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Cooperative Agreements between Airlines Providing Australian International Air Services

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## Abstract:

The structure of the international commercial airline industry is changing and a degree of uncertainty and speculation exists regarding the shape of the future airline industry. Some aviation regulators have been concerned that the strategy by many airlines to enter into cooperative commercial arrangements will lead to a less competitive aviation industry with negative consequences for national welfare. There has been little quantitative research into airline cooperative agreements. However, there has been substantial discussion of the positive and negatives of such agreements. This paper places these issues in an Australian context, particularly in regards to the role the International Air Services Commission plays in allocating capacity to Australian international carriers

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## Introduction

The structure of the international commercial airline industry continues to change. Many governments are adopting a more liberal approach to the regulation of their international aviation routes. At the same time, airlines are positioning themselves to take advantage of the development of a global economy, a process sometimes referred to as 'globalisation'. The impact of these changes upon the quality, quantity and price of commercial airline services is difficult to measure. Consequently, uncertainty and speculation exists regarding the future shape of the aviation industry.

Given this uncertainty, some aviation regulators have been concerned that the strategy by many airlines to enter into cooperative commercial arrangements will lead to a less competitive aviation industry with negative consequences for national welfare.

In Australia, the International Air Services Commission (IASC) determines the outcomes of applications by existing and prospective Australian international carriers for capacity and route entitlements available under the various international air services arrangements (IASC 1996a). An Australian carrier can not operate a scheduled international service without a capacity allocation by the IASC.

When making its determinations, the International Air Services Commission Act 1992 states the IASC must be satisfied that an allocation of capacity would be of benefit to the public (s. 7(2a)). If international services are to be provided jointly, the IASC must include conditions relating to those services (s.15(2e)). Consequently, the IASC has an ongoing interest in cooperative arrangements between airlines providing international air services to and from Australia

Internationally, there has been little quantitative research into airline cooperative agreements. However, there has been substantial qualitative discussion. This paper places these issues in an Australian context, particularly from the perspective of the IASC. The paper does not provide a comprehensive account of the many different forms of cooperative agreements and the impact individual agreements may have on the various international aviation markets.

## Types of cooperative agreements

In this paper, a cooperative agreement is an encompassing term used to describe any commercial relationship between two or more airlines and can include such things as;

- a statement of common interests;
- the coordination of frequent flier programs;
- interlining agreements;

- the coordination of interconnecting services;
- the rationalisation of ramp services and terminal facilities;
- seat capacity exchanges;
- · hard and soft blocked space agreements;
- code sharing;
- · revenue sharing or pooling; and
- equity links

The actual number of cooperative agreements between international airlines is uncertain Table 1 indicates that in 1996 there were 389 'alliances' between 171 carriers, an increase of approximately 50 per cent over two years. At the same time, the number of airlines involved in alliances increased by approximately 25 per cent. However, Vellas (1995, p. 11) states that in 1994 more than 177 agreements were concluded among 223 International Air Transport Association (IATA) airlines. This difference is probably due to the differing definitions of alliances [and hence the very broad definition of cooperative agreements used in this paper]. Nevertheless, it is agreed that the trend of more airlines entering into more cooperative agreements continues

## Table 1 Alliances between airlines, 1994-96

|                             | سیف میں ن <u>ور پارستا</u> میں ریایتی کر کرون کی رواند |      |      | Percentage       |
|-----------------------------|--|------|------|------------------|
|                             | 1994   | 1995 | 1996 | change (1994-96) |
| Number of alliance airlines | 136  | 153  | 171  | 25 7             |
| Number of alliances         | 280  | 324  | 389  | 30.9             |
| with equity                 | .58  | .58  | 62   | 69               |
| without equity              | 222  | 266  | 327  | 47.3             |

Source Gallacher 1996

The nature of cooperative agreements varies depending on the commercial requirements of the airlines. This paper focuses on those cooperative agreements that directly impact on an airline's ability to secure international aviation capacity. These agreements are referred to as joint services agreements. The IASC regards joint services as including *"inter alia* code sharing, seat exchanges, block space arrangements and revenue pooling" (IASC 1996b, s10.5). However, a proposed amendment to the Act currently before the Senate defines joint services as including but is not limited to, the provision of international air services by an Australian carrier involving code sharing, blocked space arrangements, joint pricing, revenue and cost sharing, revenue and cost pooling, or the sale of capacity to another airline.

The majority of joint services agreements that the IASC is concerned with are in the form of code sharing agreements.

