CAA, the Commonwealth Government is involved in two quite different forms of activity. First, it monitors aviation safety by establishing and administering a safety regulatory framework within which civil air operations are conducted. Second, it provides a range of services to aircraft users to facilitate the safe use of Australian airspace.

Role of government

The case for government regulation of safety is based on the premise that, in the absence of government intervention, market forces will produce outcomes contrary to the interests of the community at large. This may reflect the presence of information deficiencies or externalities.

- *Information* deficiencies relate to the inability of air travellers to ascertain the safety implications of flying in particular aircraft or a particular airline in the absence of safety regulations. Air travellers cannot be expected to understand the intricacies of aircraft design and airspace management and, hence, the safety implications of flying with a particular airline or in different types of aircraft.

- *Externalities* are costs arising from aviation activity which are borne by those outside the industry. For example, aircraft can become involved in accidents which cause harm, not only to the aircraft and its passengers, but also to persons and property surrounding an accident site. There is clearly an incentive for established operators to promote safety so as to reduce the

likelihood of an accident occurring, and so avoid the subsequent harm this would inflict on their reputation and future business prospects. Nonetheless, it is possible that some airline operators would not of their own volition take sufficient account of the potential for costs to be imposed on third parties in the event of accidents.

In the light of these circumstances, most governments have seen a need for aviation safety to be regulated. Implicit in this judgement is the view that the costs of administering aviation safety regulations are outweighed by the resultant benefits.

The case for government provision of airways services is less clear. However, in respect of some services, there appear to be economies in having them supplied by a single operator. Indeed, many exhibit natural monopoly or public good characteristics in that costs either continue to decline as output increases or are unaffected by additional consumption (eg the cost of maintaining most navigational aids is unaffected by the number of aircraft utilising the facilities). In these circumstances, it would make little sense to have competing networks of navigational aids within a particular region. The major alternative to the provision of such services by government is to have a single private operator undertake the required functions. However, the considerable market power which a single private operator would possess would create a need for continuous scrutiny by government. The cost of such scrutiny would again need to be weighed against the benefits that may be obtained by having the functions performed by the private sector.

The CAA's sole supplier status

The extent to which such arguments support the maintenance of a government body, the CAA, as a sole supplier varies according to the nature of the services performed. One area in which the efficacy of preserving the CAA's sole supplier status is questionable relates to the provision of air traffic control services (control tower facilities) at airports. At present, the CAA provides these services at about 30 airports throughout the country. While restricting the provision of such services to a single body is not uncommon overseas, some countries (eg the United Kingdom) permit terminal navigation services to be provided by any private or public body, subject to them complying with the appropriate regulatory standards.

In principle, there could be a number of advantages in allowing air traffic control services at airports to be provided by bodies other than the CAA.

- An element of competition would be introduced into the supply of terminal navigation services. This would increase the pressure on the CAA (and alternative suppliers) to minimise costs and to provide services which are most appropriate for the needs of individual airports.

- Airport managers would be free to provide their own air traffic control services. This could reduce costs by permitting air traffic control staff to fulfil other airport-related functions when not otherwise occupied.[2] It would also eliminate the potential for coordination problems which could arise from having two separate bodies (the FAC and the CAA) sharing responsibilities for airport operations.

- Airports currently possessing terminal navigation facilities, the future of which are currently being assessed by the CAA (eg Port Hedland and Karratha), would be able to negotiate with alternative suppliers or supply the services themselves if the CAA elected to discontinue services at these airports.

At the draft report hearings, the CAA (transcript, p. 388) stated that:

> ... as a matter of principle, there is no reason at all why an organisation other than the Civil Aviation Authority couldn't provide air traffic control services, provided it was ... to the appropriate standards and properly regulated ...

However, it suggested that allowing other parties, such as airport managers, to provide air traffic control services could have significant disadvantages. These were said to include:

- reduced economies which are expected to stem from the new Australian Advanced Air Traffic System (TAAATS) which is to provide air traffic control services at Australia's major airports by 1995;

- the need to set up a licensing and surveillance system to cover multiple service providers; and

- coordination problems associated with having tower and terminal/enroute controllers employed by different organisations.

There is relatively little information available to assess the economic impact of changing the present arrangements. The benefits could be significant: competition would provide an on-going stimulus for costs to be minimised. However, such gains would need to be weighed against any costs.

As noted by the CAA, it is possible that coordination costs could arise. However, uniform codes of practice could minimise any coordination problems. Further, Ambidji - a company which provides a range of air traffic control services, mainly to Asian countries - claimed that having different operators of air traffic services does not inhibit coordination within the United Kingdom. The

[2] A 1983 study by the Monopolies and Mergers Commission (p. 70) found that private suppliers of airport air traffic services in the United Kingdom were able to function with considerably fewer staff and lower costs than could the major publicly owned suppliers. However, given the significant changes occurring in the CAA and the different work practices that exist in Australia and the United Kingdom, it cannot be assumed that similar gains are necessarily achievable in Australia.

United Kingdom not only has to accommodate high density domestic traffic, but also large numbers of flights to and from European cities and other international destinations. In contrast, traffic densities in Australia are significantly lower, and the major air traffic centres are geographically dispersed. It would thus seem that the main disadvantages in ending the CAA's monopoly would be the erosion of economies achievable by the new TAAATS system and increased regulatory costs.

The Commission considers there is a policy option which would avoid these costs but provide an opportunity for some of the benefits of competition in the supply of airport air traffic services to be realised. This option would involve:

- permitting alternative suppliers to compete with the CAA to provide air traffic control services at any Australian airport other than the six major capital city airports, Cairns and Coolangatta that will form an integral part of the TAAATS system; and

- maintaining the CAA as the body responsible for establishing and monitoring appropriate national standards.

Allowing limited competition in this manner would provide a basis for evaluating the potential benefits of permitting more extensive competition at some future date, while minimising the attendant costs.

The implications for the CAA of allowing some airport owners to choose between alternative suppliers of air traffic control services would largely depend on the CAA itself. If the CAA can supply the range of services required at competitive prices, this factor, coupled with its established reputation in this field, would mean that most, and perhaps all, airport owners would opt to have the CAA continue to provide air traffic control services. On the other hand, if other public or private suppliers could provide a more relevant or less costly service, the CAA's activities may be significantly reduced.

The new arrangements would need to be evaluated after (say) four or five years. If it is judged that the benefits - in the form of improved efficiency in the supply of air traffic control services - have outweighed the costs (as the Commission expects), it would be appropriate at that time to consider whether it might also be beneficial to remove the CAA's sole supplier status at airports fully integrated into the TAAATS system. At that time, it would also be appropriate to consider whether regulatory oversight of airport air traffic control services should continue to be provided by the CAA, given the drawbacks in having the one organisation acting as both a competing provider of air traffic services and as a regulator.

The Commission recommends that some limited competition be permitted in the provision of air traffic control services. It proposes that other public bodies, as well as private companies, be allowed to compete with the CAA at airports other than the eight major airports that will be fully integrated into the TAAATS system. To preserve national standards and to ensure that aviation safety is not compromised, the CAA would continue to be responsible for regulatory oversight. These arrangements should be reviewed within five years.

Cost recovery and safety

As noted in relation to the FAC (see Chapter 5), the Commission considers that the corporatisation of government enterprises can improve performance, mainly by placing public organisations on a commercial footing and increasing their accountability. In this context, the Commission considers it appropriate that GBEs should, over time, fully recover costs (including a return on assets) and pay a dividend to government. The target rate of return on assets should relate to earnings before interest and tax.

The CAA is presently moving towards full cost recovery for those safety-related services which are subject to CAA charges. However, under its Act, the CAA is not required to earn a rate of return in respect of assets used in the provision of safety-related services and activities (eg testing equipment). As noted previously, the Government had announced that the cost of providing the bulk of the CAA's safety services, which has to date been funded by the Commonwealth, was to be progressively borne by users from July 1992. That decision is now being re-examined by the Government.

A number of participants commented that there is an inherent conflict between cost recovery and safety objectives. It was argued that, if the industry is charged the full cost of CAA safety activities, the viability of some aviation activity (especially general aviation) will be jeopardised, creating an incentive for some operators to reduce costs by not complying with safety requirements. As a result, some contend that safety standards would deteriorate. For example, Ord Air Charter (sub. 2, p. 5) commented:

> ... the charges for safety related services are ridiculous and result in the operator merely avoiding the procedure in order to avoid the charge.

The Commission accepts that the higher the charges for safety services, the more likely it is that evasion will be attempted. However, this is not a problem confined to aviation safety. It is a problem encountered with taxes imposed by all levels of government, and also with regulations in all spheres of economic activity which impose compliance costs on those to whom they apply.

The potential for evasion of aviation safety charges may be less than that experienced in other areas of the economy for two reasons. First, the nature of the regulation and the monitoring procedures may make evasion relatively difficult. Second, aircraft operators have a strong incentive to maintain high levels of safety because an accident could seriously jeopardise the operator's future financial viability. For example, at the draft report hearings, King Island Airlines (transcript, p. 38) commented in relation to air services to King Island:

> ... it [an aircraft incident] would probably destroy our company or Aus-Air's or Kendell's ... if they were involved in an accident with people off the Island.

In these circumstances, provided the level of safety which underlies aviation safety regulations employed in Australia is broadly in accord with the industry's perceptions of safety, and provided that CAA charges reflect the efficient cost of providing necessary services, the probability of aircraft operators not complying with the regulations should be small.

A number of participants consider that it is inappropriate for the aviation industry to pay for all of the costs of providing safety services, because many of the benefits that stem from maintaining high standards of aviation safety accrue to the community generally. For example, Promair (sub. 49, p. 3) stated that:

> It is in the interests of the whole community that Australia's safety record be maintained .... Therefore the cost of policing the standard should be met by ALL, not just the 9 000 aircraft owners in Australia.

Relative to the cost of accidents in many other industries, the cost of an aviation accident can be very high. It can involve the loss of life of people on the ground, as well as of aircraft passengers and crew. Consequently, the community does have a substantial interest in maintaining the present high levels of aviation safety. On this basis, it could be argued that there is a stronger case for government contributing to the cost of complying with aviation safety regulations than with the safety regulations applying to some other industries. Equally, however, it can be argued that individuals, companies and industries engaged in activities that pose some risk to the community should bear the costs of regulations and other measures which may be necessary to reduce that risk to acceptable levels. This is analogous with the 'polluter pays' principle in the area of environmental policy.

If it were generally accepted that government should pay for, or contribute to, safety regulations and monitoring costs on the basis suggested by some participants, many other industries which presently have to fund these activities themselves would have claims rivalling those of the aviation industry. For example, the chemical industry could argue that, as it also generates significant community benefits, it should not have to meet the cost of installing equipment and adhering to operating procedures which government regulation specifies as necessary to safeguard users and the community generally.

Another major difficulty associated with users not meeting the cost of safety services is that the demand for services may become excessive. As there is no direct charge on users, there is an incentive for them to request safety services whenever they consider that such services will be to their benefit. This can result in the costs of providing safety services escalating and bearing little relationship to the benefits derived from such services. The potential for resources to be misallocated in this manner can be avoided by establishing appropriate charges for safety services.

The Commission recommends that the cost of safety-related services provided by the CAA should be borne by the aviation industry. It considers that CAA charges for such services should recover the cost of their efficient provision, plus a return on the relevant assets. This is similar to the situation in many other industries where the cost of complying with government imposed safety standards is met by the industry itself.

6.3 Charges for CAA facilities and services

Many inquiry participants commented favourably on the extent to which the CAA had consulted with industry about charges and procedural matters. Nevertheless, a number considered the CAA's performance deficient. While some concerns related to operational changes - such as changes to airspace management outside radar coverage and the closure of Flight Service Units at some locations - the bulk of criticism was directed at the CAA's charges. Participants criticised both the level and structure of charges. For example, the New South Wales Department of Transport (sub. 32, p. 6) stated that:

> Because of universal charging policies, it appears inevitable that costs to the industry must increase even though the services offered in many areas of the state will decrease.

Skywest Airlines (sub. 22, p. 17) commented:

> The cost of ground engineers' licences has increased over the past five years to a level that Skywest contends is totally unreasonable. A basic category licence for an engineer, which five years ago cost nothing, today costs between $2000 and $3000.

Similarly, Airlines of Tasmania (sub. 14, p. 6) stated that:

> Charges for licences and other safety related services are inappropriate. Safety will be dictated by and directly proportional to the size of the cheque book.

CAA charging principles

The CAA provides a range of facilities and services to the aviation industry relating to safety and matters pertaining to airways operations. The services and facilities offered by the CAA are conditioned by the nature and level of demand within the aviation industry, as well as the requirement that it recover costs, meet a rate of return target and remit a dividend to government. As expressed in the CAA's initial submission (sub. 25, p. 19):

> Facilities and services, such as control towers and the Rescue and Fire Fighting Service, are provided or withdrawn according to the level of demand and the willingness of the aviation industry to pay for them.

The cost of providing virtually all facilities and services (including a return on assets) is increasingly being borne by users. The manner in which this is undertaken is, to some extent, limited by section 67 of the CAA Act. This stipulates that:

> The amount or rate of a charge shall be reasonably related to the expenses incurred or to be incurred by the Authority in relation to the matters to which the charge relates and shall not be such as to amount to taxation.

The CAA interprets this to mean that it 'cannot legally cross-subsidise between types of service' (sub. 25, p. 13).

The CAA stated that it sets its charges so they can be 'equitable and objectively based'. Although it accepts that its charging policies involve 'a degree of averaging', the CAA considers it has implemented the Government's policy of charging for services and facilities in such a way that those who use them most pay more, and those who use them least pay less. The nature of the facilities and services provided by the CAA and the associated charging arrangements are outlined below.

Regulatory and safety services

The regulatory and safety services provided by the CAA can be broadly categorised according to five main functions. These are:

- establishing safety standards;
- providing regulatory services;
- monitoring of compliance;
- enforcement; and
- education.

In 1990-91, revenue from these services totalled over $82 million. Over 90 per cent of revenue was provided by the Commonwealth Government as part of the safety contract. At present, only regulatory services (eg checks, tests and approvals undertaken by the CAA) are funded by the aviation industry. According to a determination published in June 1991, the CAA is responsible for 168 different regulatory services of this nature. Major services relate to: airworthiness authorities and examinations; air operators' certificates; approval of manufacture and maintenance standards; and aerodrome licences. Charges for these regulatory services are based on the cost incurred by the CAA. This involves either a set fee or a charge based on an hourly rate.

Airways services

Major airway services provided by the CAA encompass terminal navigation, enroute services and meteorological services. In addition, the CAA provides a rescue and fire fighting service at most major airports. In 1990-91, over $554 million was raised by the CAA through its airways services - over 80 per cent of its total revenue.

For some services, the basis for charges is dependent on the aircraft type. The distinguishing feature is whether the aircraft is powered by aviation turbine fuel (avtur), as are jets, turbo-prop aircraft and most helicopters, or by aviation gasoline (avgas). The major users of avgas include most small general aviation aircraft and a limited range of small passenger aircraft. The level and structure of CAA airways charges are briefly outlined below and summarised in Boxÿ6.1.

Box 6.1: **Summary of CAA charges for airways services**

Type of service	**Charges**	
	Avtur aircraft	Avgas aircraft
Terminal navigation		
- capital city airports	weight-based, payable on landing	weight-based, payable on landing
- other major airports	weight-based, fuel excise payable on landing	
Enroute	based on weight and distance, payable on landing	fuel excise
Fire fighting		
- capital city airports	weight-based, payable on landing	weight-based, payable on landing
- other major airports	weight-based, payable on landing	fuel excise
Meteorological	based on weight and distance, payable on landing	fuel excise

Terminal navigation services

A terminal navigation service is provided at airports equipped with a control tower. This includes all capital city and 26 other airports. Within a particular radius of these airports (usually 55 kilometres), air traffic controllers have the responsibility of separating and coordinating all aircraft.

