

MEASURING AND MONITORING THE AUSTRALIA  
DOMESTIC AVIATION INDUSTRY:  
ISSUES AND DIRECTIONS

K Edwards  
Acting Director  
Domestic Aviation  
Industry Branch  
Department of Transport  
and Communications  
Canberra  
Australian Capital Territory

**ABSTRACT**

*Deregulation of the domestic aviation industry in 1990 has generated a need to review the statistical collections maintained by the Department of Transport and Communications. The need to collect and disseminate aviation activity data after deregulation, for both Government and the industry, is examined. The scope of the airport traffic data collections, and the methodology used to compile them are reviewed in the context of current industry structure and possible changes caused by deregulation. Expansion of the collections to include traffic loads on charter services and origin/destination traffic flows is proposed. A number of areas are identified where changes to the classifications currently used to compile the data are necessary. The need for further investigation of requirements for data on service quality is pointed out.*

## MEASURING AND MONITORING THE AUSTRALIAN DOMESTIC AVIATION INDUSTRY: ISSUES AND DIRECTIONS

### INTRODUCTION

One of the more benign spin-offs of regulation of the domestic aviation industry has been the collection and publication of detailed aviation activity statistics. Economic deregulation of domestic aviation on 31 October 1990 raises the question of what statistics, if any, need to be collected in a deregulated environment.

The existing collections of aviation data maintained by the Department of Transport and Communications provide an obvious starting point for satisfying both Government and industry statistical needs under deregulation. Currently the Department's collections of aviation statistics are the only publicly available source of domestic aviation activity data in Australia. However, as the discussion below shows, the data has been shaped and to a large degree constrained by its origin and justification as a regulatory by-product.

Despite its limitations however, the lack of alternative data sources and absence of charges for the service have created a substantial demand for the data. Approximately 1500 organisations and individuals receive copies of the regular publications produced by the Department, and around 30 ad hoc requests for information are received each week. Building on this foundation seems a sensible starting point in planning for an aviation information system under deregulation: the question is, just how much rebuilding is needed?

An agency collecting aviation statistics and serving both government and industry should have the following features:

- . what it collects reflects user requirements;
- . the data is valid, in the sense of being reliable and correct;
- . the data is constructed into information, through use of levels of aggregation and classifications that reflect both user needs and industry structure;
- . the data is disseminated in a form useful to users on a timely basis;
- . respondent burden is minimised.

The main part of this paper describes and critically examines the collections in the light of current industry structure and possible changes caused by deregulation.

#### EDWARDS

Airport traffic data has been selected as the main focus for the discussion, both because of its importance in terms of the Department's remaining functions and because most of the requests for data received by the Department from the industry relate to this database. It needs to be remembered however that there are other types of data that may be needed under deregulation for purposes that will only be touched on here.

The scope of the current collections of airport traffic data are outlined below. The limitations of the current collections in terms of what is collected, and how it is converted into meaningful information, are then considered in the light of both current industry structure and deregulation.

First however it is important to briefly consider the basis of the requirement for information on the industry. The first section of the paper therefore briefly examines the rationale for the continued collection of aviation data by the Department of Transport and Communications in a deregulated environment.

#### THE NEED FOR INFORMATION

The Independent Review of Economic Regulation of Domestic Aviation (May Review) found that the lack of publicly available information about the domestic aviation industry was a major deficiency of the two airlines policy arrangements (May Review, 1986,1;23). The Review found that more information would benefit decision-making on Government planning functions, improve accountability of the industry to the public, and assist other Government regulatory agencies such as the Trade Practices Commission. It recommended public disclosure of origin/destination data, cross-classified by fare type and passenger characteristics (May Review, 1986,1:199-200). The Review noted that in the United States, under deregulation, reporting requirements for the airlines are much more extensive than in Australia. US reporting requirements include data on route-specific and airline-specific cost structures, yields, passenger profiles, passenger origin and destination, use of various fares, and financial statistics that are comparable between the airlines (May Review, 1986,1:196).