Interline agreements are agreements where the "carriers involved are required to honour tickets issued by other carriers in the agreement. The identity of each carrier is maintained" (BTCE 1994, p 402). Since interline agreements do not impact an airline's capacity rights they are not discussed here, nor are some forms of strategic alliances,

even though some complex non-joint services agreements may provide airlines with benefits similar to those achieved through joint services. Nevertheless, some of the conclusions drawn in this paper may also be applicable to non-joint services agreements.

#### Examples of joint services

*Code sharing*: Code sharing is an agreement "whereby one carrier permits a second carrier to use its airline designator code on a flight, or where two carriers share the same airline designator code on a flight" (ICAO 1996, p. 5).

Code sharing usually exists as part of an overall cooperative package and it is possible cooperative agreements may have negative consequences with or without the inclusion of a code sharing. Consequently, to isolate code sharing from other forms of cooperative arrangements is inappropriate. As Humphreys argues (1994, p. 204), code sharing "is not, although it is often mistakenly presented as such, is the core of the alliance"

Blocked space and seat exchange agreements: Blocked space agreements are where one airline purchases capacity on another airline's services. Seat exchange agreements are where one airline provides capacity on its services in exchange for capacity on another airline's services. This exchange is in lieu of any financial payment. Although these agreements usually involve the sharing of designator codes, this is not essential.

Blocked space agreements take two forms: hard and soft A hard blocked space agreement usually refers to an agreement that specifies a predetermined number of seats that the operating carrier sells to the non-operating carrier on each flight. It is usual for hard agreements to include a clause whereby the non-operating carrier may sell back any unused capacity prior to each flight.

A soft blocked space agreement does not predetermine the number of seats that the nonoperating carrier must purchase. Instead, the non-operating carrier purchases as many seats as needed for each flight. It is usual for these agreements to limit the total number of seats per flight that the non-operating carrier may purchase.

In most instances, Australian carriers enter into blocked space agreements where the cost of the capacity provided is not shared. Instead, the operating carrier tends to charge the non-operating carrier a negotiated charge that may be specific to the particular service or may be based on the airlines' agreed interline charges. To a large extent these charges are commercially based and although the IASC requires carriers to price their services independently, the IASC is usually not too concerned with this practice Consequently, the IASC normally places a condition on the carrier to seek approval for any amendments to this arrangement but not necessarily to any changes in the charges themselves. However, the IASC does become concerned when the operating and non-operating carriers share the revenue earned from the capacity provided jointly, regardless of the charging arrangements

*Revenue pooling*: Revenue pooling is where airlines combine their revenues from given services then redistribute the revenues among the participating carriers in such a way that the revenue received by a carrier is not related to the type of service provided or the number of passengers carried This type of collusive behaviour, and others such as the joint determination of prices, often require an exemption from anti-trust regulations before an allocation of capacity can proceed (for example, see IPC 1995 for the Qantas-British Airways Joint Services Agreement case).

Unlike revenue pooling, revenue sharing or apportionment is where the combined revenues of the carriers operating the joint services are redistributed among the participating carriers based on a formula that takes into account the contribution each carrier makes in providing such services. For example, the formula may be expressed in terms of the cost per revenue passenger kilometre flown. If the IASC finds such an agreement acceptable, it is usual for the IASC to place a condition on the airline to seek approval before the airline can make any changes to the revenue sharing formula.

Regardless of the type of joint services agreement, it is usual for the IASC to impose the following conditions on an Australian airline seeking to operate its capacity jointly with a foreign carrier: it must price and sell its services independently; and it must not pool revenues.

#### Why joint services?

While airlines may enter into cooperative agreements for many reasons, they enter into joint services mainly to decrease costs and/or increase revenues. Carriers may enter into joint services with other carriers to decrease unit costs by:

- increasing load factors and aircraft utilisation;
- sharing maintenance and ground handling costs;
- · achieving economies of scope through rationalisation of services; or
- gaining economies of density by increasing the utilisation of terminal capacity.

An airline may also enter into joint services to reduce the capital costs of accessing new markets or to reduce the costs of increasing frequencies on an existing route. By doing so, the airline achieves greater network presence via routes that would otherwise be uneconomical or where access is restricted by capacity limitations. In turn, a larger network enables a carrier to market itself as having more flights to more destinations, making the airline more attractive to a wider range of passengers.

Without increasing air fares, carriers may increase total revenue by entering into agreements that result in higher traffic volumes by:

• feeding the foreign carrier's traffic through the national carrier's domestic network;

- feeding international passengers via the domestic carrier's network on to the foreign carrier's international services; or
- obtaining a better Computer Reservation Systems (CRS) display position through code sharing.