A uniform charge relating to MTOW (currently $7.65 per tonne) applies to all avtur aircraft landing at aerodromes with control services available at the time of landing. A lower charge ($3.80 per tonne) applies to avgas aircraft, but only at the six major capital city airports. A charge of $3.83 per tonne applies only to avtur aircraft which land within an airport control zone, but not at the airport itself (eg a helicopter landing on a sports field in the vicinity of an airport equipped with a control tower).

No separate CAA landing charges for terminal navigation services apply to avgas aircraft using airports other than the six major capital city airports. Charges applying to avgas aircraft for terminal navigation services at major airports, other than the six capital city airports, along with CAA charges for enroute, RFFS and meteorological services, are combined and collected by means of an excise on avgas. The excise is currently set at 26.48 cents per litre.[3] Of this amount, 2.01 cents per litre is payable to DOTAC to help cover the costs of its airports and ALOP airports. The remainder is paid to the CAA to help meet the cost of services it provides to avgas aircraft.

Enroute/flight information services

Once outside the range of an airport with control tower facilities, aircraft must rely on enroute services. The services provided include the provision of navigational aids and operational information (eg information on turbulence).

The nature of enroute services provided by the CAA differs according to whether aircraft are operating within or outside controlled airspace. Controlled airspace extends along most trunk routes and within prescribed areas of major airports. While all aircraft using major airports access controlled airspace around these airports, large pressurised aircraft flying at high altitudes are the predominant users of air traffic control services in controlled air space. Smaller aircraft operating outside controlled air space have access to flight information services. Unlike the air traffic services provided to aircraft flying in controlled airspace, flight information services do not provide operators with information concerning separation from other aircraft in the region. General aviation and small commuter operators are major users of flight information services.[4]

Enroute charges for avtur powered aircraft are based on formulae which take account of MTOW and distance travelled. The formulae distinguish between avtur aircraft with MTOW of 20 tonnes and less, and heavier aircraft. In its submission to the draft report hearing, the CAA stated that the application of the formulae results in costs per seat being similar over a wide range of aircraft, although costs tend to be lower for larger, more modern aircraft.

[3] It is currently proposed that the levy be reduced by 1.01 cents.

[4] As part of its five-year Airspace Management and Air Traffic Services (AMATS) program, the CAA intends to rationalise its flight information services and promote self-regulation of safety concerns for small operators. At the completion of the program in 1995, it is expected that aircraft not relying on Visual Flight Rules (VFR) (ie aircraft with instruments) will be provided with information about flight separation Australia-wide.

Charges for enroute services used by avgas aircraft are, as noted above, collected by means of the fuel excise. According to the CAA (transcript, p. 470), the costs of some enroute services provided to turbine powered aircraft were formerly also collected by means of an excise.

> On creation of the CAA, Avtur excise was reduced to zero and the CAA applied a direct enroute charge for Avtur aircraft. With Avtur aircraft, there were not the same problems in terms of tracking of movements, because the majority of Avtur aircraft are more expensive, involved in regular commercial operations, and generally report their movements to us.

Meteorological services

The CAA provides aircraft with meteorological information which is relayed from the Bureau of Meteorology. Direct charges for meteorological information only apply to avtur aircraft flying between places within Australia, and are determined by formulae which take account of aircraft weight and distance travelled. The CAA intends to withdraw from providing this service and shift the responsibility for it to the Bureau.

Rescue and fire fighting service

A RFFS is currently provided at all capital city airports and 13 major regional airports. To cover the cost of its provision, a uniform landing charge related to MTOW applies to all avtur aircraft landing at an airport where the service is provided. The charge is currently $1.98 per tonne, with a minimum charge of $2.97 per landing. The same arrangement applies to avgas aircraft using the six major capital city airports. Charges for avgas aircraft using other airports at which the service is provided are collected by means of the fuel levy.

Assessment of the CAA's pricing policies

The principles of efficient pricing for facilities and services provided at airports are discussed in Chapter 5 and Appendix G. Similar considerations apply to most of the facilities and services provided by the CAA, other than its safety services. In essence, users should pay for the marginal cost of the services they receive. However, the marginal cost of providing an extra service or accommodating an additional aircraft is relatively small. In some instances, the additional cost is zero. For example, the cost of operating a remote navigational beacon is independent of the number of aircraft that use it. In these circumstances, setting prices according to marginal cost would not allow all costs to be recovered.

As discussed in Chapter 5, Ramsey pricing can enable all costs to be recovered without disturbing usage patterns. This would involve higher charges for users whose consumption of airways services is least likely to be affected by a price increase. As noted previously, operators of large aircraft employed on long sectors generally fall into this category.

Aircraft weight and distance as presently employed by the CAA provide a suitable basis for implementing charges for most services provided by the Authority.

While the Commission considers that CAA charges should be set to enable it to fully recover all costs and to meet its rate of return target, some yearly variations are to be expected because of fluctuations in economic activity or the introduction of new capacity. Nonetheless, on average over a period of years, the target rate of return should be achieved. In this context, the CAA commented at the initial round of public hearings (transcript, p. 442):

> In setting the level of charges for the 1990-91 financial year, our Board was conscious that the industry had just gone through considerable difficulty in the form of the pilots' dispute in 1989 and was attempting to recover from that dispute, and the actual level of charges which was set for that year did in fact reflect a slightly lower rate of return as a result of the Board's desire to grow with the industry, so to speak, rather than to simply apply a rigid rate of return.

It is not unusual for a commercial organisation to defer price increases during periods of depressed economic conditions. The primary motivation for following this course is to help maintain demand for the organisation's outputs and, in the longer term, maximise profitability. In the Commission's view, the same considerations are equally relevant to government business enterprises such as the CAA, even though their objective relates to meeting a rate of return target rather than maximising profitability.

Cross-subsidisation

At present, some degree of cross-subsidisation exists between major CAA services and also between users of the same service.

As an example of cross-subsidisation between services, the CAA stated at the initial round of public hearings that flight information services, which are primarily supplied for the benefit of avgas operators, cost about $125 million annually. However, it said that it only collects about $25 million from avgas users. The balance is largely funded from revenue raised from other services which, in the main, falls to operators of large avtur aircraft.[5]

Cross-subsidisation between users of the same service reflects the CAA's network pricing policy. This entails charging a uniform price for a service, irrespective of variations in the quantity, quality or the cost of the service supplied at different locations. For example, the charges for terminal based facilities and services for an avtur aircraft landing at KSA are identical to those charged at Wagga, Tamworth, Perth or any of 28 other designated international and domestic airports in Australia. Quite clearly, there is a large variation in the quality (and the cost) of services provided at (say) KSA and Wagga. Similarly, enroute charges take no account of disparities in services provided on different routes.

[5] It is expected that the implementation of the AMATS program will help redress this differential.

The CAA (sub. 25, p. 15) stated that:

> The CAA currently charges for its airways services on a network basis, with the same rate of charge applied for terminal navigation and the rescue and fire fighting service at each location where those services are offered. The same enroute navigation rates are shared for all domestic routes; similarly for all international routes. While this obviously represents a degree of averaging across locations, it is considered to be an appropriate approach.

In contrast to this view, some participants argued against network pricing. For example, Australia North West Airlines (sub. 68, p. 5) - a potential new airline in Western Australia - stated that:

> ANWA cannot understand why it will get charged one cent once its aircraft have left the control of CAA Radar which is about 150 miles from Perth. Up to the departure from CAA Radar we should pay, but after that there is no 'white line, road sign or traffic lights' for which to bill ANWA for the use. Under the new rules it is up to the pilots of aircraft in the area to sort out who goes where, and we are already paying them.

At present, the extent of cross-subsidisation that results from the CAA's charging policies cannot be gauged accurately. This is mainly because the information base required for such assessments is incomplete. In this context, the CAA (transcript, p.ÿ358) stated that:

> We wouldn't claim at this point that we could produce with total confidence and accuracy location-specific data by service delivered ...

The CAA added that it is currently developing better systems for recording revenues and matching costs. It stated that the establishment of a system for allocating indirect costs is the major obstacle that it has to overcome in order to identify the full cost of providing services at its various locations.

As discussed in the preceding two chapters, cross-subsidisation distorts production and consumption patterns and can impose considerable costs on the community. These shortcomings have been recognised by governments throughout Australia, especially over the last two or three years. During this period, governments have, to varying degrees, committed themselves to eliminating, or at least reducing, cross-subsidisation which has been identified in a wide range of publicly owned business enterprises.

In the absence of knowledge of the extent of cross-subsidisation between users of CAA services, it is not possible to assess the severity of the problems posed by cross-subsidisation embodied in the CAA's charging policies. However, in principle, network pricing as practised by the CAA can encourage the over-use of facilities which are under-priced and the under-utilisation of those which are over-priced. This can affect patterns of demand and, as noted previously, can result in inappropriate investment decisions in costly aviation infrastructure.

In its submission to the draft report hearings, the CAA (sub. 55, p. 10) agreed that there are 'potential resource allocation dangers with network pricing'. However, it stated that, although there are high cost and low cost locations and routes serviced by the CAA, usage patterns tend to 'dampen' disparities, in that high cost locations/routes tend to be extensively used, while low cost locations/routes tend to be characterised by relatively low traffic volumes. The implications of this argument are that, if charges were set on a location/route basis, per aircraft charges for relatively high cost services would gravitate towards the mean (ie the 'network price'). Similarly, charges for relatively low cost services would also trend towards the mean. Depending on traffic volumes, this factor could reduce cross-subsidisation. However, as acknowledged by the CAA, it would be pure coincidence if traffic volumes are such that cross-subsidisation is eliminated.

The lack of detail available to verify the CAA's claim highlights the need for the CAA to assign a high priority to the development of cost and revenue allocation procedures to help identify precisely where cross-subsidisation is occurring and the extent to which it occurs. This information is not only required to enable charges to be efficiently structured, but also to facilitate the efficient day-to-day management of the CAA's operations.

It is recognised that the extent to which cross-subsidies between services can be removed may be limited by practical considerations. For example, it may not be possible to accurately forecast the cost of (say) fire fighting services in a particular year, or the volume of air traffic (and hence revenue). Consequently, in the short term, some degree of cross-subsidisation would appear unavoidable. Similarly, the administrative cost of implementing more efficient pricing practices must also be taken into consideration. In making this tradeoff, it needs to be recognised that the larger the cross-subsidy and/or the number of users involved, the more likely it is that the administrative costs would be outweighed by the benefits from a more efficient pricing structure.

To encourage a more efficient pattern of use of CAA facilities and services, the Commission recommends that, where practicable, CAA charges be modified so as to better reflect the differences that exist in services provided and the cost of their supply at different locations. A necessary prerequisite is the compilation by the CAA of revenue and cost information by location, route and class of user.

CAA charges for avgas aircraft

As mentioned previously, CAA charges for enroute services, terminal navigation and fire fighting services (other than at the six major capital city airports) and meteorological services used by avgas aircraft are collected by means of the fuel excise. A major problem with this approach is that the levy is, as described by the CAA, a 'blunt instrument': the incidence of the charge need bear no relation to the cost of the services used by different segments of the general aviation industry.

The CAA stated that preliminary indications are that the general aviation avgas aircraft sector as a whole is not fully recovering the costs of the CAA services it uses. However, within this sector, there appears to be considerable variation among different activities. For example, while some general aviation users of CAA flight services information are not meeting their share of the costs of the service, other general aviation operators (eg agricultural spraying aircraft) are being 'taxed' because, while they have no requirement for enroute services, they contribute to the costs of its provision via the avgas fuel levy. This highlights the need to review CAA charges as a whole, and not just focus on charges for one category of service or for one sector of the aviation industry.

Submissions to this inquiry indicate that most general aviation operators agree that the use of a levy on avgas to recoup CAA costs presents a number of problems, but they also consider that the excise is the least costly alternative. Indeed, the CAA stated that the present charging arrangements were originally put in place (in 1987) with the agreement of the general aviation industry.

Aspects of the present arrangements in relation to the CAA's enroute and terminal navigation charges are discussed briefly below. Charges for fire fighting services are discussed in the following sub-section.

- *Enroute charges*

CAA charges for enroute services used by avtur aircraft are based on aircraft weight and distance travelled. However, the CAA indicated that it is not feasible to charge avgas aircraft on this basis because many operators seldom use manned airports and, as relatively few lodge a flight plan or maintain radio contact with CAA facilities, there is insufficient information to track aircraft movements.

Charging avgas aircraft by means of a fuel excise involves overcharging some users and undercharging others. Instances of overcharging are more easily identifiable and, as would be expected, were the major concerns expressed by participants. Examples of overcharging appear to include crop dusters, training aircraft and some aircraft that operate in remote locations. Most of these aircraft do not require, and do not use, CAA enroute services. Indeed, in remote areas there are frequently no relevant services available.

In its draft report, the Commission sought additional comment on alternatives to the fuel excise for recouping the cost of CAA enroute services supplied to avgas aircraft. These included the provision of regional rebates and the use of lump sum fees related to the primary activity in which an aircraft is engaged. There was little support from participants: most appear to agree with the CAA that, while the use of the fuel levy is unsatisfactory, no better solution is presently available.

The Commission acknowledges that there are problems in more accurately charging avgas aircraft for the use of CAA enroute services. However, it considers that some improvement could be achieved by providing rebates of that portion of the fuel excise allocated towards meeting CAA

enroute costs for aircraft which, first, can be clearly identified and, second, do not require enroute services. Agricultural aircraft would appear to fall into this category. The proposed safety tax will, if implemented, require identification of this class of aircraft. Consideration should also be given to exempting other classes of aircraft, such as training aircraft, although their multiple uses (eg training aircraft are frequently used for charter work) would complicate identification procedures.

- *Terminal navigation charges*

A problem also exists in relation to terminal navigation charges for avgas powered aircraft. At present, avgas aircraft landing at the six major capital city airports are charged on the same basis as avtur users. However, there is no direct charge applied to avgas aircraft at other airports at which terminal navigation facilities exist. The charge is collected via the excise on avgas. As a result, some avgas users are charged for terminal navigation facilities which they never use, and those that use the major capital city airports are effectively paying twice (since they pay both the landing charge and the levy).

In its draft report, the Commission suggested that these distortions could be largely avoided by extending the present system of terminal navigation charges payable on landing at each of the six capital city airports to cover other airports at which terminal navigation services are provided. This change would need to be accompanied by a decrease in the avgas excise.

In response to this proposal, the CAA stated that it would be possible to charge avgas aircraft for terminal navigation services according to use, but that it would involve considerable additional costs. The costs mainly stem from the need to employ extra staff to record aircraft movements in sufficient detail to allow implementation of movement-based charges.

This matter involves consideration of similar issues to those discussed in Chapter 5 in relation to the use of GAIT to charge for the use of FAC secondary airports by general aviation aircraft. The Commission accepts that there may be additional costs incurred in order to record flight movements at busy secondary airports such as Bankstown and Moorabbin. However, it is not clear that additional resources would be required at some other airports providing terminal navigation facilities, such as Launceston, Alice Springs and Mount Isa - at which aircraft movements in 1990-91 were all less than 6 per cent of that recorded at Bankstown - or for that matter busier airports such as Darwin, Townsville, Canberra and Coolangatta - the busiest of which recorded only 14 per cent of the number of movements at Bankstown in 1990-91. If the FAC were to replace GAIT fees with landing charges, there might also be scope for sharing the costs of recording aircraft movements with the FAC at relevant airports. Consideration could also be given to the possibility of using automatic means of recording aircraft movements (eg the use of video cameras or transponders).

Additional administrative expenses are often unavoidable consequences of initiatives to improve pricing. The costs associated with the implementation of better pricing practices need to be weighed against the wider economic benefits of direct user charges in determining whether such a change would, on balance, generate net benefits. One problem is that, unlike the costs, the benefits associated with introducing improved pricing practices are frequently not readily visible or measurable. In the absence of detailed information, the Commission is unable to determine whether there would be net benefits from extending the use of specific terminal navigation charges to those airports where substantial additional resources would be needed. However, it considers that the CAA should at least implement such charges at those airports where the additional administrative costs would be small relative to the Authority's airport costs. This change would need to be accompanied by a commensurate reduction in the fuel excise.