Though collecting all of this information might be considered excessive, at least some types of information not currently available could be important under 'deregulation'. Even after 1990 Government will continue to have regulatory responsibilities for competition policy (through the Trade Practices Commission and Prices Surveillance Authority), safety, and infrastructure provision. At the very least, some intelligence on the industry will be needed to evaluate whether the

## MEASURING AND MONITORING DOMESTIC AVIATION

Government's objective for deregulation has been met. That objective is, "to create an environment which will foster:

- .. increased responsiveness by airlines to consumer needs;
- .. a wider range of fares and types of services to provide enhanced travel opportunities;
- .. increased competition and pricing flexibility leading to greater economic efficiency in the industry; and
- .. a continuation of Australia's world renowned aviation safety record." (Evans, 1987)

Fulfillment of these objectives will largely be a matter for the market, not regulators (or deregulators), however one of the keys to creating this environment is access to infrastructure. The type of data needed to enable Government to fulfil its airport and airways related responsibilities is therefore considered in some detail here.

For the Department, these functions include an oversight role of the statutory authorities, management of some airports, and management of the Airports Local Ownership Program. Under the Federal Airports Corporation Act 1986, the Department also has some responsibilities in relation to airport planning. First there is 'the investigation of the need for additional Federal airports and the desirability of replacing existing Federal airports with new Federal airports'. In addition, the Federal Airports Corporation (FAC) is precluded from undertaking 'the preparation of plans for, and the establishment of, airports that are to be Federal airports'.

A requirement for information to support infrastructure planning is not confined to the Department however. There are over 400 airports in Australia, and responsibility for infrastructure provision at these airports is spread across a diverse range of bodies. The Federal agencies involved in airport management include the FAC which operates 23 airports), the Civil Aviation Authority (CAA) which is responsible for Air Traffic Control and safety, the Department of Defence with 9 joint user aerodromes, Department of Territories with 2 airports, and the Department of Transport and Communications which operates 37 airports. As well however, State Government's, local councils and other local authorities have interests in 276 airports in the Local Ownership Program), private companies, and individuals operate some 83 airports.

Although the discussion here concentrates on the Government's management information needs, the availability of information on the industry may also have a substantial

#### EDWARDS

at : impact on the success or otherwise of deregulation. New entrants, for example, need information to develop strategies and set fares. Financial institutions need to be able to assess how risky an investment in aircraft or other infrastructure is. The importance of an informed market has been stressed by Coppel in the context of the 'deregulated' securities market in Australia. He argues that at least some 'regulation', in the form of reporting requirements, is necessary to ensure the operation of the market. He says,

"... the objective of regulation is to have a fully informed market, where the necessary information to make intelligent investment decisions is available to those who have the intellectual capacity or natural cunning to make those decisions." (Coppel, 1988; 10)

In the United States the recognition that consumers also need information in order to make choices has led to the introduction of data collection on service quality indicators, such as lost baggage and delayed flights.

In summary, the rationale for Government collection of statistics in a deregulated environment is to:

- .. provide a basis for government decisions and briefing of Ministers on aviation issues, such as infrastructure planning, investment policy and competition policy;
- .. assess the success of deregulation, a program monitoring function;
- .. promote the smooth functioning of the market (and other associated markets such as tourism infrastructure) by facilitating efficient investment decisions by airlines, bankers, aircraft manufacturers and other industry participants;
- .. provide consumers with information on which to base their choices.

#### SCOPE OF THE CURRENT COLLECTIONS

The existing collections of aviation data provide an obvious starting point for satisfying Government information requirements under deregulation, as well as those of the industry. The limitations of the current collections are considered first in the context of current industry structure and user needs. Then, the way in which deregulation might influence the development of the collections is analysed.

## MEASURING AND MONITORING DOMESTIC AVIATION

The Department maintains three major collections of airports traffic information:

- .. the Survey of Hours Flown and Landings;
- .. airport movements at some 59 airports with Air Traffic Control; and
- .. traffic data for airports with regular public transport (RPT) services.

The Survey, which covers all aircraft on the Australian Aircraft Register provides the most comprehensive source, in the sense that it covers all aircraft movements, wherever the aircraft lands and whatever type of activity it undertakes. However, the Survey only captures the total number of landings performed by each aircraft during a six month period. Moreover the data cannot be disaggregated by the type of activity being performed or the airport or airstrip at which the aircraft landed. Since most users require a greater level of disaggregation than can be provided by this source, it does not appear to be extensively used for airport management purposes.