By entering into a joint services agreement, it is also possible for the airlines to increase revenues by increasing air fares to reflect improvements in the standard of services provided. These improvements may include the apparent seamlessness of services as passengers change from one carrier to another, and access to better terminal facilities for waiting passengers.

In practice, the above benefits of joint services agreements can be summarised into two forms: flight frequency and traffic density. In this paper, these characteristics have been used to differentiate between the many different types of joint services. This is a different approach to others, where code sharing agreements in particular have been typed by their diagrammatical appearance (see for example, Humphreys (1994), and Oum, Park & Zhang (1996)).

Frequency type joint services agreements

As illustrated in figure 1, frequency joint services agreements are characterised by a single sector (or at least linear network) Examples of frequency joint services include where:

- one carrier operates the service and sells seats to the second carrier in a blocked space arrangement, such as the Qantas-Air Vanuatu Capacity Purchase Sale Agreement; or
- two carriers operate the same route with a seat exchange arrangement on both carriers, such as the Ansett International-Malaysian Air Services (MAS) Joint Services Agreement.



## Figure 1 An example of frequency joint services

Another variation of figure 1 is where there is an intermediate point (city C) whereby carrier A operates between city A and city C linking up with carrier B's services between city C and city B. An example of this type of frequency joint services is the Qantas-Canadian Airlines (CAI) Joint Operation Agreement between Australia and

Canada via Honululu, where Qantas operates services between Australia and Honululu connecting with CAI services between Honululu and Canada

Frequency joint services agreements may not be limited to one sector and may enable the cooperating carriers to rationalise services over a number of sectors. For example, prior to the Basic Memorandum of Understanding of Cooperation between Qantas and Japan Airlines (JAL), Qantas and JAL operated 14 independent frequencies between Brisbane and Tokyo via Cairns. Through the Qantas-JAL agreement, both carriers were able to rationalise their services with Qantas operating seven direct services between Cairns and Tokyo, and JAL operating seven direct services between Brisbane and Tokyo, with both carriers code sharing on each others services on a seat exchange basis.

## Density type joint services agreements

Figure 2 illustrates an example of joint services where the emphasis is on maximising traffic density. For example, two carriers may enter into a joint services agreement for the city pairs C-A, D-A and E-A. Under such an agreement, carrier B increases its load factors from city A to city B due to the feeder traffic it acquires from carrier A's network. In addition, carrier A increases its load factors, extending from city A, by linking its network with carrier B's incoming flights. In Australia, an example of this type of agreement is the Ansett Australia-MAS Joint Services Agreement.



# An example of density joint services network

The benefit to airlines of density agreements can be substantial. For example, United Airlines has estimated that the Ansett Australia-United joint services agreement (where United code shares on Ansett's domestic network) contributed \$US14 million of revenue to United in 1994 (GAO 1995, pp. 38-9). No estimate of the benefit to Ansett Australia was given although it is reasonable to suspect that Ansett has also benefited from this agreement. However, since no correlation between traffic stimulation and code sharing has been established, with traffic more likely being redistributed between airlines (ICAO 1996, p. 9), it is likely that United and Ansett Australia have benefited at

Airlines may enter into agreements that increase both their frequency and traffic densities, that is, the carriers form joint services to cover the sector A-B, and points beyond. However, it is typical for frequency type agreements to be signed between two international carriers, while density agreements are made between a foreign carrier and a domestic carrier (or at least a national carrier's domestic division). In the latter case, it is a typical requirement for the foreign carrier to obtain approval from the regulatory authorities of the domestic airline. Consequently, since the IASC does not have any jurisdiction over Australian domestic services, the IASC deals principally with frequency agreements.

Both frequency and density type joint services agreements can provide carriers with the additional benefit of market access.

## The impact of joint services on competition

In a recent quantitative study on the implications of code sharing on airline competition, Oum, Park & Zhang state (1996, p. 189):

"Many articles concerning the effects of carrier alliances have appeared in the popular press. However we know of no studies that have systematically investigated the effects of airlines code sharing on firm conduct and air fares."

However, there is a substantial amount of qualitative literature on joint services and from this it can be concluded that joint services have both negative effects (principally increased market concentration) and positive effects (principally reducing barriers to entry) on competition. The nature of this balance depends on the characteristics of the appropriate market in which the joint services agreement operates.