Rescue and fire fighting service

A RFFS is provided at international airports to comply with Australia's obligations under the Chicago convention, and at 10 other airports to satisfy the CAA's criterion that the service be available to 90ÿ per cent of international and domestic airline passengers. The costs of providing the service are met by charging all avtur aircraft a uniform weight-related fee at aerodromes where the service is provided. Avgas aircraft using the major capital city airports are subject to the same arrangements. Charges for the RFFS at other airports at which the service is provided are recouped by attributing part of the fuel levy (0.748 cents per litre) to the costs of the service.

The CAA stated that the 90 per cent criterion had been endorsed by the industry following a review in 1989. However, comments made by inquiry participants indicate that some general aviation operators and some relatively small airline operators do not support the present arrangements. For example, Airlines of Tasmania pointed out that, under the present arrangements, it can land at Flinders Island and King Island without incurring a direct fire fighting service charge (because no service is provided at those locations), but the same aircraft incurs a charge upon landing at Launceston. It added that the CAA would not waive the charge if Airlines of Tasmania undertook to provide its own fire fighting service. In the case of most general aviation operators, because the charge is embodied in the fuel levy, a fire fighting charge is incurred even if they never use airports which provide the service.

Most general aviation activity takes place at airports at which no fire fighting service is provided. Moreover, accidents involving general aviation aircraft are low (in the order of 20 per 100 000 hours flown), and most do not occur at airports. In view of these factors, and because the service is primarily installed for the benefit of the larger airlines, the Commission's draft report suggested allowing small operators the option of paying for the rescue and fire fighting service only when actually used.

Relatively little comment was received. However, some representatives of general aviation interests, such as the Aircraft Owners and Pilots Association of Australia, supported the Commission's proposal. It stated (sub. 61, p. 9) that the fire fighting service:

> ... is unnecessary for general aviation operations and ... there are many good arguments for only charging for the facility when it is used. The ready availability of RFFS is certainly a convenience but general aviation has exhibited its willingness to forego this convenience by removing RFFS from general aviation airports.

On the other hand, the CAA (sub. 55, p. 13) argued against the proposal.

> In the commercial world, it is too late to pay an insurance premium once a claim has occurred - at that stage, the full cost of the claim must be borne.

This argument implies that the charges that would apply on such occasions would be substantial. It is not clear that this would be so. As the RFFS is provided at airports to protect RPT passengers, there are strong grounds for charging incidental users - such as general aviation aircraft - only for those costs directly attributable to their use of the service.

The Commission sees little need for RFFS charges to be compulsory for small operators that are not provided with the service at most airports they operate from. Provided indicative fees for using RFFS services are generally available, there would seem to be little reason why the decision to insure or to pay according to use should not be left to operators themselves, as are other financial decisions. This would place aircraft operators in a similar situation to that applying in a number of other areas of economic activity in which commercial insurance operates. It would, for example, be similar to ambulance insurance schemes. Insurance can be taken out to cover the costs that would be incurred if ambulance services are required or, alternatively, a fee is payable if the service is used.

The Commission recommends that RFFS charges not be compulsory for general aviation operators. This would permit general aviation operators to opt out of a system, the stated objective of which relates to passenger movements, while paying for RFFS services when used.

Implementation of this recommendation would require a clear definition of those aircraft to which compulsory RFFS charges would not apply. One option would be to exempt all avgas users and to reduce the fuel levy accordingly. Those operators that elected to continue to pay for fire fighting services as at present would have to be charged on a per movement basis, as is currently the case at the major capital city airports. Alternatively, a broader definition of general aviation could be employed to also encompass smaller avtur aircraft up to a designated MTOW.

Since major airlines contribute a substantial proportion of the revenue raised from charges for fire fighting services, it is possible that the withdrawal of small aviation businesses would not have significant implications for the provision of fire fighting services at most airports. Nevertheless, in some cases it is possible that it could result in the withdrawal or scaling down of fire services at some (non-international) domestic airports. However, if this does occur, this may well result in the more efficient utilisation of fire fighting resources. For example, following the withdrawal of the rescue and fire fighting service from a number of airports, including Bankstown and Moorabbin, arrangements have been made for local emergency services to be used if the need arises. This overcomes what appears to have been some duplication of fire fighting resources.

A number of participants suggested that there is also scope for more efficient utilisation of the remaining RFFS resources. For example, the Aircraft Owners and Pilots Association of Australia suggested that RFFS resources could also be employed to augment civilian fire fighting resources. It added (sub. 61, p. 9) that:

> It is wasteful to build specialist fire fighting resources on airfields, where the demands are few and far between, such that they cannot readily respond to more routine domestic demands.

The Commission considers there is merit in considering this proposal and other alternatives for increasing the utilisation of RFFS resources. The resources dedicated to the RFFS are considerable, but over the course of a year are required only on relatively few occasions. CAA data (CAA 1991, p. 31) show that RFFS employment was 721 at January 1992 - equivalent to 10 per cent of the CAA's total workforce. Moreover, RFFS employment is projected to decline by only four persons by July 1996. As this coincides with a period when employment in most other areas of the CAA is being significantly reduced, the RFFS workforce is forecast to constitute nearly 20 per cent of the CAA's total staff at that time.

6.4 Summary of recommendations

CAA charges constitute a significant component of aircraft operators' costs. Consequently, it is important that the Authority's activities are undertaken at least cost and that its charges are efficiently structured. The corporatisation of the CAA provides a basis upon which reforms can be introduced to improve efficiency. Significant changes have already been introduced, and further changes have been foreshadowed. To date, the major focus of change has been on reducing costs, with less emphasis being placed on improving pricing practices.

To improve efficiency, the Commission recommends that:

- the CAA be required to recover all costs and meet a target real rate of return on all assets necessary to allow it to perform its functions efficiently, including those associated with the provision of safety-related services;

- the target rate of return relate to earnings before interest and tax;

- subject to compliance with the appropriate regulations and standards, any organisation be permitted to provide air traffic control services at Australian airports other than the six major capital city airports, Cairns and Coolangatta, and that the new arrangements be reviewed within five years;

- the CAA's charges be modified to eliminate, as far as practicable, cross-subsidies between users, so that charges more closely reflect the cost of services supplied to different groups of users;

- terminal navigation charges presently levied on avgas powered aircraft at major capital city airports be extended to include other airports where any extra administrative cost would be small relative to the Authority's airport costs;

- avgas aircraft used for agricultural purposes and any other aircraft readily identifiable as not requiring, or not having access to, CAA enroute services, receive a rebate of that part of the excise on avgas which is attributed to the cost of providing CAA enroute services; and

- general aviation aircraft operators be permitted to determine whether they be charged for the RFFS by means of a landing fee at airports where the service is provided or, alternatively, pay only when the RFFS is used.

APPENDIX A: INQUIRY PARTICIPANTS

Throughout the inquiry the Commission benefitted from discussions with a wide range of individuals and organisations with an interest in intrastate aviation. The main formal venue for interaction with inquiry participants was the public hearings, which were held initially in Melbourne, Sydney, Adelaide and Canberra, and following release of the draft report, in Launceston, Sydney, Perth and Canberra. In addition, the Commission met informally with representatives of the following organisations:

- Airlines of Tasmania
- Ansett Transport Industries
- Australian Airlines
- Australian Federation of Air Pilots
- Civil Aviation Authority
- Commonwealth Department of Transport and Communications
- Federal Airports Corporation
- Kendell Airlines
- NSW Business Deregulation Unit
- NSW Department of Transport
- NSW Farmers' Association
- Regional Airlines Association of Australia
- Tasmanian Department of Premier and Cabinet
- Tasmanian Department of Roads and Transport
- Tasmanian Farmers' and Graziers' Association
- Trade Practices Commission

Submissions to the inquiry

Organisations and individuals who made submissions to the inquiry are listed below. Participants marked * presented submissions at public hearings. Participants marked ** made no written submission but appeared at hearings. The remainder made written submissions only.

Participant	Submission number
Aircraft Owners and Pilots Association *	61
Airlines of Tasmania *	14, 46
Allen, Mike **	
Ambidji Group *	67
Ansett Transport Industries *	15, 47, 53
Aus-Air	81
Australia North West Airlines *	68

Participant	Submission number
Australian Air Transport Association	83
Australian Airport Owners' Association *	11, 64
Australian Economic Advisers	19
Australian Federation of Air Pilots *	8, 58
Australian Local Government Association	65
Citizens Revolt Against Sound Harassment (CRASH)	3, 44
Civil Aviation Authority *	25, 55
Committee for Melbourne	51
Cootamundra Shire Council	27
Council of the Municipality of Casino	75
Council of the Shire of Uralla	56
Department of Transport - NSW	32, 80
Department of Transport - WA	82
Department of Transport and Communications *	30, 40, 78
Department of Transport and Works - NT	35, 38
Dumaresq Shire Council	37
Eastern Australia Airlines *	17
Essendon Airport Chamber of Commerce *	20, 62
Federal Airports Corporation *	29, 59
Flight West Airlines *	13
Flinders Island Tourism Committee	7
General Aviation Association *	24
Grafton City Council	10
Greenaway, K.	9, 57
Hamersley Iron Pty Limited	36
Hazelton Airlines *	28, 72
Hume Shire Council	1
John Bushell, Value Management *	42, 43, 66
Kendell Airlines *	26
King Island Airlines Pty Ltd *	54, 77
Lismore City Council	23
Minister for Transport - WA *	31
Municipality of Flinders *	5
NAROC	45
Narrandera Shire Council	69
NSW Farmers' Association *	21, 79

Participant	Submission number
Ord Air Charter Pty Ltd	2, 48
Promair Australia Pty Ltd *	4, 49, 50
Queensland Government	41, 84
Regional Airlines Association of Australia *	16
Royal Federation of Aero Clubs of Australia *	70, 73, 74
Rural Airlink Action Group *	12
Skywest Airlines *	22, 71
South Australian Government **	
Tasmanian Aero Club *	6, 52
Tasmanian Government	33, 85
Town of Port Hedland	76
Trade Practices Commission	39
Valupa Pty Ltd **	
Victorian Government	60
Walker, Geoffrey W. *	18, 34
Woodside Offshore Petroleum Pty Ltd *	63

APPENDIX B: EVOLUTION OF INTERSTATE AVIATION POLICY

This appendix outlines the development of interstate aviation since the 1940s. It focuses on the two-airline policy, dealing with the reasons for its establishment, the many modifications implemented over the life of the policy, and the factors leading to its termination in October 1990.

B.1 Establishment of Trans Australian Airlines

Prior to 1945, the Commonwealth had substantial power to shape the development of aviation in Australia through a combination of the exercise of its constitutional power and the passing by the states of uniform Air Navigation Acts. In 1945, the Commonwealth attempted to extend its involvement in aviation by creating a government monopoly of interstate aviation to take over the private airlines operating interstate routes (Australia, House of Representatives, 1945). This was designed to counter the likelihood of a private monopoly being formed from the merging of private airline companies. The Government therefore enacted the Australian National Airlines Act 1945 to establish the Australian National Airlines Commission, which traded as Trans Australia Airlines (TAA).

The legislation was challenged in the High Court in the same year by the largest of the privately owned airlines, Australian National Airways (ANA). The High Court found that, while TAA could have a monopoly of territorial air services, a government monopoly over interstate routes would violate Section 92 of the Constitution. Thus, it ruled that the monopoly provisions of the Act, as they related to interstate transport, were invalid.

TAA commenced operations in 1946 under the valid provisions of the Act, competing with several other operators, including Ansett Airways and ANA. TAA was greatly advantaged in its operations by substantial financial assistance, the privileged allocation of airport facilities, favourable rentals, lower airport and airways charges, a monopoly on government business and, in 1949, the transfer to it of the Queensland intrastate services which had been developed by Qantas.

Facing a weakening of its financial position, ANA proposed to the Commonwealth Government in 1952 that it merge with TAA and that the Government have the controlling interest. However, the Government of the day opposed private monopolies and rejected the merger proposal. Indeed, it favoured the removal of the substantial protection which had been granted to TAA.

B.2 1952 Airlines Agreement

Following a review of aviation policy which had commenced in 1951, the Government recognised the poor financial position of ANA and implemented the *Civil Aviation Agreement Act 1952* and associated legislation. This Agreement between the Government and ANA was intended to operate for 15 years and related to operations on the existing interstate routes and the Queensland intrastate routes operated by ANA and TAA. The Agreement gave a measure of financial protection to ANA in terms of the sharing of government passenger and mail business, and government guarantees on the repayment of loans entered into by ANA. TAA was opposed to the Agreement because it stood to lose a great deal of business. It refused to be a contractual party to it, but was bound by its requirements. Ansett Airways, the other major interstate operator, was excluded from the Agreement, as were other smaller operators.

The Agreement required ANA and TAA to consult on the rationalisation of matters such as routes, timetables, fares and freight rates. Rationalisation was seen as appropriate to prevent unnecessary overlapping of services and wasteful competition; provide the most effective and economical services bearing in mind the public interest; and bring earnings into a 'proper' relation to overall costs. If TAA and ANA failed to reach agreement on any of these matters, further discussions were required to take place before an independent Chairman, whose decision would be final.

In order to assist ANA to compete with TAA, the Government provided loan guarantees to ANA for the purchase of aircraft comparable in size and type to those purchased by TAA. However, nothing in the legislation prevented other private airlines from competing with either TAA or ANA on existing trunk routes. The legislation made no reference to policy on potential new routes.

This Agreement was the first of six airlines agreements which dominated Australian domestic aviation policy for nearly 40 years.

B.3 1957 Airlines Agreement

During the 1950s, the financial position of ANA and the other private airlines gradually deteriorated due to fierce competition on trunk routes and the operation of uneconomic DC3 aircraft which the airlines could not afford to update. ANA, which had accumulated large financial losses over a number of years, was taken over by Ansett Transport Industries (Ansett) in June 1957.

A 1957 review of aviation policy by the Director General of Civil Aviation reflected increasing Government concern about the operation of the private airlines and the funding of airport facilities. Following the review, the *Civil Aviation Agreement Act 1957* was enacted which took account of

the dominant position of TAA in the market. Parties to the Agreement (and subsequent Airline Agreements) were the Government, TAA and Ansett. The Agreement was intended to operate for 10 years to 1967, and had as its main purpose the formalisation of the position of Ansett and companies under its control as the only commercial operator on trunk routes in the two-airline policy structure desired by the Government.

The Agreement required TAA and Ansett to consult through a Rationalisation Committee which comprised a member of each airline and a Co-ordinator whose role was to make final and binding decisions, subject to appeal to an independent Chairman. The Government considered it desirable that the trunk route operators should be able to make reasonable profits and yet provide a highly competitive type of service. The rationalisation provisions of the 1952 Agreement were extended to cover all routes operated by one or other airline, as well as proposals to expand the trunk network.

The *Airlines Equipment Act 1958* strengthened the two-airline policy by regulating the re-equipment of Ansett and TAA. The Act provided for both airlines to receive government loan guarantees for the purchase of aircraft. In return, the airlines were required, for the duration of their outstanding loans, to limit their capacity to the requirements of non-competitive routes plus one half of the estimated traffic on competitive routes, after taking account of a specified revenue load factor. The capacity determination provisions of the Act ensured that the level of available capacity was matched to perceived market demand, and that it was evenly divided between the two airlines.

The Government inferred that it would use its powers under the *Customs (Prohibited Imports) Regulations* to prevent the importation of aircraft if it was considered to be detrimental to the stability of the industry. This power, although rarely used, underpinned the Government's control over the two-airline policy. Thus, the airlines were prevented from introducing types of aircraft which could result in a re-equipment race and instability in the industry. It also prevented the possibility of competition from new entrants to the industry by depriving them of the means by which they could acquire aircraft. In 1965, the legality of the Government's power to regulate the importation of aircraft under Customs Regulations was questioned in the High Court. The Government's powers in this regard were found to be not in conflict with Section 92 of the constitution.