The second collection, derived from Air Traffic Control records, reports all aircraft movements at an airport each month, and differentiates between light and heavy airline, general aviation, military and helicopter movements at an airport. 'Airline' movements however, include not only domestic and international operations, but also non-scheduled movements by the major airlines. The 'general aviation' category also includes scheduled commuter operations. These definitions differ from those used to compile the RPT traffic data and make it impossible to reconcile the two sets of aircraft movement data. The airport movement data system does not include information on passenger and freight movements, for which one must turn to the RPT traffic reporting system.

The most comprehensive data, and the most complex, is the Air Transport Statistics System, which covers all regular public transport services performed by airlines in Australia. In general, all airlines operating regular scheduled services in Australia are required to report under Air Navigation Regulation 107, details of all RPT flights performed, including the following details:

- .. registration of the aircraft performing the service;
- .. flight number;
- .. date of the flight;
- .. airline;
- .. ports served within the flight;
- .. departure and arrival times for all ports in the

## EDWARDS

- flight, or flying time for each sector;
- passengers, freight and mail carried on each flight stage and sector by some (limited) fare categories;
- operation type (indicates availability of first class, freight only, etc).

There are a number of alternative means by which the airlines may provide this data, including using standard trip record forms supplied by the Department, diskette or using airline generated hardcopy reports. In the main however, the major airlines provide the data on magnetic tape for processing by the Department's computer system.

The concepts used to compile this data and make it meaningful, and their limitations in the light of current industry structure and the forces that might emerge under deregulation are considered below.

### CLASSIFICATION METHODOLOGY FOR RPT DATA

#### Unit of the Flight

Although the major airlines use the flight as the basic unit for providing data, flight numbers are allocated by the airlines themselves and numbering practices (for example rules determining where a new flight commences) are not consistent across the industry. While a flight based system may facilitate data collection and compilation, it does pose problems for the interpretation of the data. Moreover, the diversity of flight numbering practices is further complicated by the 'break ports' system used by Ansett and Australian Airlines.

The break port system means that while a single flight may include several ports within the plane's journey, in most instances a new flight number is automatically allocated when an aircraft's journey involves a stopover at the following ports: Adelaide, Brisbane, Cairns, Canberra, Darwin, Hobart, Melbourne, Perth and Sydney. This means that all passengers whose flights stop at one of these ports will be counted as being uplifted and discharged at that port, regardless of whether or not their journey terminated there, or whether they left the plane or not. By contrast, if a passenger's journey involves several landings within the same flight number, they will only be counted at the beginning and end points of their journey. As a result, traffic levels at the 'break ports' are inflated by the inclusion of transit passengers. The 'break ports' are of course the major airports of Australia.

The difficulties posed by the flight number system could be overcome in a number of ways. The most obvious would be to impose standard rules defining what constitutes a flight,

## MEASURING AND MONITORING DOMESTIC AVIATION

for example a multi-stage journey that does not backtrack on itself. An alternative used by the International Civil Aviation Organization (ICAO) (ICAO, 1987;vi) is to distinguish between embarking and disembarking passengers (travellers whose journey begins or ends at the reporting airport), and direct transit passengers, who continue their journey on a flight having the same flight number as the flight on which they arrived. The same information could also be derived by supplementing existing reports with data on origin and destination traffic flows (ie initial point of uplift and the ultimate destination of air traffic irrespective of the number of flights involved), which could be matched against the flight based statistics in order to generate transit passenger numbers.

### Types of Airline

Another problem concerns the classifications of different levels of operator. There are in fact three separate collections of RPT traffic data maintained by the Department. These relate to the domestic, international and commuter sectors. Although the three data sets can readily be aggregated in theory, the reality is that the logistics of obtaining and processing data from around 50 commuter airlines (compared to only 7 domestics) tends to make commuter data far less timely. There are also slight differences in the information reported by the different types of airline.

The domestic/commuter/international distinction is derived from licensing requirements which distinguished between domestic airlines (full airline licence holders), commuter airlines (operating under a supplementary airline licence or Air Navigation Regulation 203), and international airlines. Table 1 below sets out totals of some of the major activity measures for each of the three industry sectors. It shows that each of the sectors is larger than the others in terms of one of the measures of airport activity.