## What is an aviation market?

A difficulty in determining the impact of joint services is the issue of defining the appropriate market. This can be a contentious issue and crucial to the conclusions drawn. For example, in relation to the British Airways (BA) and American Airlines (AA) alliance, the European Competition Commissioner, Karel Van Miert, rejected BA/AA's assertion that their alliance would provide them with only 24 per cent of the US-Europe market by saying (Avmark 1996, p. 2):

"We do not consider that the routes as a whole between Europe and the US constitute a relevant market For example, business passengers are particularly time sensitive and do not accept to use indirect flights unless there is no direct flight. Consequently, for example, a London/New York flight is not substitutable with a flight London/Lisbon/New York." In its simplest form, an aviation market may consist of services between two airports (a city pair or sector) However, in other instances the city pair definition may be too narrow, for example, when there are a number of cities in one country but only one city in the second country. In addition, while consumers tend to prefer flying direct and with one airline (BICE 1994, p 18), the availability of indirect flights will impact upon the conduct of airlines operating direct services on any given city pair. Therefore, in some circumstances, indirect routes should be included in the market definition.

Type of passenger: The nature of demand for air travel is a significant consideration when defining the appropriate market. Few passengers "travel for the intrinsic pleasure of travelling" (BICE 1994, p. 19). Instead, the demand is derived from passengers' needs to achieve something at their destinations. As a result, the demand for air travel is segregated, with the two most significant groups of passengers being categorised as business and leisure passengers. A third group of passengers, VFR (visiting friends or relatives) is not homogenous in its demand characteristics Depending on the reason for the visit, some VFR passengers act like leisure passengers while others act like business passengers.

The proportion of business to leisure passengers travelling on different sectors is by no means fixed Instead, different sectors can be dominated by a particular type of passenger. For example, the proportion of inbound leisure passengers to all inbound passengers on the Australia-Japan route was 88 per cent for the year ending October 1996 (DoIRD 1997). Airlines competing on the basis of quality are likely to be in a stronger competitive position on routes that have a higher proportion of business passengers, while 'discount' airlines will tend to be more competitive on routes where there are more leisure passengers.

Different sectors are also characterised by the origin of passengers. For example, on the Australia-Taiwan route, Australian residents accounted for only 16 per cent of total passenger movements for the year ending October 1996 (DoIRD 1997). It is reasonable that, all else being equal, a national airline will be favoured by its residents over a foreign airline

The different characteristics of each aviation route makes it difficult to prescribe a general paradigm of the competitive effects of joint services. Instead, each agreement should be judged on a case by case basis Nevertheless, some general points regarding the competitive impact of joint services agreements can be made.

#### The impact of joint services agreements on market structure

*Concentration of firms*: Given the difficulty of proving the competitive implications of joint services, anti-competitive concerns are often argued in terms of the increased market concentration, as past or possible competitors become partners. However, joint services agreements do not automatically result in greater concentration. For example, by their nature, density joint services agreements are not typically made between

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competing or potentially competing airlines. Also, on low volume routes, it is possible only one carrier will provide independent services in the absence of a frequency joint services agreement.

| -<br>Route                  | per cent                     |         |         |                        |         |         |  |  |
|-----------------------------|------------------------------|---------|---------|------------------------|---------|---------|--|--|
|                             | Top two airline market share |         |         | Market share of Qantas |         |         |  |  |
|                             | 1993/94                      | 1994/95 | 1995/96 | 1993/94                | 1994/95 | 1995/96 |  |  |
| Indonesia                   | 84                           | 78      | 80      | 33                     | 32      | 36      |  |  |
| Japan                       | 87                           | 88      | 82      | 52                     | 53      | 46      |  |  |
| New Zealand                 | 87                           | 91      | 89      | .38                    | 40      | .39     |  |  |
| Singapore                   | 94                           | 94      | 93      | 46                     | 45      | 38      |  |  |
| United Kingdom <sup>1</sup> | 100                          | 100     | 100     | 52                     | 55      | 53      |  |  |
| United States               | 82                           | 93      | 88      | 51                     | 54      | 51      |  |  |

## Table 2 Market shares, uplift-discharge traffic, selected routes

1 The Australia-UK route is an example of the difficulty of defining the market for aviation services. While uplift-discharge data suggests that the route is dominated by Qantas and British Airways, there is effective competition from other airlines via intermediate points. For a discussion of this see IPC 1995.