By the 1960s, the thrust of Government policy for the aviation industry had the objectives of: fostering the orderly development and growth of the 'infant' industry; ensuring the long-term financial stability of the two airlines; cross-subsidising of unprofitable routes; matching of capacity to demand; and promoting 'fair' competition between operators. Nevertheless, legislation introduced by the Commonwealth during the 1960s had, by regulating capacity, air fares and aircraft specifications, substantially reduced the scope for any meaningful competition to develop.

B.4 1962 Airlines Agreement

Following a request for an extension and revision of the Airlines Agreements by Ansett, the Government conducted a review of aviation policy. The Review focussed attention on the need for TAA and Ansett to have similar cost structures, with TAA not obtaining financial advantages from its government ownership, and the need for Ansett to be able to re-equip with similar jet aircraft to TAA at the appropriate time. The *Airlines Agreement Act 1961*, which was enacted as a result of the Review and came into force in 1962, consolidated and refined the two-airline policy. It encompassed requirements for each airline to operate similar fleets of aircraft under regulated 'competition', and provided the environment for the airlines to re-equip with jet aircraft.

The new Agreement introduced a new dimension - the need for the airlines to operate under comparable cost structures. It also extended the rationalisation machinery for 15 years to 1977, and set out in considerable detail the matters which could be referred to the Rationalisation Committee. These were extended to include: timetables; frequencies; stopping places; aircraft types and capacities; fares; freight rates; load factors; and any other matters affecting the efficient and economical operation of air services. The Agreement required the Treasurer to guarantee the repayment of loans by Ansett for the purpose of purchasing jet aircraft comparable to those purchased by TAA.

The new Agreement introduced measures to restore the competitive balance between the airlines, with TAA being required to operate on a more commercial basis. It was required to meet a dividend target set by the Minister and change its arrangements for paying insurance premiums.

B.5 1972 Airlines Agreement

In the early 1970s, there was considerable criticism by the Government and the public of operational aspects of the two-airline policy, including: the high incidence of parallel scheduling; the reduction in the level of rural services; the poor quality of freight services; the lack of provision of discount fares; the low level of cost recovery payments to the Government; and the opposition of the trunk operators to the provision by other airlines of small-scale services on some trunk routes.

The *Airlines Agreement Act 1972* sought to address most of these criticisms and clarify the level of service which was expected to be provided under the two-airline policy. The Agreement extended the life of the 1952 and 1962 Agreements by requiring at least five years notice of termination after the end of 1977.

B.6 Developments between 1973 and 1981

With the competitive advantage turning in favour of Ansett, amendments to *the Australian National Airlines Act 1945* made in 1973 were intended to expand the scope of TAA's operations in order to restore the balance. For example, they permitted TAA to become involved in road transport and engineering work, to engage in intrastate airline operations, to acquire subsidiaries, to engage in aerial work and charter operations, and to establish and operate hotels.

The *Airlines Agreement Act 1973* increased air navigation charges to substantially improve the recovery of costs attributable to airline operations. Measures taken to reduce the impact of these higher charges on the airlines included increased air fares and freight rates, and the hypothecation of government imposts on aviation fuel for aviation cost recovery.

Whereas before 1974 there had been no systematic method for the setting of air fares by the Minister under Air Navigation Regulations, a comprehensive national air fare formula structure was introduced in 1974 which took account of relevant cost factors.

A successful takeover bid was made for Ansett by Thomas Nationwide Transport Ltd (TNT) and News Ltd in 1979. This followed an earlier unsuccessful bid by TNT in 1972.

B.7 1981 Airlines Agreement

In contrast to the Airlines Agreements which precluded virtually all competition between the two operators on trunk routes and between the trunk operators and other airlines, the 1979 Domestic Air Transport Policy (DATP) Review (DOT 1979), recommended that, while maintaining its essential structure, the Airlines Agreement should be modified to allow for some competition and innovation.

The Review recommended that intra-regional and some inter-regional services (only those with intermediate stops) be provided by specialist regional operators rather than the major trunk operators. It also recommended that only operators using small aircraft should provide services on short-haul and/or low traffic routes. The Review contended that operators of the smaller aircraft should be discouraged from providing services to airports in the trunk network. This Review was followed by the 1981 Independent Public Inquiry into Domestic Air Fares (the Holcroft Inquiry).

Recommendations from the DATP Review and the Holcroft Inquiry which were accepted by the Government were incorporated in the re-negotiated Airlines Agreement and associated legislation which together formed the 1981 Domestic Aviation Legislation Package. The 1981 Agreement had a term of eight years to 26 January 1990, and could be terminated at any time after five years, provided three years' notice was given.

The thrust of the Package was to continue with the two-airline policy and the existing service network but, at the same time, introduce measures which would increase the potential for competition between the major airlines. However, the 1981 Agreement gave the major airlines first option over any proposal to operate intrastate services on trunk routes put forward by regional or commuter operators. The Package also established an Independent Air Fares Committee (IAFC) which operated under the *Independent Air Fares Committee Act 1981*. Major provisions of the Act included: the determination of cost-based air fare formulae that reflected efficient and economic operations; the setting of identical economy air fares for Ansett and TAA; the setting of route specific fares for all regional and commuter operators; and the approval of a wide range of discount fares. The implementation of this Act considerably reduced the scope of matters dealt with by the Rationalisation Committee.

Among the measures intended to increase competition and reduce community criticism were provisions to: permit access by regional operators to jet aircraft and to certain trunk route operations; remove air freight from the two-airline policy; define the role of TAA, Ansett and Qantas; and limit the areas of compulsory consultation between TAA and Ansett to matters such as aircraft load factors, utilisation and air fares. The Rationalisation Committee was abolished and replaced by an Arbitrator, with simplified procedures for resolving disagreements.

In the less regulated environment fostered by the 1981 Package, certain developments indicated that a degree of competition was emerging. These included the introduction of different types of aircraft on trunk routes, a decrease in parallel scheduling, more innovation in fare setting and discounting, increases in direct city-pair services, and improved levels of in-flight and on-ground passenger services.

B.8 1984 Inquiry into Aviation Cost Recovery

In 1984, the report of the Independent Inquiry into Aviation Cost Recovery (the Bosch Inquiry) stated that, given current policies, the level of cost recovery for government services supplied to the industry, such as airport and air navigation facilities, would fall below 50 per cent by 1987-88. The report also indicated that the arbitrary method of cost allocation then being used resulted in about 44 per cent of all infrastructure costs being attributed to commuter airlines and general aviation. Major recommendations were: separate charges should be introduced for the use of airports and airways; pricing for the use of airports and airways should be more efficient and equitable; and airports should be managed on a commercial basis.

The report's findings contributed to the creation of the FAC in 1986 and the CAA in 1988. The FAC initially assumed responsibility under the *Federal Airports Corporation Act 1986* for operating 17 Federal airports and their associated terminals, runways and related facilities on a commercial basis. CAA assumed responsibility for both safety standard-setting and day-to-day

control of aviation safety matters under the *Civil Aviation Authority Act 1988*. Operational responsibility for airways facilities, comprising air traffic control, flight advisory services, communications, navigation and surveillance systems, and rescue and firefighting services at airports, also passed to the CAA. However, the Bureau of Air Safety Investigation continued to operate as part of the Department of Transport and Communications, and to maintain responsibility for investigating safety incidents and accidents.

B.9 1985 Independent Review of Domestic Aviation

The Independent Review of Economic Regulation of Domestic Aviation (the May Review) was commissioned in March 1985 and reported to the Government in December 1986. The terms of reference required it to review the existing arrangements for economic regulation of domestic aviation in Australia, and to report on options for the future.

May Review findings

The May Review was critical of existing arrangements in the domestic aviation industry, and drew attention to significant public dissatisfaction with the current policy, including the widespread view that it worked to the disadvantage of consumers and encouraged the airlines to serve the high yield business market to the detriment of the leisure market. It found that, in comparison with its overseas counterparts, Australian aviation was characterised by relatively low productivity and high and stable profit levels. The findings of the May Review can be categorised under the following headings.

Market development

Capacity consultations between the major airlines and the market sharing arrangements that applied on competitive trunk routes were found to discourage the airlines from seeking out new markets and further developing existing markets, as any market gains by one airline had to be shared with the other airline.

Route entry

Entry onto trunk routes by airlines other than Ansett and TAA had been hampered or delayed by the regulator's difficulties in interpreting certain of the route entry provisions in the Airlines Agreement.

Aircraft utilisation

Control by the IAFC of the rates of return on airline investment had encouraged the airlines to employ somewhat excessive numbers of aircraft relative to output levels[1]. This was reflected in low density seating configurations and low utilisation of aircraft.

Range and quality of service

The regulatory environment encouraged the airlines to concentrate on the high-yield business travel section of the market and the provision of less than adequate service for those willing and able to travel on discount fares. The Review found that the regulatory arrangements had emphasised enforcement of the conditions of the Airlines Agreement and preservation of the current industry structure rather than the more fundamental objective of satisfying consumer needs.

Commonwealth-State powers

Commonwealth and state aviation regulations were found to overlap and create the potential for conflict in such areas as intrastate fare levels and routes, capacities on intrastate services, rural services, infrastructure and cost recovery. There was no formal process of coordination and no consistent strategy for resolving potential conflicts resulting from this overlap.

Administrative and legislative matters

The Review found that much of the existing regulation was cumbersome and internally inconsistent, that it was difficult to interpret (eg in regard to the route entry provisions mentioned above), and that it inappropriately partitioned the administrative responsibilities for aviation policy. For example, it stated that the dispersion of economic regulatory responsibilities among the Minister for Aviation, the Secretary of the Department of Aviation and IAFC made it difficult to coordinate regulatory responsibility and could lead to confusion in the industry and delays in decision-making.

The findings of the May Review were not accepted by all sections of the industry. For example, the IAFC set out contrary views in two of its annual reports (IAFC 1986, pp. 16-18; 1987, p. 21).

Policy options developed by May Review

Among the recommendations which were proposed by the Review were: future arrangements in the industry be incorporated in Acts of Parliament rather than in contractual agreements; airlines' commercial behaviour be monitored; a single regulatory authority be created, separate from the

[1] Strictly speaking, the IAFC regulated air fares rather than rates of return on investment.

body responsible for air safety; the requirement for the airlines to consult each other be abolished; provision be made to accommodate new airlines in existing terminals; restrictions on air charter operations within Australia be reduced; and legislative changes be introduced to allow Qantas to carry domestic freight on domestic sectors of international flights.

The recommendations were accompanied by five alternative policy options, ranging from the maintenance of the status quo (Option 1) to complete deregulation of the industry (Option 5). Each option involved decreasing degrees of regulatory involvement in four main policy dimensions: aircraft capacity; route entry; fare setting; and industry consultation and cooperation. The Review offered no judgment about which of the options would be preferred, stating that this was a matter for Government.

B.10 Government response to May Review

The Government responded to the May Review in October 1987 (DOTAC 1987). The Government's views were developed against a stated policy of withdrawing from business regulation where it was not, on balance, justified as a means of promoting efficiency, improving the competitiveness of Australian industry, or securing long term benefits for consumers.

In the Government's view, the maintenance of the status quo (Option 1) would not promote, and could prevent, attainment of economic efficiency. The next three options were also considered unsatisfactory because they would fail to resolve the problems identified in the industry. The Government therefore decided to adopt Option 5, which involved complete withdrawal from detailed regulation of domestic air fare setting, control of aircraft imports, capacity controls and route entry.

Consequently, the Government announced that the 1981 Airlines Agreement would terminate in October 1990 and that it would: remove controls over the importation of aircraft under Customs Regulations; withdraw from the detailed determination under the *Airlines Equipment Act 1958* of the amount of passenger capacity that could be provided by each trunk airline and each regional airline which used jet aircraft with larger than 30 seats capacity; abolish the IAFC; and remove constraints on the entry of new domestic operators to trunk routes.

Other decisions by the Government announced at this time included: allowing Qantas to carry passengers of other international airlines on domestic sectors of Qantas' international services (termed interlining); reducing restrictions on the import of large jet aircraft for domestic charter flights; issuing new guidelines for international freight and passenger operations; and foreshadowing extensive changes to the role of Australian Airlines (formerly TAA).

Subsequent developments in aviation policy are set out in Chapter 3 of this Report.

APPENDIX C: RURAL AIR SUBSIDIES

As the provision of air services to remote areas is often a marginal activity, Commonwealth and state governments have chosen to support some air services where there is no alternative transport option. In pursuing this objective, governments have supported restrictive licensing arrangements, direct subsidies and programs such as the Royal Flying Doctor Service. This appendix addresses schemes supported by governments through direct subsidies. The use of regulatory barriers to entry to secure air services is discussed in Chapter 4.

C.1 Rationale

Universal access to transport services - at reasonable cost - is a commonly pursued social objective of governments. It is based on the notion that all citizens should be afforded access to a minimum level of transport services. A corollary is that those living in remote areas are entitled to share in the benefits enjoyed by those living in urban areas. In pursuing this objective, it has often been necessary to subsidise transport operations. As expressed by the Western Australian Department of Transport (1991, p. 46):

> Where necessary, subsidy schemes are developed and administered with the objective of improving access to services for people who:
>
> - are isolated by virtue of their distance from facilities;
> - would otherwise not have access to public transport; and
> - do not have the capacity to sustain an acceptable standard of service in their own right.

In many cases, air transport has been deemed the most appropriate transport mode to achieve this objective - particularly in remote and isolated areas.

C.2 Subsidy arrangements

There are three main air subsidy schemes operating in Australia (see Table C.1). In terms of routes and ports, the most extensive arrangement is the Commonwealth Government's Rural Air Services Subsidy (RASS) scheme. It provides subsidies for air services to small communities and isolated properties/stations in Queensland, South Australia, Western Australia and the Northern Territory. In addition to the RASS scheme, the Queensland and Western Australian Governments support additional services within their own state. The combined annual cost of these programs is a little over $4 million.

Table C1: **Air services directly subsidised by Commonwealth and State Government, 1990-91**

Government	*Operator*	*Base*	*Routes*	*Ports*	*Region of service*	*Annual subsidy*
			No.	***No.***		***$***
Commonwealth	CYAS [a]	Cairns	8	74	Northern Qld (Cape York)	651 070
	Chartiar	Alice Springs	3	25	Southern NT	166 454
		Tennant Creek	1	12	Central NT	
	Air North	Katherine	4	40	Northern NT	106 057
	Ord Air	Wyndham	1	8	North-east WA (Kimberleys)	66 601
	Air Mt Isa	Mt Isa	2	15	North-west Qld	62 492
	Augusta Air	Port Augusta	2	23	SA & South-west Qld	59 405 [b]
Queensland	Flight West	Brisbane	2	9	Southern Qld	2 700 000
		Townsville	1	6	Central Qld	
Western Australia	Skywest [c]	Port Hedland	2	5	North-west WA	139 963
	Ord Air	Derby	1	3	North-east WA	107 942
	Western Airlines	Perth	1	4	South-west WA (coastal)	92 333
Total			28	224		4 152 317

a Cape York Air Services.
b Includes funding by the South Australian Government (22 per cent), the Queensland Government (11 per cent) and Australia Post (33 per cent)
c As of 8 May 1991, subsidised services by Skywest were reduced to one route and 2 ports.

Sources: DOTAC (1991); Department of Transport, Western Australia (1991); Gerritsen (1991); Submission.

All schemes are currently under review. According to DOTAC (sub. 30, p. 47), a recent report by Gerritsen (1991) found that:

> ... the [RASS] scheme is an inappropriate activity for the Commonwealth Department of Transport and Communications ... it encourages economic inefficiency, is inequitable, overly complex and faces a potential fiscal blowout because of unsatisfied demand.

The majority of these concerns, which are unlikely to be confined to the RASS scheme, stem from administrative problems. The main areas of concern include the criteria used to determine funding arrangements, subsidy status and the distribution and review of route allocations.

Funding

There are two important aspects of funding arrangements for subsidised air services: how services are funded and the method by which funds are applied.