Table 1: Total traffic by industry sector, 1987/88

SECTOR	NO. OF PASSENGERS UPLIFTED	CARGO TONNES UPLIFTED	AIRCRAFT MOVEMENTS
INTERNATIONAL <sup>a</sup>	7,165,260	292,043	56,147
DOMESTIC	13,267,045	164,117	433,100
COMMUTER <sup>a</sup>	1,241,100	3,500	467,680

SOURCE: AVIATION INDUSTRY STATISTICS SECTION, DTC  
NOTE (a): Provisional.

Table 1 also illustrates that none of the industry sectors can be discounted when infrastructure questions are addressed. In addition, the traffic for the smaller international and commuter sectors tends to be concentrated at particular airports increases. Although commuters, for example, provide in total around 5.7% of total passenger traffic at Australian airports, commuter operations contribute a significant number of passengers at some of the larger ports. All of the passengers to Newcastle's Belmont airport, for example, travelled on commuter services, and the airport ranked as the 26th largest airport in Australia in 1986/87 in terms of passenger numbers (if traffic to Newcastle's Williamstown airport is also included, the city ranked 22nd).

While none of the sectors can be discounted when looking at airport traffic, there are some limitations inherent in the classifications. In particular, the classifications reflect licensing distinctions, rather than being derived from considerations relating to the economic structure of the industry.

The term 'domestic' was used to refer to airlines operating under a full airline licence. This included both freight only and passenger services performed by airlines whose fleets included 'high capacity' aircraft. High capacity is currently defined as aircraft with 38 or more seats or a payload of 4200 kilograms or more.

Commuters were defined as airlines operating under a Supplementary Airline Licence or Air Navigation Regulation 203, while international referred to operators providing international services to and from Australia. These classifications have largely been carried over to the system of Air Operators Certificates introduced by the CAA in 1988. Table 2 below illustrates the artificial nature of the domestic/commuter airline distinction. It shows for example that Kendell airlines, a commuter airline, is larger than Ansett NT, a domestic airline.

Consider the following illustration of the problems inherent in the fleet based distinction between a domestic and a commuter operator. Two operators, call them Big Brother Airlines and Little Sister Airlines, compete with each other on a route using identical (low capacity) aircraft. Big Brother Airlines has a large jet in its fleet, as well as a low capacity aircraft and is therefore counted as a domestic airline. Little Sister Airlines' fleet however consists entirely of 'low capacity' aircraft, and is therefore a commuter airline. The consequence of this is that the two airlines traffic on the route appears in completely separate publications. Moreover, some of the data for Big Brother Airlines would be available on a quarterly basis in the Domestic Provisional publication, which is generally released within two weeks of the end of

# MEASURING AND MONITORING DOMESTIC AVIATION

Table 2: Profiles of selected operators

CLASSIFICATION	OPERATOR	PROFILE
DOMESTIC	ANSETT AA	<u>TRAFFIC</u> : 5.6 MILLION PASSENGERS AND 70,660 TONNES OF CARGO UPLIFTED IN 1987
		<u>FLEET</u> : 37 AIRCRAFT RANGING FROM F27 - B767 AS AT 31.12.87
		<u>ROUTES</u> : TRUNK ROUTES + 'REGIONAL' NETWORK
	IPEC	<u>TRAFFIC</u> : 30,615 TONNES OF CARGO IN 1987
		<u>FLEET</u> : 4 AIRCRAFT
		<u>ROUTES</u> : LIMITED NETWORK (5 MAJOR PORTS)
	EAST-WEST	<u>TRAFFIC</u> : 978,400 PASSENGERS AND 3,051 TONNES OF CARGO IN '87
		<u>FLEET</u> : 13 AIRCRAFT, F27+F28 AS AT 31.12.87
		<u>ROUTES</u> : NETWORK SPANNING 6 STATES AND TERRS..
	ANSETT NT	<u>TRAFFIC</u> : 121,600 PASSENGERS AND 246 TONNES OF CARGO
		<u>FLEET</u> : NIL (USES ANSETT WA AIRCRAFT)
		<u>ROUTES</u> : MAINLY WITHIN NT
COMMUTER	KENDELL	<u>TRAFFIC</u> : 246,760 PASSENGERS AND 228 TONNES CARGO IN 1987
		<u>FLEET</u> : 10 AIRCRAFT
		<u>ROUTES</u> : 19 ROUTES IN 3 STATES
	AEROPELICAN	<u>TRAFFIC</u> : 91,166 PASSENGERS '87
		<u>FLEET</u> : 4 AIRCRAFT
		<u>ROUTES</u> : ONE ROUTE
	PHILLIP ISLAND	<u>TRAFFIC</u> : 806 PASSENGERS
		<u>FLEET</u> : 1 CESSNA 402
		<u>ROUTES</u> : ONE ROUTE