All three major subsidy programs are funded through consolidated revenue, with outlays published in annual reports of the respective transport departments. Apart from the Northern Territory and the Cape York region of Queensland, subsidised air services operating exclusively within a state are funded by the respective state government. Funding for air services which transcend state borders is provided by the Commonwealth Government. Apart from state contributions on the interstate service operated by Augusta Airways, the Commonwealth does not receive co-funding from the benefiting state or territory.

Direct subsidies for air services are usually applied on a cost-plus basis. Operators are reimbursed for operating shortfalls incurred on subsidised routes, plus a return on capital employed. In Queensland, an annual base subsidy was negotiated as part of a five-year contract to service remote areas. Subsidy payments vary according to movements in the CPI, although increases in the base subsidy have subsequently been approved by the Government following losses sustained by the operator.

In Western Australia, subsidy payments are based on the shortfall between revenue and costs for the previous month's operations.

Under the RASS scheme, however, the subsidy is based on the forecasted difference between revenue and costs. Moreover, there is no process by which the Government can redress any discrepancies between actual and projected figures. For example, if an operator sustains an annual loss of $10 000, but forecasted a loss of $20 000, it is able to retain the balance. This arrangement provides an incentive for conservative estimations of expected revenue and/or over-estimates of costs.

Gaining subsidy status

The process by which a community gains a subsidised air service differs across governments. For example, the RASS scheme has a set of stated criteria which must be satisfied before a subsidised air service will be provided. According to DOTAC, these require that:

- there is sufficient demand for the service (the benchmark used is at least $35 per week in revenue from passengers and freight);
- the port is beyond one hour's comfortable drive to a centre of population at which basic economic and social services are available;
- the port is 60 kilometres or more beyond an accessible aerodrome; and
- the port is not served by, or sited close to, a sealed main road.

These criteria allow access to the scheme by individual families and stations. However, if an applicant fails to meet them, a subsidised service may still be provided if access by road is not possible during certain times of the year, or if there are special medical, educational or welfare reasons why a regular service is warranted.

In Western Australia and Queensland, eligibility for a subsidised air service is assessed on a case-by-case basis. According to the Western Australian Minister for Transport (sub. 31, p. 6), this provides it with the ability to:

> ... financially support regional air services where specific operational circumstances, or a downturn in viability, threatened the withdrawal of services legitimately required by the community.

Review of route status

The effectiveness of the Western Australian air subsidy program is assessed annually. In May 1991, the Government decided to withdraw subsidised services from Port Hedland through Karratha and Onslow. The services have been replaced by a subsidised taxi service which connects with the existing coach lines in the region.

At present, a route or port approved under the RASS scheme guidelines cannot be excluded from the program - even if it no longer satisfies the criteria. Procedures for reviewing the eligibility of ports are being considered as part of DOTAC's review of the RASS scheme.

In Queensland, the present subsidised network has been maintained in its present form since June 1987, but is currently subject to review.

Route allocations

The three air subsidy schemes have been in existence for many years - the Commonwealth has been providing subsidies since 1957. Most operators under the RASS scheme have gained route

networks through historical incidents, rather than by means of a tender or auction. In effect, exclusive rights (renewed annually) to some networks have been passed onto another airline following the failure of the incumbent to provide an adequate service. The lack of a formal process for allocating RASS routes may reflect the inadequacy of competition for provision of services in remote areas.

The subsidised route network currently operated by Flight West in Queensland was abandoned by Australian Airlines in May 1987. This followed the cessation of a joint Commonwealth/State subsidy arrangement in April 1985. Flight West won the exclusive rights to service the routes for five years after submitting the lowest subsidy bid for the entire network. The Queensland Government has announced that the subsidy contract will be extended until June 1993, whilst a full review of the subsidy arrangements is undertaken.

In Western Australia, exclusive rights to subsidised routes are subject to some competitive pressure. As expressed by the Western Australian Minister for Transport (sub. 31, p. 6):

> Should another operator submit a proposal to introduce the same, or higher, level of service at a reduced cost to Government, then the licensee would be given the opportunity to match the standard of service offered. ... In the event that the established operator is unable to provide the same level of service proposed, then consideration will be given to licensing the second operator and that may (or may not) include preferential rights over the routes.

C.3 Efficiency considerations

Providing air services to particular segments of the community - whether to protect the social welfare of individuals or to promote development - involves income transfers from taxpayers to those who benefit from the subsidised services. It leads to resources being channelled from the general economy into those areas supported by subsidies. It is therefore important that the community and the government consider, first, if such subsidies are warranted. Is it reasonable, for instance, for taxpayers to subsidise the lifestyle of people in remote areas, given that they chose to live there and were aware of the implications? and, second, if subsidies are to be provided, how can governments minimise the any efficiency losses can be minimised.

The rationale for air subsidy schemes is not always clear. Some would argue that it is for reasons of social justice, while others may consider it necessary to facilitate regional development. However, if governments and the community are to assess their appropriateness and performance, subsidy programs need to be transparent and have clearly stated objectives. Only when the objectives are clearly enunciated can proper consideration be given to the most appropriate method of achieving those objectives. For example, decentralisation objectives can be more efficiently pursued through generally applicable measures, such as the taxation system. Applying a subsidy to a broad region of

Australia (eg through existing zone rebates embedded in the income tax system) rather than to designated areas provides a relatively uniform level of assistance which is available to all taxpayers residing in remote areas, not just air travellers. This is a more neutral and less distorting mechanism than selective subsidies. It also reduces the necessity for discretionary assessments of eligibility.

Where governments decide to support remote area air services, however, the application of the following principles would help to minimise efficiency losses:

- As with current schemes, governments should fund programs from Consolidated Revenue.

- Contracts for air services should be awarded by tender, on the basis of the lowest bid, according to a predetermined level of service. Although this may not always result in multiple bids, it will impose some cost discipline on the incumbent supplier. Contracts should be re-tendered regularly - about every 2 to 3 years.

- If contracts are based on a cost-plus arrangement, subsidies should be made on forecasted aggregates and subsequently adjusted for actual costs and revenues. Where practicable, the subsidy payment should be subject to an annual discount to allow for productivity gains.

- Programs should be reviewed regularly to establish if they are meeting their stated objectives.

APPENDIX D: OVERSEAS EXPERIENCE

This appendix summarises studies of aviation in three countries: New Zealand, Canada and the United States. These countries were selected for examination mainly because each has adopted deregulatory policies. The available information concerning aviation activity in these countries at a level equivalent to Australia's intrastate aviation tends to be overshadowed by discussion of developments at the national level. Nonetheless, to the extent that regional and commuter airline activity is an integral part of domestic (and even international) aviation, overseas experience is of some relevance to intrastate aviation in Australia.

In the studies available to the Commission, conflicting opinions were expressed about a number of aspects of deregulation overseas. Thus, in preparing this appendix, the Commission has sought to reflect those findings which have broad support rather than those which appear to reflect minority views.

D.1 New Zealand

Background

Serving a total population of less than 4 million people, the New Zealand aviation market is considerably smaller than the Australian market. Consequently, only Wellington, Auckland and Christchurch, which collectively account for nearly 50 per cent of the population, are linked by jet services. As other centres have relatively small populations, and are situated comparatively close to one another, there is limited scope for other regular jet air services in New Zealand.

'Quantity licensing' in various forms was a feature of the New Zealand aviation industry from 1934 to 1990. Initially, licensing was the responsibility of the Minister for Aviation. With the passing of the *Air Services Licensing Act 1951*, licensing became the responsibility of the independent Air Services Licensing Authority. The objectives of the Act were to produce a suitable environment for the development of the industry and to ensure the continued availability of services. Licensing procedures required potential entrants to demonstrate financial viability, reliability and that the proposed service was 'necessary or desirable in the public interest'. The concept of 'quantity' was rigidly defined, with the licences detailing capacity, type of fleet, routes, fares and charges. The operations of airlines were subject to a seven-yearly review.

In 1948, the National Airways Corporation (NAC) was established under government ownership. Until deregulation occurred in the 1980s, the airline was the sole operator permitted on the major domestic routes. Competition was largely restricted to provincial routes, where private operators provided feeder services to the NAC.

In 1978, the NAC was merged with the international carrier to form the government-owned Air New Zealand, to service both domestic and international markets. By the early 1980s, the industry

comprised the dominant airline, Air New Zealand, as well as the tourist carrier, Mt Cook Airlines. Twelve commuter and 122 other operators provided charters and scenic flights. Air New Zealand was privatised in 1989.

Motivation for deregulation

According to Mills (1991a), poor service quality was one of the legacies of the regulated environment. Air New Zealand operated single class, relatively crowded aircraft, offering limited cabin service and poor terminal facilities. The desire for better service and greater competition were factors encouraging an examination of regulation and its affects.

During the early 1980s, a policy review of airline licensing found that existing regulation was inhibiting competitive forces within the industry and promoting the monopoly position of the national carrier. The review resulted in the introduction of the *Air Services Licensing Act 1983.* This Act ultimately established a strictly qualitative licensing scheme. Focussing on financial stability and resources, managerial experience and competence, the licensing criteria were designed to produce a safe and reliable industry, providing a high standard of service. Restrictions over routes, fleets, fares, charges and capacity were abolished. Entry was liberalised to allow for new entrants, although foreign investment in any one airline continued to be restricted to twenty five per cent.

Process and effects

Implementation of the first phase (December 1983 - March 1984) of the *Air Services Licensing Act* involved the issue of replacement licenses to incumbent airlines. These were designed to allow time for operators to establish new routes and order new aircraft in preparation for the entry of competitors. During the second phase (April - June 1984), both incumbent and new airlines were invited to apply for new licences.

After April 1984, virtually all new air transport licences were granted to small operators, who had the flexibility to alter routes, fleets and fares on a purely commercial basis. Four completely new scheduled passenger carriers commenced operation. One has subsequently ceased operations, two have merged and one has maintained limited services.

The passing of the *Air Services Licensing Amendment Bill 1986* removed some of the restrictions on foreign investment. In August 1986, approval was given for the establishment of a second domestic airline, Ansett New Zealand (Ansett NZ), at that time 50 per cent owned by Ansett Transport Industries (ATI). In 1988, ATI equity increased to 100 per cent.

Competition between Ansett NZ and Air New Zealand began in 1987 on the three trunk routes. Ansett NZ commenced with the advantage of lower labour costs, less expensive equipment and access to the prime routes. At that time, Air New Zealand withdrew turboprop services from four smaller provincial towns and reduced turboprop services to others. In their place it introduced expanded services using smaller aircraft operated by two regional operators in which it had acquired an interest.

The capacity of the two airlines' fleets was estimated to be 64 per cent higher in 1990 than that of Air New Zealand alone in 1987. Passenger numbers also grew substantially during the period, but at a rate slower than the increase in airline capacity, resulting in lower load factors overall (BTCE and Jarden Morgan 1991).

Despite the new entrant seeking to differentiate only on quality, fare cuts and heavy fare discounting resulted. Average real air fares fell by 23 per cent in the first twelve months. After the first year of competition, the price war abated and fares rose. Nevertheless, by 1989, air fares were 8 per cent lower (in real terms) then they were in 1987 (New South Wales Business Deregulation Unit 1990). According to Mills (1991a), the net loss after extraordinary items for the first three years of operations for Ansett NZ was NZ$98 million. (Comparative data for Air New Zealand are unavailable.)

Ansett NZ gradually introduced a newer and quieter fleet of smaller aircraft, expanded its route network, increased flight frequency and offered feeder services. Mills (1991a) considers that competition on the major routes also stimulated Air New Zealand to improve its service quality and productivity. It introduced more flexible and competitive fares, improved its scheduling and in-flight service, refined its route network and upgraded terminal facilities.

In 1990, the Government introduced the *Civil Aviation Act*. This Act abolished qualitative licensing of domestic air services effective from September 1990. Thus, the only form of domestic regulation remaining in New Zealand relates to safety and technical operational standards.

D.2 Canada

Background

Some 80 per cent of the Canadian population is in the extreme southern band of the country, within three hundred kilometres of the United States border. This is similar to the distribution of the Australian population, whereby the majority reside along the southern and eastern coastlines. The northern regions of Canada are very sparsely populated. The trunk routes run east-west parallel to the US border.

In 1937, the government-owned Trans-Canada Air Lines (now Air Canada) was formed to provide scheduled services across the country. It operated a monopoly on transcontinental, transborder and international air services until CP Air commenced limited international flights to the Pacific region in 1949. From 1959, CP Air competed with Trans-Canada, initially on a very restricted basis of one return flight per day between Vancouver and Montreal. Wardair was established in 1953, primarily to provide remote area services, although it expanded into limited international services in 1962.

During this period, five other independent airlines flew limited scheduled regional routes. Most began in the 1940s and 1950s, operating under a number of strict guidelines formalised in the Regional Air Policy of October 1966 (Oum, Stanbury and Tretheway, 1991). These limited the regional airlines to particular routes, with the objective of supplementing - not directly competing with - the services provided by the two major airlines. Although regulation was administered by government during this period, routes and fares were, in practice, initiated by Air Canada itself. Once its proposals were approved by the Government, the regulators were expected to comply with, and implement, the new policy (Oum, Stanbury and Tretheway 1991). It was not until 1978 that Air Canada itself came under the same regulatory rules as other Canadian airlines.

During the late 1970s, economic regulation of domestic aviation was conducted by the Air Transport Committee of the Canadian Transport Commission (CTC). The principal objective of airline regulation until the early 1980s was the protection of the prominent and profitable position of Air Canada. The airline carried more than fifty per cent of passenger traffic and earned almost two-thirds of all passenger revenue in the domestic market. Tight regulation of routes, fares, services and entry shielded the incumbent from competition. For example, controls existed over flight frequency, capacity and intermediate stops.

The Committee's powers over entry to the industry and access to routes were based on a test which assessed the need for the potential service in relation to 'present and future public convenience and necessity' (Oum, Stanbury and Tretheway 1991). The restrictive nature of the policy was demonstrated by the limited number of routes served by more than one carrier during this period.

Price competition was discouraged by the regulation of fares and discounts. Mergers were also monitored by the Committee with a view to ensuring proposals would not 'lessen competition unduly'. In practice, however, all but one of the proposed mergers were accepted during the period.

By the early 1980s, the domestic industry comprised the two national carriers, Air Canada and CP Air, and four major regional airlines, Eastern Provincial, Nordair, Pacific Western Airlines and Quebec Air (the last three being owned and operated by provincial governments). Wardair operated non-scheduled services, accounting for approximately 10 per cent of the market. Many smaller companies operated as feeders for the larger regional and transcontinental carriers. By 1984, the main airlines accounted for 86 per cent of the domestic market, with Air Canada accounting for more than 50 per cent of the total market.

Motivation for deregulation

Deregulation of the United States market in 1978 (see Section D.3) exerted significant competitive pressures on Canada. For example, some domestic Canadian traffic was diverted to transcontinental US routes because of cheaper US fares. The Canadian aviation industry also experienced similar forces to those which had built up in the US. The Canadian public, observing the positive effects of US deregulation, pressured the Government for deregulation of the Canadian domestic market. At the same time, certain Canadian charter airlines, including Wardair, proved that long-distance domestic travel could be cheaper than that provided by the two major airlines (Oum, Stanbury and Tretheway 1991).

In April 1982, the House of Commons Standing Committee on Transport endorsed the regulatory control of the CTC within a set of policy guidelines that would continue the 'evolutionary process' by which greater, but controlled, competition had occurred. It was concluded that the need for aviation services was not uniform across the country. The CTC subsequently held extensive public hearings to discuss the regulation of the aviation sector, addressing issues such as: the lack of potential for service and pricing innovation; management flexibility and the ability to respond to change; misallocations of time and resources; planning difficulties and poor financial performances by the airlines overall.

Process of deregulation

The New Canadian Air Policy was announced in 1984. It liberalised, rather than fully deregulated, prices, entry and exit, capacity and routes. In particular, the new policy relaxed restrictions on price reductions (in the south), while retaining final authority over price increases. Restrictions on flight frequency, flight equipment and route applications by new entrants and incumbents were also removed. Equal access by all airlines to airport facilities was emphasised.