SOURCE: AVIATION INDUSTRY STATISTICS SECTION, DTC.

a quarter. Commuter airline data however is only published on an annual basis and generally suffers from significant reporting lags.

#### Operation Type

Another problem area concerns the classification of traffic by the type of operator performing the service, rather than the type of trip being made. International tourists travelling by plane between Sydney and Melbourne for example would be classified as international travellers if they travelled on Qantas, but as domestic if the same journey is made on Australian Airlines. This distinction becomes even more doubtful when passengers on Ansett's regular scheduled international services performed on behalf of Qantas are taken into account: Ansett passengers travelling on the Sydney-Brisbane leg of the flight are counted as international passengers.

There is a justification for this: flights made by international airlines are not open to domestic travellers unless they hold an international ticket. Nonetheless, there is a strong argument that an international traveller travelling on an international airline is just as much a part of the domestic market on a route such as Sydney - Melbourne as an international traveller who chooses to fly that sector on a domestic airline. ICAO for example, would treat Qantas domestic sector traffic as domestic, as they define international flights as the operation of an aircraft from take-off to its next landing where one or both the terminals are in a State other than the State in which the operator is registered (1988;319).

At the same time, if there are deficiencies in the classifications used in compiling aviation statistics, there is no satisfactory ready-made alternative. The trunk/regional/commuter sectoral distinction often used, for example, is equally problematic as the terms are derived from outmoded provisions of the current regulatory legislation. One alternative currently under consideration is a system based on a combination of criteria such as aircraft type and size (such as large jets/other 'avtur' aircraft/'avgas' aircraft) and network size, both in terms of traffic levels and the routes operated on.

#### NON-SCHEDULED SERVICES REPORTING

One obvious area not addressed by the current data collections is information on traffic loads carried in charter operations. Passengers and freight carried on charter services may be as important in assessing infrastructure needs as those using scheduled services. Charters are the largest sector of the industry in Australia after regular public transport services in terms

## MEASURING AND MONITORING DOMESTIC AVIATION

of hours flown. In 1987/88, over 1100 aircraft performed charter operations totalling 345.3 thousand hours in that period, compared to 435.1 hours for domestic and commuter RPT operations. Even excluding charters performed by aircraft owned by the major airlines, jets performed around 18% of charter services.

Policy restrictions on charters operated with large jet aircraft were lifted in late 1987, however commercial passenger charter flights by operators other than the existing airlines do still require case by case approval. This sector is likely to continue to expand in importance with deregulation and collection of more information on charters should be seriously considered. Details of revenue freight and passengers on 'non-scheduled' services are reported in the United States of America, United Kingdom, Canada and New Zealand, possibly because of ICAO reporting obligations.

## NETWORK STRUCTURE AND ORIGIN/DESTINATION DATA

Another factor that may need to be taken into account in designing a collection methodology for deregulation is the anticipated increase in traffic levels and the possible consequent effects of this on network structures. One of the benefits expected to flow from the economic deregulation of domestic aviation identified by Senator Evans in his policy statement of 1987 was the potential for an expansion in the number of people travelling by air. The Bureau of Transport and Communication Economics (BTCE) have estimated that a 20% across-the-board cut in fares might increase market size by 1.7 million passengers in 1991-92 (BTCE, 1989;9). This figure was acknowledged to be extremely conservative since it is based on the price elasticity of the current, full-fare dominated market, while growth is most likely to be strongest in the price sensitive leisure sector of the market.

While a jump in traffic growth levels may not in itself affect how we measure airport traffic levels, the ways in which the industry accommodates traffic growth may well change in a deregulated environment. These changes may need to be taken into account in infrastructure management, and would require the development of appropriately structured information collections.

At the moment, the two major airlines both use Sydney as the primary focus of their networks. Even with improved traffic management, congestion associated with Sydney airport, together with the high level of existing services, suggests that the scope for a new entrant to successfully compete using Sydney as a hub may be limited. The major difficulty in assessing the scope for hub and spoke networks in Australia arises from the lack of published data on the origin and destination of traffic flows within

#### EDWARDS

the existing network. The only origin/destination data available is the list of routes with more than 10,000 origin/destination passengers in 1984/85 compiled by the May Review (1986,2;103). Commonsense suggests that it is much easier to move in on an underserved market than to attempt to establish yourself in a well-served market. A good example of this type of strategy was provided by East-West's successful Brisbane-Cairns service introduced in 1986, where the incumbent operators generally served the route with indirect services.

The difficulty however is establishing, on the basis of the information currently published, which routes are in fact underserved. The May Review's list does however suggest that an airline using Melbourne as its hub could operate a competitive service by operating direct flights to Mackay, Rockhampton, Cairns, Proserpine, Darwin and Townsville. In view of the high levels of traffic growth that have occurred since 1984/85 (averaging around 8% per annum), it is likely that a number of other ports would also warrant a direct service. Canberra might also serve as a strong hub centre on the basis of the May Review's finding that direct services to Perth, Coolangatta, and Hobart could be justified. The limited origin/destination data provided to the Department suggests that direct services to a number of other ports from these two possibly hubs (Canberra and Melbourne) could be justified.

Collection and publication of origin/destination traffic statistics would enable operators to assess these opportunities, and could go some way to stimulating a market based solution to any congestion resulting from traffic growth generated by deregulation.

#### DATA DISSEMINATION

Collection of data is of course only a means to an end, namely providing information to users. As well as addressing the quality of the data the Department is also examining a number of issues relating to the dissemination of the data.

Although data on scheduled services is collected on a flight by flight basis, the standard reports available from the Department's computing system are derived from a monthly aggregate database, and reports cannot be generated for shorter data periods. Work is currently in progress to allow reports to be generated by accessing the flight by flight database, thus allowing much more detailed analysis of traffic.

Secondly, for forecasting purposes time series data is generally required. The Department currently has access only to data back to 1985 on its main computing system and although older data is held in the Department's magnetic

## MEASURING AND MONITORING DOMESTIC AVIATION

tape archives, converting it to usable form remains a project for less resource constrained times. Construction of time series therefore involves the rekeying of older data from hardcopy, as for example was done in order to produce the new RPT Airport Traffic Data time series publication released in March 1989 in hardcopy and diskette formats.

It is interesting to note that similar data relating to passengers on-board and aircraft used reported in the US is now available to users on compact disk (CD-ROM) for periods between 1972 and 1988 (Aviation Data News, 1988;1). The Department cannot at the moment download data from its mainframe system onto electronic media for distribution to users, however this feature is expected to be available in the immediate future.

Thirdly, the standard reports of airport traffic that are generated for the domestic and commuter sectors can separately identify for each port the aircraft movements, passengers, freight and mail in and out of an airport by operator and aircraft type for each month. The data is generally published only on an all operators basis, as individual operator data is treated as confidential to the Department, and for the most part, on an annual (calendar and financial year) basis. The information collected by the Department could obviously be manipulated to produce a variety of other report formats and could be published for shorter reporting periods, such as by quarter or by month. User requirements for alternative presentations of the data are currently being investigated.

### CONCLUSIONS

Perhaps the most important point that needs to be drawn out is that there will be a need to collect and disseminate aviation activity data after deregulation in October 1990, both for Government and for use by the industry itself. However, there is a need for change, particularly in relation to what data is collected and to the concepts used to classify the data.

In the past, the collection of aviation data has largely been driven by the Department of Transport and Communications' regulatory requirements, however the establishment of the FAC and CAA, together with the move away from aviation-specific economic controls under deregulation will create new challenges. The Department's role will shift from being a major player in determining market outcomes through direct regulation, to one of promoting a competitive environment and monitoring outcomes. Data dissemination could promote the achievement of the Government's objectives in deregulating the industry.