Virtually complete deregulation of domestic aviation was proposed in 1985, although formal legislation was not passed before three years of further public debate. The National Transportation Act 1987 came into effect on 1 January 1988. It subjected the industry to two distinct regulatory regimes: almost complete deregulation in the south, but only partial deregulation in northern Canada. In the south, the only constraints imposed on licences under the Act were that new entrants be Canadian and in possession of an operating certificate and adequate liability insurance. The licences themselves were free of any restrictions.

Air services in the north of Canada (the 'designated' area) were considered essential due to the inadequacy of the rail and road networks. Many of the routes were judged too thin to sustain competition. In the designated area, applications could only be denied if it could be shown that the issue of a licence would not be in the 'public interest'. This 'reverse onus' test required incumbents to prove that entry would lead to a 'significant decrease or instability in the level of domestic service'.

Under the 1987 legislation, the new National Transport Agency (the successor to the Canadian Transport Commission) could use its licensing power to influence services, capacity, routes and schedules, and could hear appeals regarding fare levels. At the same time, controls over mergers and safety procedures were further developed.

As Air Canada dominated the market both before and after deregulation, government restrictions were established in 1984 to prevent it using its strong market position to engage in anti-competitive scheduling and pricing behaviour. With the safeguards in place, the full privatisation of Air Canada was announced in 1988 and completed by late 1989. The aim of privatisation was to ensure the full realisation of any benefits from the deregulation of the airline industry.

Effects of deregulation

Consolidation

With the evolution of deregulation, the number of airlines operating scheduled routes and unscheduled charter and feeder operations increased. However, in the seven years from 1982 to 1989, there was considerable consolidation, with the formation of alliances between airlines and the emergence of a duopoly. As the majors moved away from short-haul routes towards transcontinental and international flights, the need for complementary feeder routes increased. According to a study by the Western Transportation Advisory Council (1986), regional airlines satisfied this need; many forming alliances with Air Canada and Canadian Airlines International Limited (which included the former CP Air).

The process of consolidation was encouraged by economies of traffic density and the preference of consumers for large airlines. According to Oum, Stanbury and Tretheway (1991), higher service quality, the presence of frequent flyer programs and relatively low information costs associated with a more extensive route network operated in favour of the larger established carriers and against smaller airlines.

Although large scale consolidation has occurred in the Canadian aviation market since deregulation, concentration is now lower than in 1984. The New South Wales Business

Deregulation Unit (1990) found that, by 1989-90, Air Canada was responsible for only about 40 per cent of all passenger traffic, compared with 50 per cent before deregulation. Canadian Airlines share was approximately 33 per cent. Affiliates of the majors accounted for approximately 20 per cent, with independent operators accounting for the remainder.

Barriers to entry

According to Gillen, Oum and Tretheway (1988), the post-deregulation aviation market retains significant barriers to entry and other anti-competitive forces. The two operators: control a common computer reservation system; have almost all feeder air carriers aligned with themselves; have strong brand loyalty through their frequent flyer schemes; and occupy most ticketing and gate space at airports, including Vancouver and Toronto.

Airport capacity

One important outcome of deregulation was an increase in aircraft traffic. The study by Gillen, Oum and Tretheway (1990) found that, between 1984 and 1989, average weekly departures nearly doubled in the south, and more than doubled in the north of Canada. At Toronto airport alone, aircraft movements increased by 39 per cent between 1980 and 1988, while total passengers increased by 43 per cent over the same period. The move toward hub-and-spoke operations and the employment of high frequency short-haul, turboprop aircraft added significantly to the increase. Resistance by communities to the development of local airport facilities, combined with the fact that much of the increase in activity was unanticipated, exacerbated congestion problems. Slot controls are currently practised at Toronto airport.

Service

Most studies claim that deregulation of the airline industry has brought about substantial improvements in various aspects of airline service in Canada, mainly because airlines were provided with greater freedom to select routes and aircraft types. This led to the streamlining of operations and a corresponding improvement in airline efficiency and cost structures. These structural improvements can be passed on to passengers in the form of lower fares and increased choice although, in practice, this has depended upon the extent of competition in each market.

Deregulation resulted in the removal of restrictions on aircraft type and capacity. One immediate effect of this change was the replacement of jet services with more efficient turboprop aircraft on regional and short-haul routes to smaller centres. The smaller turboprops were able to service some centres for the first time and provide some centres with increased flight frequencies. This was encouraged by the removal of exclusive rights formerly held by small general aviation aircraft.

Deregulation has, however, had some adverse impacts for some users. For example, the establishment of hub-and-spoke networks similar to those operating in the United States has inconvenienced some travellers. There are fewer non-stop services offered and congestion at the major hubs in Toronto and Vancouver has resulted in greater delays for travellers.

Fares

According to Oum, Stanbury and Tretheway (1991), average fare yields decreased by 18 per cent in real terms between 1978 and 1989. The response varied with market conditions. For example, in many of the remote northern areas where new services were introduced, the availability of discount air fares was significantly less than in the south. Similarly, some fares increased because subsidies were removed.

D.3 United States

Background

Public concern that a free market would not produce 'appropriate' levels of safety and financial stability resulted in extensive regulation of interstate aviation in the United States from the late 1930s. Regulation of fares and route exit and entry was exercised by the Civil Aeronautics Board (CAB). Cross-subsidisation of air fares was practised through controls which aimed to encourage travel on relatively thin short-haul routes, at the expense of long-distance travellers. Flight frequency and scheduling, choice of aircraft type and passenger facilities were, however, determined by the airlines themselves. This led to significant non-price competition during this period. Intrastate charter airlines were exempt from many of the restrictions facing the interstate airlines.

In this regulated environment, large capacity and high flight frequencies contributed to relatively high average costs and low load factors. Inefficient work practices also developed during the period of regulation. According to Forsyth and Oster (1987), nurturing of incumbent airlines and the absence of real competition in the industry removed the impetus for airline management to develop efficient decision making, marketing and cost control practices. The workforce was strongly unionised and employed under restrictive contracts for relatively high wages. Collectively, these conditions contributed to a relatively high cost structure for the regulated industry. This was reflected in significant differences in fares between the regulated airlines and the unregulated intrastate carriers.

Motivation for deregulation

The CAB took several controversial actions in the early 1970s including: the introduction of a rigid fare formula (strictly based on distance); the elimination of all discount fares; the introduction of a moratorium on new routes; allowing negotiations among the largest carriers to mutually limit flights in their busiest markets; and imposing minimum fares for charter airlines. Partly as a result of these actions, fares increased by 20 per cent in one year (Pickrell 1991).

These developments further restricted competition in the sector and led to mounting pressure for deregulation of the aviation industry. Potential carriers sought deregulation to permit their entry into the more profitable routes that were restricted to the incumbents. Similarly, some established airlines sought deregulation to enable route expansion. Travellers also pressed for change after observing the lower fares being offered by viable intrastate charter and non-regulated airlines.

Process of deregulation

While academics began questioning the worth of airline regulation in the 1960s, it wasn't until the 1970s that Congressional support for deregulation emerged (OECD 1988). Board members committed to a less regulated regime were appointed to the CAB and, in 1976, some limitations on discount fares were removed. Fears that discounting could force some smaller operators out of the market, or lead to some form of price discrimination, failed to materialise in this trial period. Load factors increased considerably and, by late 1977, all discount restrictions were effectively removed. The move toward full deregulation was assisted in 1977 by the appointment of a deregulation advocate (Alfred Kahn) as the CAB's new chairman. According to a study by the US Congressional Budget Office (Congress of the United States 1988), real air fares fell by more than 8 per cent following the easing of pricing restrictions in 1978. Passenger traffic increased by 17 per cent and profits improved.

The *Airline Deregulation Act 1978* endorsed a gradual path to full deregulation. One of the more important proposals was the phased abolition of the CAB by 1984. Under the new regime, safety and related issues continue to be administered by the Federal Aviation Administration (FAA). The Federal Department of Transportation became responsible for other areas of aviation administration.

In response to concerns that deregulation would undermine airline services to small communities, the Act also established an Essential Air Services program. The program guaranteed that towns would continue to receive a minimum of essential air services through the provision of a new government subsidy. The subsidy had a broader scope than its predecessor, but did not involve increased government expenditure. According to Samuels (1990), freedom of entry and exit has led to many large carriers withdrawing their services from the shorter, subsidised routes. In many cases services have been maintained by smaller, lower cost regional airlines. This has removed the need for subsidisation of these routes and reduced the total cost of the program.

Forsyth and Oster (1987) provided evidence for the period 1978 to 1984 demonstrating that even the small non-hub airports experienced increased activity levels. This suggests that smaller

communities experienced an improvement in service after deregulation. Nonetheless, 91 towns lost services in the same period. Most were served by small airlines which had been exempt from regulatory control over exit and entry prior to deregulation. However, Forsyth and Oster (1987) and Kahn (1988) suggest the exit of some of these airlines during this period most likely reflected under-capitalisation and the impact of the 1982-83 recession, rather than the effects of deregulation.

Effects of deregulation

Hub-and-spoke networks

Associated with deregulation has been the growth of hub-and-spoke networks. Under this arrangement, smaller communities which could only support a limited range of direct service flights in the regulated environment can receive more frequent flights to the hub, from where connecting flights travel to many other cities. While some consumers suffer a reduction in convenience in terms of fewer non-stop services and longer flying time, benefits include a greater variety of destinations, cheaper fares, more frequent services and more convenient departure times. However, congestion at the prominent hubs is increasingly causing inconvenience, offsetting some of the benefits of this arrangement.

According to Bailey (1985), deregulation saw the airlines shift away from wide-bodied high-capacity aircraft in favour of smaller and relatively more fuel-efficient aircraft. As this coincided with a reduction in direct flights, load factors on services to the hubs increased.

Many recent studies have focussed on the increasing number of hubs dominated by a single airline. A carrier which dominates a particular hub can reinforce its position through a continual expansion of service frequency and convenience. This makes it increasingly difficult for rival carriers to compete. Despite this factor, overall competition on routes between city pairs has increased since deregulation. A study cited by the New South Wales Business Deregulation Unit (1990) found that, in 1978, only 28 per cent of passengers in the United States travelled on routes served by more than three carriers; by 1988, this rate had increased to 55 per cent. Kahn (1988) suggests that hubs have increased the efficiency of airline operations and the variety of destinations carriers can serve, which has led to an overall improvement in competition.

Fares

The removal of restrictions over fares, together with greater productivity and an increase in competition provided by new low-cost entrants, led to a fall in average fares after deregulation. The decline was not uniform throughout the industry. Prices fell most in competitive, long-distance and major-city markets and, conversely, average fares rose in short-haul and small-city markets. The fare increases reflect the removal of cross-subsidisation between long and short distance routes which occurred under the CAB fare regulation, and lower levels of discount competition on most short-haul routes.

An OECD (1988) study found that the percentage of passengers travelling on discount tickets in the US increased from 15 to 90 per cent between 1976, when discounting was first introduced, and 1987. Pickrell (1991) argues that the overall level of air fares in the late 1980s was approximately 15 per cent lower than would have been the case if CAB fare regulation had continued. The study also indicates that the difference may have peaked during the early 1980s. Kahn (1988) suggests that greater productivity and price competition accounted for a real fall of 30 per cent in average yields per passenger mile between 1976 and 1987.

Congestion

A significant problem faced by the United States aviation industry since deregulation has been increased congestion at airports. Although aircraft movements have doubled since 1978, there has been no major airport built to cater for the greater demand. Moreover, congestion is a formidable barrier to new entrants. In some cases the response to congestion has been to ration available space and allocate 'slots' to particular carriers. These can be sold to other airlines. Where one or two majors dominate access and capacity at a particular airport, through measures including grandfather rights and competitive bidding, air fares are generally higher than in less concentrated hubs.

Expansion and concentration

Deregulation initially contributed to an expansion in all sectors of the aviation industry. Between 1978 and 1988, the number of aircraft operated doubled and passenger traffic more than tripled. The interstate sector increased as both former intrastate carriers and new entrants came into this market. Cooperation between the regionals and majors increased with the introduction of techniques such as 'code sharing'. Common booking codes were introduced because of the perception that travellers preferred to remain on the one airline (Congress of the United States 1988). According to the New South Wales Business Deregulation Unit (1990), competition on the regional routes increased such that 212 of the 300 most popular regional markets were served by at least two carriers.

Local service carriers also benefited from deregulation. During the regulated era, these airlines were forced to operate within limited geographical areas. However, with the removal of route restrictions, local carriers successfully entered new markets and were able to improve their route scheduling and service to major cities. Deregulation indirectly led to a reduction in the provision of jet services by the smaller operators and a corresponding increase in smaller, propellor-driven aircraft. These aircraft provided the service at a lower unit cost than the jet carriers, and were used to provide more frequent and convenient departures. In most markets where these adjustments occurred, patronage increased. Together with the essential air services program, these changes reduced concerns that deregulation would lead to a severe reduction in air services to small communities.

The latter half of the 1980s saw a reversal of the trend towards a proliferation of new entrants apparent in the early 1980s. According to Pickrell (1991), only four (formerly) intrastate and a few new airlines remained independent by 1988. Concentration of market power has continued into the 1990s, so that a handful of airlines now dominate the industry. The collapse of airlines has not been confined to a particular type of carrier. It has affected those established both before and after deregulation, small and large alike.

A variety of factors contributed to the consolidation of the industry including:

- A lack of understanding by some airlines of the tactical situation at the commencement of deregulation.

- The introduction of frequent flyer plans which have enhanced the competitive position of the major airlines by encouraging brand loyalty.

- The increase in importance of computer reservation systems during the early to mid 1980s.

- Domination of access to facilities and airways at many hubs by major carriers which has made it difficult for smaller carriers to compete for passenger traffic.

Safety

One aspect of regulatory control not relaxed with the passing of the *Airline Deregulation Act 1978* was airline safety. Both the regulations governing safety and the FAA's supervision powers remained intact. The FAA retained responsibility for aircraft maintenance and the qualifications of flight crews. One motive for retaining this regulatory control was the fear that cost minimisation forces in a competitive market would encourage operators to compromise on aircraft maintenance, or on the skill, qualifications and experience of air crew.

Forsyth and Oster (1987) demonstrate that, by some measures of safety, there have been improvements in the post-deregulation period. For example, over the period examined (1979-1984) the fatality rate fell for both jet carriers (by one-third) and commuter aircraft (by one-half). However, other studies have focussed on different aspects of safety and found a reduction in standards (eg in relation to air crew and maintenance standards).

APPENDIX E: ANALYSIS OF INTRASTATE AIR FARES

Inquiry participants expressed conflicting views about the effect of regulation on air fares. While a number submitted comparative fare data, the ability to undertake a meaningful analysis with this information was severely limited. Major limitations included:

- the type of fare used was often inconsistent across airlines (eg some were based on standard fares; others used discounted fares);
- important external factors affecting costs were not taken into account (eg the peak period surcharge applying at KSA can affect the cost of operations for airlines requiring access during peak hours); and
- no account was taken of differences in the levels of service (eg jet or turbo-prop aircraft).

To isolate the impact of these factors and allow more meaningful comparisons, the Commission sought a range of information directly from operators. The analysis of this information, extended and revised since the draft report, is the subject of this appendix.

E.1 Information sources

Confidential information was received from 12 airlines engaged in intrastate activity, ranging in size from large commuter to single-route operators. The surveyed airlines included operators of both regulated and unregulated routes. The airlines were requested to provide details concerning their six most popular routes. A major objective was to obtain information on average fares, as this is a more meaningful measure of relative air fares than standard or economy fares. Information was also sought on:

- standard and cheapest air fares;
- aircraft type and seating;
- average load factor and estimated market share;
- the regulatory environment;
- the number of operators supplying services on the route; and
- any route-specific factors affecting air fares.

A copy of the questionnaire is at Attachment E.1.

All data were based on airlines' operation during August 1991. This period was chosen as it was prior to the abandonment of 14 New South Wales ports by Hazelton Airlines and was relatively unaffected by seasonal demand fluctuations, such as holiday periods.

E.2 The analysis

The Commission applied a regression analysis to the data in an attempt to explain the variation in fares between different routes and different operators. In arriving at the final model, several different functional forms and variables were tested.

Functional form

It was postulated that average air fares (ie yields) were a function of the level of competition and operating costs, which in turn could be explained by variables such as distance, load factor and the presence or otherwise of regulation. Hence, the general form of the relation was assumed to be:

Average air fares = f (costs, competition) where;

Costs = f (distance, load, passengers, regulation, level of service)

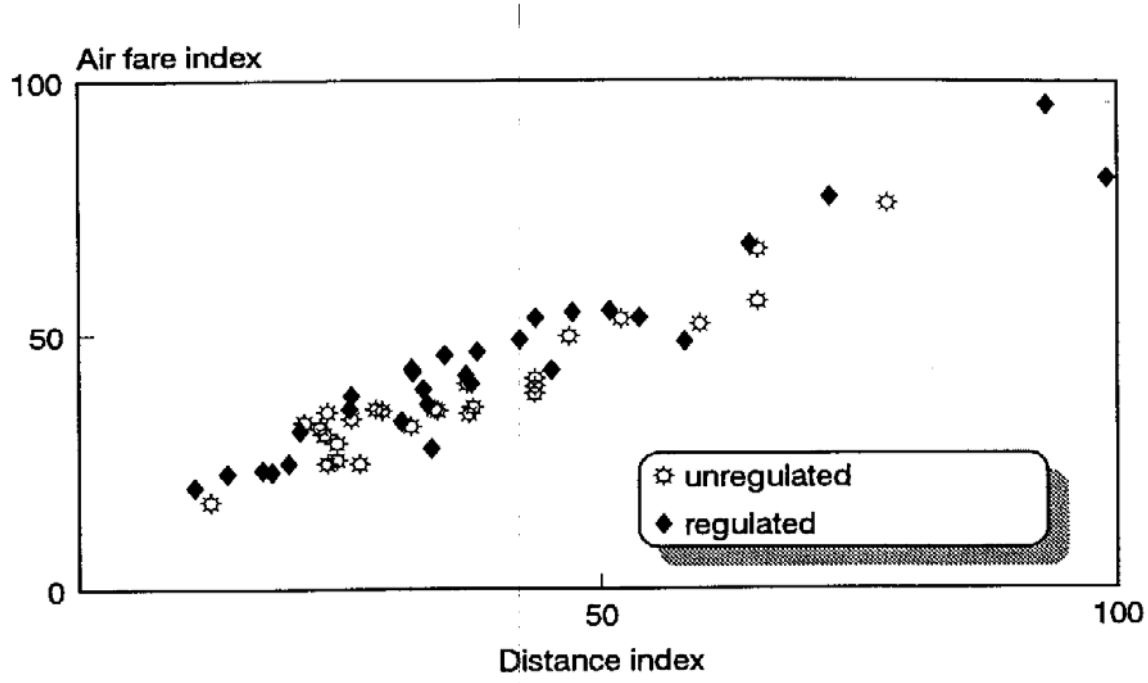
It was expected that the log model (natural logarithms of both the independent and dependent variables) would be the most appropriate functional form for the regression. Economic literature suggests that cost functions for firms are usually best estimated as linear in logs. In addition, the log model has the advantage of directly providing elasticities of the effects of variables on air fares. Nevertheless, the results of the linear regression are also of interest.

Independent and dummy variables

Fifty-six observations were used in the regression, with average air fare being the dependent variable. A number of independent and dummy variables were used to explain changes in average air fares.

As expected, distance proved to be the most important factor affecting air fares. This can be readily seen by a plot of air fares against distance, as shown in Figure E.1. Variables for average load factor and estimated market share were found to be not significant (at the 5 per cent level) and were not included in the final model. Based on the notion that passenger densities affect costs (and hence fares), passenger numbers for all routes were included as an independent variable. Although the coefficient was negative (suggesting that relative air fares fall as passenger numbers increase), it was found to be insignificant (at the 10 per cent level).

Figure E.1: **An indexed plot of air fares and distance**



Having established distance as a significant independent variable, a number of dummy variables (for regulation, competition and aircraft size) were included in the model. Although in most cases the competition and regulation dummies were present in the same observations (ie regulated routes were usually monopolies), the presence of regulation was found to be more significant.

It was expected that aircraft size would have a direct impact on airline cost functions. Moreover, due to legislative requirements concerning crew size, there are a number of discrete levels at which aircraft become more expensive to operate. On this basis, a dummy variable was employed for routes flown by aircraft with greater than 14 seats. This was found to be significant at the 5 per cent level.[1]

[1] Regressions were also run with a cut-off of 9 seats. The coefficient was found to be significant. However, with only 20 per cent of observations based on routes serviced by aircraft with 9 seats or less, it was considered inappropriate to draw any firm conclusions from the result.

The models used were of the form:

$$AVF = ß_0 + ß_1 DIST + ß_2 REG + ß_3 SEAT \quad (1)$$

$$\log (AVF) = ß_0 + ß_1 \log (DIST) + ß_2 REG + ß_3 SEAT \quad (2)$$

where: AVF is average fare
DIST is great circle distance (km)
REG is the dummy variable for the presence of regulation
SEAT is the dummy variable for aircraft of over 14 seats in capacity

E.3 Summary of results

The most appropriate functional form was the log model. Diagnostic tests (mainly for heteroscedasticity) indicated non-linearity in model (1). The inclusion of a dummy variable for seat capacity increased the significance of all other variables in the log model. Thus, the log model with dummy variables for both regulation and seat capacity was the favoured model. The results of models both with and without the seat dummy variable are shown in Table E.1.

Table E.1: **Regression results**

Model	*Dependent Variable*	*Coefficients*				R^2
		$ß_0$	$ß_1$	$ß_2$	$ß_3$	
(1)	AVF	26.879 (5.76)	0.240 (23.47)	10.270 (2.69)	-	0.9154
		23.632 (4.94)	0.237 (23.68)	10.668 (2.88)	7.832 (2.10)	0.9220
(2)	log (AVF)	0.5307 (2.69)	0.7155 (21.24)	0.0921 (2.93)	-	0.8979
		0.5546 (2.97)	0.7037 (21.90)	0.0957 (3.22)	0.0813 (2.71)	0.9105

Note: Bracketed figures are t-statistics.

Analysis of the regression coefficients suggests the following:

- As expected, distance was clearly the most significant explanator of changes in air fares. An elasticity of less than unity confirms the existence of economies of stage distance (ie air fares per kilometre fall as distance increases).

- Regulation has a positive and significant effect on the level of average air fares. According to the log model, intrastate air fares on regulated routes are, on average, 9.6 per cent higher than fares on unregulated routes - other factors being equal. On a one-way trip between Adelaide to Broken Hill (426 km), for example, the favoured model predicts that if economic regulation applied it would increase an average fare from $ 133 to $ 147.

- The cost function appears to vary according to aircraft size. According to the results, fares on routes serviced by aircraft with more than 18 seats are, on average, 8 per cent higher than on routes served by smaller planes.

INDUSTRY COMMISSION

INTRASTATE AVIATION QUESTIONNAIRE

Operator: _____

Please provide the following details for each of your top six routes (in terms of passenger movements)[a] for AUGUST 1991.

Route (Origin-destination)	Distance (km)	Average Fare (4) (one way)	Standard economy fare ($) (one way)	Cheapest restricted fare ($) (one way)	Aircraft type(s) and seating	Regulated or unregulated route	Name(s) of competing operators (if any)	Your average load factor(%)	Estimate of your market share(%)	Route-specific factors affecting face levels

Notes:

a Intrastate or interstate

b Defined as both ways, excluding any intermediate stops (for example if the route between aBK and SYD has two sectors ABK-WGA and WGA-SYD, we are interested only in details for ABK-SKD and SYD-ABK, not ABK-WGA, WGA-SYD, SYD-WGA or WGA-ABK).

c Average revenue per paying passenger for all flights on the route during August 1991 (ie. YIELD AS % OF STANDARD FARE).

d List any factors (for example, higher than average airport landing charges for route, including KSA peak surcharge) which increases fares relative to other routes of similar distance. If possible, please estimate the average dollar impact on average fare of any such factors.

APPENDIX F: DEREGULATION AND THIN ROUTES

It is generally accepted that many of the intrastate air services presently subsidised by governments (eg to remote areas in northern Australia) would not be provided in the absence of government support. Many other routes, which carry significantly more traffic but are nonetheless relatively thin by commercial standards, are protected by regulatory barriers to entry. However, the need for intervention to sustain a service on these routes is questionable and, in some states, has been considered unnecessary.

As discussed in Chapter 4, governments that support regulation of air services often contend that it is required, first, because traffic is otherwise insufficient to support a service and, second, to provide stability of service. This appendix contains evidence pertaining to four aspects of this argument:

- stability of service in an unregulated environment;
- route density required to support one operator;
- route density required to support more than one operator; and
- passenger growth in regulated *vis-à-vis* unregulated routes.

F.1 Service on thin routes

One way of assessing the claim that services to some communities would not be viable without regulation is to examine service levels on relatively thin routes subsequent to them being deregulated. In this regard, the best available information relates to South Australia. In that State, intrastate air services were effectively deregulated in 1979 (see Chapter 3).

Table F.1 covers thin routes in *South Australia* in the period prior to deregulation, 1978-79, through to 1990-91. The information suggests that, while changes in operator have been common, there has been little disruption to services on most routes. The major exception is the smallest of the six routes (Adelaide-Cleve) which was unserviced for two periods during the 1980s. As was the case prior to deregulation, all routes are currently serviced.

Table F.1: **Airline activity on selected South Australian routes, 1978-79 to 1990-91** [a]

Route (ex Adelaide)	*Passengers*		*Changes in service* [b]
	1978-79	*1990-91*	
Port Augusta	1670	6425	• Continual service, apart from 05/83 to 08/83. Currently operated by DR.
Mildura	2992	3975	• Continual service, apart from a two-week period during 11/86 when SZ replaced VL.
Coober Pedy	5576	3907	• Continual service; KD replaced OB 08/86.
Woomera	950	1385	• Continual service; KD replaced OB 08/86.
Renmark	1617	1111	• Continual service, apart from a two-week period during 11/86 when SZ replaced VL.
Cleve	1331	1034	• Service ceased 01/81 following failure of WV; OC resumed service 01/83, ceased 09/83; continual service by one operator since 01/85 - provided by WU, then CL and currently by WA.

a Routes selected were the six largest in South Australia with 1978-79 passengers of less than 6000.
b Attachment F.1 lists operator codes.
Sources: DOTAC estimates; Reid (various years).

Recent developments in *New South Wales* also provide an important insight into the possible effects of deregulation on stability of service. In September 1991, Hazelton withdrew from 14 relatively small ports which it had serviced as a sole licensed operator. The routes were declared 'deregulated' and open to any operators. Within a short period of time, new operators were servicing all routes previously flown by Hazelton. As shown in Table F.2, despite most having traffic of less than 2000 passengers per annum, service on all routes has been maintained, with some now having more than one operator (eg Sydney-Cootamundra).

Table F.2: **Services on ex-Hazelton routes, June 1992**

Route (ex Sydney)	*Annual Passengers* [a]	*Operator(s)*
Bourke	976	AL [b]
Brewarrina	1127	AL [b]
Coonabarabran	2876	SG
Coonamble	1184	AL [b]
Cootamundra	1519	MN WE [c] WT
Cowra	3500	MN WT
Forbes	3227	ST
Gunnedah	4761	SG OX
Lightning Ridge	899	AL [b]
Nyngan	247	AL [b]
Quirindi	1203	SG OX
Temora	53	WE [c] MN
Walgett	1450	AL [b]
Young	1770	MN WT

a Passenger numbers based on services offered by Hazelton, 1990-91.
b This service is provided via Dubbo. Flights offered by Air Link (AL) connect with the Hazelton service between Sydney and Dubbo.
c This service is provided via Wagga. Flights offered by Western NSW Airlines (WE) connect with the Ansett Express service between Sydney and Wagga.
Source: DOTAC estimates.

Service on thin routes/networks

The majority of airlines provide services on a network basis. It is therefore difficult to ascertain the viability of individual routes within a regulated network. Nevertheless, there is evidence to suggest that thin, stand-alone routes and networks, which in aggregate only support small volumes of traffic, are viable in an unregulated regime. For example, as shown in Table F.3, both Kendell (KD) and Phillip Island Air Services (PI) provide service on routes supporting less than 6000 passengers per annum. The majority of the routes within the networks listed in Table F.3 support less than 1000 passengers per annum. In the case of Skyport (SK), its most popular route (Alice Springs-Tennant Creek) carried around 500 passengers in 1990-91.

Table F.3: **Current examples of thin, unregulated routes/networks**

Route/Network	*Operator* [a]	*Number of Routes* [b]	*Passengers 1990-91*
Phillip Island - Burnie/Wynyard	PI	1	855
Darwin - Katherine - Tennant Creek - Alice Springs	SK	4	1629
Adelaide - Ceduna	KD	1	5237
Adelaide - Cummins - Tumby Bay	CL	2	6455
Sydney/Dubbo - ports [c]	AL	9	6763 [d]
Welshpool - Flinders Island - Launceston	PM	2	7806 [e]

a Attachment F.1 lists operator codes.
b Includes all routes within the network which carried more than 100 passengers during 1990-91.
c The service between Sydney and Dubbo is provided by Ansett Express and Hazelton. Air Link (AL) carries passengers between Dubbo-Bourke-Brewarrina-Nyngan-Coonamble-Walgett-Lightning Ridge.
d Based on passengers formerly carried by Hazelton.
e Estimate based on provisional data, 1989-90.
Source: DOTAC estimates.

In addition to those routes shown in Table F.3, there are several examples of airlines providing services to small towns which form part of a network. As the smaller routes often link with more densely trafficked routes in the network, it cannot be stated unequivocally that these routes would be viable on their own, although their continued existence suggests that they contribute to the profitability of the network as a whole. In South Australia, for instance, Whyalla Airlines provides a service from Adelaide, via Whyalla, to three small towns on the York Peninsula - Cleve, Wudinna and Streaky Bay. These three towns provide total passengers of just over 1000 annually.

F.2 Direct competition and route densities

There is some conjecture surrounding the necessary passenger densities required to support more than one air operator on a route. Airlines of Tasmania have supported the judgement of the BTCE that 25ÿ000 passengers per annum is the appropriate level. This figure was based on `an examination of passenger numbers over competitive routes, excluding those where services were assessed to be essentially complementary' (BTCE 1988, p. 69).

There is considerable evidence that this estimate greatly overstates the volume of traffic required to support more than one operator. As shown in Table F.4, there are many routes with annual passenger volumes significantly less than 25 000 currently serviced by more than one commuter airline. Indeed, one of the smallest routes - Melbourne to Flinders Island - is serviced by Airlines of Tasmania in competition with Aus-Air. The annual passenger numbers on this route are less than 3000.

Table F.4: **Examples of relatively thin unregulated routes/networks currently supporting more than one commuter operator**

Passengers a (per annum)	*Route/Network*	*Operators b*
less than 5000	Flinders Island - Melbourne [c]	AU XZ
5000 - 10 000	Brisbane – Toowoomba	ES ZG
	Melbourne - Merimbula	ET HA
	Sydney - Cootamundra/Cowra/Young [d]	MN WE WT [e]
10 000 - 15 000	Geraldton - Perth [f]	MB SJ
15 000 - 25 000	Adelaide - Broken Hill [g]	KD SZ
	Brisbane - Blackwater/Emerald	FW [h] SL
	Brisbane – Bundaberg	FW QJ SL
	King Island - Melbourne	AU KD KI
	Melbourne - Mount Gambier	KD OC
	Newcastle - Brisbane/Coolangatta	ET OX

a Based on 1990-91 'uplift and discharges within flight' for commuter airlines.
b Attachment F.1 lists operator codes.
c Melbourne includes Moorabbin and Essendon airports.
d Nearby ports are treated as a single destination and passengers numbers combined.
e Western NSW Airlines (WE) only competes on the Sydney-Cootamundra route.
f This route is also serviced by a regional carrier, Ansett WA.
g Southern Airlines (SZ) provides an indirect flight to Broken Hill.
h Routes flown by Flight West (FW) include estimated data.
Source: DOTAC estimates.