#### EDWARDS

The existing data collections could provide a good foundation for continued monitoring of the industry under deregulation. However, the concepts and classifications used to compile data on regular public transport services do need to be revamped. First, the definition of a 'flight' needs to be revised so that transit passengers at an airport can be identified. Secondly, the distinction between 'domestic' and 'commuter' airlines should be abolished and replaced by a classification system that more closely reflects industry structure. In addition, reporting of traffic should be tied to markets, so that, for example, the extent of competition between domestic and international airlines for domestic sector passengers can be seen.

Deregulation will also reinforce the case for two new collections of information to be started, namely reporting of origin/destination traffic flows, and reporting of traffic loads for charter services. The costs and benefits of collecting additional data in these areas will of course have to be assessed in consultation with the industry.

An important area that has not been addressed here is whether there is a need to expand the data collections in the directions suggested by the May Review (1986). Public interest considerations have not ranked high under the two airlines policy, and the scope of the current collections reflects this. One possibility would be to provide information on the quality of service provided by the different airlines as is done in the United States. Information on fare types available and their usage would assist not only consumers and the Prices Surveillance Authority but also help in forecasting future demand for air services. Passenger profile information could help assess who benefits from deregulation, as well help identifying untapped markets for air services.

Collection of some financial data also needs to be at least considered, since the termination of the Airlines Agreement will mean the loss of even the minimal accounts currently tabled in Parliament by the major airlines.

New collections however impose a cost on respondents, who will need to be convinced that they will get a benefit from providing the information. This means that the collection agency will need to continue to upgrade the quality, timeliness and relevance of the statistics to ensure that both current and evolving user requirements are met.

# MEASURING AND MONITORING DOMESTIC AVIATION

## REFERENCES

- |   |  |
|---|--|
| Aviation Data News, 1988,   | Vol 1, No 1, Fall,<br>Dallas, Texas.   |
| BTCE (Bureau of Transport and<br>Communications Economics) 1988               | "Domestic Aviation in<br>Transition", Paper<br>presented to BTCE<br>Seminar on Aviation<br>Issues in Transition,<br>22 March 1989.   |
| CAA (Civil Aviation<br>Authority) (1988)                                      | ANR 191 Review Industry<br>Discussion Paper,<br>Attachment B to<br>ARP 88/9, Canberra.   |
| Coppel, Ronald L. (1988)  | The Regulation of the<br>Securities Industry with<br>Particular Reference to<br>the Proposed Changes to<br>Prospectus Regulation,<br>Economic Papers,<br>Vol 7, No 4, pp 9 -15.    |
| DILAEA (Department of<br>Immigration, Local Government<br>and Local Affairs), | Australia's Population<br>Trends and Prospects<br>1988, Canberra.  |
| DOT (Department of<br>Transportation) (1988)                                  | Air Travel Consumer<br>Report, Washington,<br>(monthly).   |
| Evans, Gareth (1987)  | Domestic Aviation: A New<br>Direction for the 1990s,<br>Policy Statement by the<br>Minister for Transport<br>and Communications<br>Senator Gareth Evans Q.C.<br>on 7 October 1987. |
| ICAO (International Civil<br>Aviation Organization) (1988)                    | Commercial Air Carriers<br>Traffic 1983 - 1987,<br>Digest of Statistics<br>No. 347, Montreal.  |
| ICAO (1987)   | Airport Traffic 1986,<br>Digest of Statistics<br>No. 340, Montreal.  |

EDWARDS

Levine, Michael E. (1987)

Airline Competition in  
Deregulated Markets:  
Theory, Firm Strategy,  
and Public Policy, Yale  
Journal on Regulation,  
Vol 4, pp393-494.

May Review (1986)

Report of the  
Independent Review of  
Economic Regulation of  
Domestic Aviation,  
2 vols, Canberra.

---

I would like to thank Dr Maurice Haddad, Ms Carol Boughton and an anonymous referee for their helpful comments on an earlier draft of this paper. All remaining deficiencies are of course my own responsibility. The views expressed in this paper are those of the author and are not necessarily shared by the Department of Transport and Communications.