Some regulated routes also have more than one licensed operator. For example, the New South Wales Government has recently announced that a third operator will be allowed access to the Lord Howe Island route. This route has annual passengers of 12-13 000. However, the viability of having three operators on this route does not appear to be in question as it has recently been reported that seven airlines applied to operate the additional service. In contrast, the most popular

route in the State - Sydney to Coffs Harbour, with annual passenger movements of close to 100 000 - is currently a regulated monopoly.[1]

F.3 Regulation and traffic growth

A common feature associated with the deregulation of air services - both overseas and on trunk routes in Australia - has been the rapid increase in passenger growth on most routes. It has been suggested that removing regulation has increased the incentive for operators to exploit fully the capacity of their market (eg by promoting tourism and introducing more competitive fares). One way of assessing this claim is to compare traffic growth on regulated compared to unregulated routes. Ideally, this would entail examining routes which are comparable in all respects other than the application of regulatory barriers to entry. In practice, a range of factors (eg differences in growth rates of regional centres and in the availability of alternative transport modes) make it impossible to identify perfect comparisons. However, to lessen the problems associated with comparability, the Commission identified regional towns which have been provided, for many years, with both a regulated intrastate and an unregulated interstate service. Ports satisfying this criterion were found in New South Wales and Tasmania.

The information in Table F.5 shows that traffic growth has generally been greater - or the decline in market size smaller - on unregulated routes. In some cases, such as services to King and Flinders Islands, the difference has been substantial. The major exception to this trend are the Sydney and Melbourne routes into Albury. The fall in traffic on the shorter Melbourne-Albury route may, however, be attributed to the rapid improvement in highway quality over the last few years.

[1] The New South Wales Government has announced that a second operator will be permitted on this route from January 1993.

Table F.5: **Change in passenger densities on selected routes, 1980-81 to 1990-91**

Route	*Route Status* [a]	*Annual Passengers*											*Percentage Change*
		1980-81	*1981-82*	*1982-83*	*1983-84*	*1984-85*	*1985-86*	*1986-87*	*1987-88*	*1988-89*	*1989-90*	*1990-91*	*1980-81 to 1990-91*
Albury – Melbourne	U	28987	24898	23374	33293	36274	38270	37924	40902	34611	23460	27997	-3.4
Albury – Sydney	R	60810	56369	47138	54642	64170	76402	79610	80315	75205	35166	72671	19.5
Broken Hill – Adelaide	U	18628	21612	18980	18025	19527	17991	15173	15820	16884	14919	16122	-13.5
Broken Hill – Sydney	R	11857	10801	10482	11128	12615	13797	13411	13374	13342	6558	9083	-23.4
Cooma – Melbourne	U	4763	4231	3234	3030	3234	4103	3891	4160	3663	3369	3291	-30.9
Cooma – Sydney	R	35279	30715	20318	21198	22316	24899	25809	26331	23912	15036	20159	-42.9
Flinders Is – Melbourne [b]	U	1088	1204	1344	1436	1373	1271	1046	2214	1979	1608	2604	139.3
Flinders Is- Launceston	R	12237	13260	12621	13808	14575	14858	14190	15264	14998	16735	14594	19.3
King Is – Melbourne [c]	U	7472	11142	8968	7991	7688	6890	9884	14287	15898	14847	18806	151.3
King Is - L'ston /Wynyard	R	10710	11344	10525	11904	12793	12840	11717	13316	13482	14874	13130	22.6
Merimbula – Melbourne	U	5711	6351	6094	5619	7308	7659	7761	8451	8188	8478	9850	72.5
Merimbula – Sydney	R	14109	14330	13063	12962	14351	14971	14800	14362	13373	10961	13400	-5.0
Wagga – Melbourne	U	14971	15616	13287	11302	13312	14781	14763	15391	15149	14259	16152	7.9
Wagga – Sydney	R	70889	69168	60542	57121	63004	63817	65963	66153	64535	48589	62709	-11.5

a U = unregulated; R = regulated.
b Melbourne includes Moorabbin and Essendon airports
c Melbourne includes Morrabbin, Essendon and Tullarmarine airports.
Sources: DOTAC (various years); DOTAC estimates.

Attachment F.1

AL	Air Link
AU	Aus-Air
CL	Eyre Central Air
DR	Augusta Airlines
ES	Eastland Air
ET	Eastern Australia Airlines
FW	Flight West
HA	Hazelton Airlines
KD	Kendell Airlines
KI	King Island Airlines
MB	Western Airlines
MN	Monarch Air
OB	Opal Air
OC	O'Connor Airlines
OX	Oxley Airlines
PI	Phillip Island Air Services
PM	Promair
QJ	Southern Pacific Regional Airlines
SG	Yanda Airlines
SJ	Skywest
SK	Skyport
ST	Southern Airlines
SZ	Southern Australia Airlines
VL	Murray Valley Airlines
WA	Whyalla Airlines
WE	Western NSW Airlines
WT	Crane Airlines
WU	Wudinna Air Services
WV	Williams Aviation
XZ	Airlines of Tasmania
ZG	Sabair Airlines

APPENDIX G: PRINCIPLES OF EFFICIENT AIRPORT PRICING

G.1 Role of efficient pricing

Normally, it is not necessary to specify the manner in which an industry's output should be priced. In most cases this is determined by market forces - depending on the extent of competition from alternative suppliers and substitute goods, and the demand characteristics of the products concerned. However, as many government business enterprises (GBEs) are monopoly suppliers in a state or even nationally, they enjoy considerable flexibility in setting prices. In these circumstances, it is necessary to identify an appropriate pricing policy.

While it is evident the performance of a GBE can be improved through cost reductions, it is not always so clear that price reform can also generate significant efficiency gains; especially if improved pricing requires additional administrative resources. Nevertheless, prices have important implications for economic efficiency within the economy. The potential for gains from improved pricing has been demonstrated in a number of Commission inquiries. For example, the Commission estimated that better pricing of rail services and electricity would increase GDP by $1.6 billion and $0.5 billion annually (see IC 1991a, p.50, and IC 1991b, p.36).

The price mechanism is the signalling device between suppliers and consumers (or commercial users). Simultaneously, prices indicate to suppliers how much demand to cater for and, to each user, the cost of the goods or services in question relative to other purchases. Prices thus play an important role in determining users' consumption patterns. If prices for some users are excessive in relation to supply costs, they are tantamount to a tax; users' purchasing decisions will be distorted, costs will be higher than necessary and the competitiveness of users will be reduced. Conversely, if prices for other users are artificially low, those users will be subsidised and their demand will be higher than it should be. Prices also provide an important input into new investment decisions. For example, if overall prices are too low, demand will be greater than it would otherwise be and will signal a need for new capacity which would not be warranted if appropriate prices were charged.

Efficient pricing generally requires prices to reflect the marginal cost of supply. If prices are greater than the marginal cost of supply, a firm can increase its profits by expanding output. On the other hand, if the market price is less than the firm's marginal cost of production, the firm can increase profits (or reduce losses) by reducing output. Similarly, users will continue to demand a product as long as the benefits they derive from it are equal to or greater than its price. In this way, when prices reflect the marginal cost of production the benefits to society from both the production and consumption of a good or service are maximised.

Airports differ from most goods and services in that a large proportion of an airport's operating costs are fixed. For instance, runways and taxiways must be constructed to facilitate the landing and movement of aircraft. Terminal facilities must be constructed to enable passengers and cargo to reach their intended destination. Once an airport's capacity has been installed, the costs associated with catering for an additional landing are relatively small; they largely relate to the wear and tear on the runway and the need for additional ground handling staff. Because these costs are small relative to fixed costs, a pricing structure which reflected only these short run marginal costs would result in the airport operating at a loss.

Airport use may also involve the imposition of costs not borne by either the airport or aircraft operators. For instance, an aircraft landing and taking-off creates noise which disturbs the surrounding community. This will be reflected in lower land prices and higher sound-proofing costs. Also, during a busy period at an airport, aircraft movements may cause delays to other aircraft wishing to use the airport. If these external costs are not taken into consideration, the net benefits to society from using the airport could be lower than their potential level.

In most countries these costs are managed through curfews and noise standards and by placing aircraft in holding patterns and administratively allocating landing slots. An alternative is to estimate the costs of noise and delay, and place an equivalent charge on each aircraft movement. In principle, this would ensure that the benefits of each aircraft movement are at least equivalent to the costs borne by the airport, aircraft operators and any other external parties (ie other aircraft operators and the surrounding community). Since these charges would reflect costs imposed on others, not costs directly borne by the airport, they could be considered to be a tax. However, to the extent the revenue is not directly appropriated by the government, but is attributed to the airport and used to recover all, or part, of its fixed costs, these charges should not be considered a tax. Nevertheless, significant difficulties in assessing the relevant costs would have to be overcome in order for this alternative to be implemented fully.

G.2 Landing fees at uncongested airports

Pricing strategies can be designed to overcome the revenue shortfall generated by airports pricing at marginal cost while maintaining many desirable attributes of marginal cost pricing. Such strategies attempt to transfer to airports some of the benefits users receive from airport use, while maintaining the incentive for the efficient use of the airports. Two pricing strategies of this kind are two-part tariffs and Ramsey pricing.

Two-part tariffs

Under a two-part tariff, aircraft operators would be required to pay landing fees which reflect usage costs (ie marginal and any external costs), as well as an 'access fee' to recover any revenue shortfall. The access fee would be a set amount per period, irrespective of usage, and be similar to a club membership fee. It could apply to individual aircraft, or possibly to each airport user. The access fee would need to be no higher than the total benefits a user receives from landing at an airport. If this were not the case, aircraft would be discouraged from using an airport, even though the operator would be willing to pay a landing fee in excess of the costs generated by its activity. This difficulty can be overcome through the introduction of alternative two-part tariffs. Under this arrangement, aircraft operators would be free to choose between a number of two-part tariffs based on their frequency of use, for example one of either: no access charge and (say) a $1000 landing fee; an annual $20 000 access charge plus a $500 landing fee; or a $50 000 access charge with no landing fees.

Ramsey pricing

Under Ramsey pricing principles, landing fees would include a surcharge to generate sufficient revenue to cover all aeronautical costs. The surcharge would be in addition to landing fees based on marginal and external costs, and would differ between categories of airport users. To minimise distortions in the pattern of airport use, the surcharge would need to be highest for those aircraft which are least likely to alter their usage and lowest for those most likely to alter their pattern of airport use. For example, the surcharge could be greatest for large aircraft (which have the capacity to spread landing fees over a large number of passengers), for aircraft which travel long distances (involving relatively high fares and limited competition from alternative transport modes) and for aircraft using the airport at morning and afternoon peak periods (ie business passengers that are relatively insensitive to price changes).

Currently, landing fees at most airports are based on aircraft weight. Weight based fees are efficient to the extent they take account of some airport costs (eg wear and tear) and some of the elements of the responsiveness of demand (eg the ability of larger aircraft to spread landing fees across more passengers and cargo). However, weight based fees ignore other elements of Ramsey pricing since they do not closely reflect the distance component. A study by Morrison (1982, pp. 151-9) indicates that Ramsey prices should consist of a weight component, whereby larger aircraft would pay less per tonne than a smaller aircraft, plus some distance component. The implication for current pricing practices for intrastate aviation is unclear since, as Morrison suggests, landing fees for smaller aircraft on longer flights should increase, however, on average, it is the larger aircraft which fly the longer distances.

G.3 Landing fees at congested airports

Access charges or Ramsey-based surcharges are necessary for airports to meet predetermined levels of cost recovery. However, additional complications arise where airports are subject to congestion. In Australia, some airports are subject to early morning and late afternoon peak periods when airport capacity is stretched. This has been a particular problem at KSA.

In principle, landing charges during congested periods should reflect the cost an aircraft movement imposes on all other aircraft wishing to use the airport. The costs are caused by aircraft being placed in holding patterns over an airport until a landing slot becomes vacant, or being held on the ground waiting clearance. An estimate of the delay costs would include the additional fuel used by aircraft, costs associated with restrictions on airlines to operate an optimal network and inconvenience to passengers.

Congestion costs differ depending on the capacity of the aircraft involved. For example, it was estimated that delays at Sydney airport cost Compass (which operated large Airbus aircraft) around $150 a minute, in contrast to $50 a minute for Eastwest (which operates smaller aircraft) (FAC 1991, p. 7).[1] For a large aircraft, the cost of a one minute delay, in terms of passengers' time, could significantly exceed these estimates.

An aircraft landing at an airport during a congested period not only delays the immediately following aircraft, but all aircraft which land or take-off during the remainder of the congested period. Therefore, the cost of the delays caused by an aircraft movement at the start of a congested period are much greater than for an aircraft movement at the end of the congested period.

The structure of landing charges during a congested period should differ from that during an uncongested period. This is because, during a congested period, a small aircraft can cause as much delay as a large aircraft.[2] Hence, all aircraft should be liable for similar landing charges during congested periods. In principle, landing charges which fully reflect delay costs would be highest at the start of a congested period and decline until congestion is no longer a problem. During an uncongested period, charges should be related to marginal costs and capacity to pay. This would result in the level of charges differing between aircraft types. However, at heavily congested airports, two-part tariffs and Ramsey pricing may be unnecessary since landing fees based on marginal and external (ie delay and noise) costs may be sufficient to recover costs.

[1] Gillen, Oum & Tretheway (1990, p. 86) reported that, in 1987, Lufthansa's operating costs were increased by $US30 million because its fleet spent 5200 hours in holding patterns (approximately $A120 a minute).

[2] While small aircraft have slower approach speeds and take longer to land, larger aircraft generate wake turbulence which delays the movement of small aircraft. In addition, an aircraft movement at the start of a congested period will cause delays to a larger number of aircraft than would a movement nearer the end of the congested periods. If the delays caused by different aircraft are significant, it would be appropriate for this to be reflected in landing charges which differ between aircraft types and the time of landing/take-off.

Auctioning of landing and take-off slots is another option in allocating scarce airport capacity. The appeal of this option is that it forces airlines to reveal their preferences for landing at any particular time. Airlines will only choose to take off or land if the cost of doing so is less than the associated benefits. This would involve comparing the price of a landing slot with the effect that landing off-peak would have on passenger demand, fuel costs, network economies and the like. While auctioning processes have been introduced to allocate resources in a number of other markets (eg supply of electricity to the transmission grid in the United Kingdom and allocation of some pollution rights in the United States), they have yet to be introduced to allocate landing slots at congested airports. This is largely because of institutional constraints and practical considerations. For instance, it may be too much to expect an aircraft which has been delayed (eg due to head winds) to have to renegotiate landing rights while still in the air or, alternatively, maintain a holding pattern for an hour or more.

Investment in additional runways, taxiways and navigation systems would also address many of the difficulties associated with scarce airport capacity. However, expanding airport facilities is a costly process and, because it is 'lumpy', cannot be closely matched with demand growth. Investment in airport capacity should only occur when the benefits of the expansion (eg reduced congestion charges or delay costs) are greater than the initial investment costs. This means that the existence of congestion at certain periods during the day does not in itself justify additional investment.

Even if the timing of new investment is perfect, it is normal for an airport to experience congestion for some time prior to, and excess capacity for some time after, a new investment. The timing of any capacity expansion would be influenced by initial capacity, the lumpiness of the new investment and the time pattern of future traffic growth (see Oum and Zhang 1990). Since congestion would normally be relieved, or at least reduced, by new investment, landing charges would generally fall following an expansion in capacity. The revenue generated prior to an investment could be used to offset under-recovery of costs in the period following expansion.

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