Source Do IRD 1997

When joint services agreements do result in increased market concentration, does this translate into an effective reduction in competition? As shown in table 2, aviation routes can be dominated by the designated national carriers to such an extent that, in any other industry, the concentration of firms would already be considered undesirable. Consequently, it is possible that until regulatory restrictions on foreign ownership and capacity are relaxed, frequency joint services are unlikely to have a significant impact on the competitive nature of some routes

*Barriers to entry*: The Irade Practices Commission (IPC 1995, p. vii) defines barriers to entry as "regulatory and economic impediments that prevent or inhibit the ability of new airlines to enter, or existing airlines to increase services in, particular markets" Barriers to entry may also include those barriers that make it difficult for a firm to withdraw from an industry and hence deter a firm from entering the industry in the first place

Contestability theory suggests that the easier (less costly) it is for new firms to enter into a market, the greater the competitive pressures on incumbent firms to produce efficiently, equating marginal costs with the market price for the good or service (Baumol, Panzar & Willig 1982) At first, deregulated "airline markets were believed to be contestable, and thus easy to enter, because aircraft were mobile at relatively low cost - the 'capital on wings' rationalization" (Debbage 1994, p. 191). However, it is now accepted, particularly for international markets, that there can still be substantial barriers to entry. These barriers include economies of scale and scope.

Although "an airline's network size may not result in lower unit costs it may give an airline a significant marketing advantage over its rivals, making profitable entry more difficult for a new airline" (BTCE 1994, p. 28). The inability of new and existing airlines to gain access to some airports creates a barrier to entry and hence can reduce the airlines' ability to extend its network presence.

Even without regulatory or physical restrictions, for an entrant airline to establish a comparable network to that enjoyed by an incumbent airline, the entrant airline would need access to substantial capital resources. Even for established carriers, the risks associated with making large capital outlays to finance market entry can be a deterrent. For potential airlines, the IASC has found that it can be very difficult for applicants to secure enough capital to gain regulatory approval to commence independent services.

Joint services provide a less capital intensive alternative for airlines to develop their networks. Frequency type joint services allow an airline to establish a market presence on routes that otherwise it could not afford, while density joint services allow an airline to extend its network quickly through one agreement with another carrier

Consequently, joint services may be viewed as reducing barriers to entry and thus enhancing competition. However, as more airlines enter into more joint services agreements, in the future it may become increasingly difficult for new airlines to find partner airlines who are free to enter into new agreements.

The impact of joint services agreements on market conduct and performance

Often airlines claim joint services are necessary because of the carriers' inability to provide a commercially sustainable service. In general, commercial viability is a function of the balance between supply and demand for a given market. However, capacity limitations due to either airport congestion or regulatory allocations may also impose impediments to a commercially viable service.

On low traffic routes dominated by leisure travellers, a national carrier may not be able to provide a commercially sustainable service when it is at a cost disadvantage to a foreign carrier. Alternatively, a national carrier may have a cost advantage over a foreign carrier but could find itself in a commercially unsustainable position if the foreign carrier continues to operate on the route at a loss. A foreign carrier may be able to operate at a loss if the carrier can cross subsidise services on the route with the rest of its network or if the carrier can gain government subsidies to operate services on the route.

In the above circumstances, a number of market scenarios are possible. Firstly, the national carrier may choose not to operate on the route. In this instance, the amount of

monopolistic power the foreign carrier has would depend on the type of passengers travelling on the route and the number of available indirect services.

A second possibility is that the national carrier chooses to operate a service regardless of the possible losses, that is, the carrier makes the decision to provide a minimum level of service. A carrier may do so if there is an expectation of possible positive returns in the future. Whether or not this market structure would increase competition beyond which would exist if only one carrier operated on the route would depend on the rivalry between the national and foreign carriers. If there is strong rivalry, consumers could expect to benefit from lower air fares as the national carrier attempts to minimise its operating losses by maximising load factors. However, in terms of national benefit, it is possible that any additional consumer surplus would be outweighed by the producer loss incurred by the national carrier. If there was little rivalry between the two carriers, it is likely that air fares would reflect costs in a relationship similar to there being only one carrier. However, unit costs are likely to be higher and hence passengers would probably face higher air fares.

A third scenario is where the national carrier seeks to operate frequency joint services with the foreign carrier. Since the two carriers are willing to cooperate under a formal agreement, it could be argued that the two carriers would be unlikely to act in an overly competitive manner without a joint services agreement. Consequently, it is likely joint services would provide a similar level of competition to what would be the case if the two carriers operated independently on the route. Also, the rationalisation of services and facilities made possible through cooperation could lower unit costs to a level similar to those of one carrier operating on the route. While this may not translate to lower air fares for passengers, at least the national carrier would be sharing in any monopoly rents earned on the route.

If the joint services were operated as a seat exchange or blocked capacity agreement, and if the carriers were required to market and sell their seats independently, then similar competitive forces may exist to the situation where the carriers provided independent services. However, the operating carrier would be in a stronger competitive position than the non-operating carrier since the operating carrier knows the price at which it sold its seats, and hence knows the 'operating cost' of the non-operating carrier Also, if the operating carrier can sell capacity to the non-operating carrier for a price greater than the cost of providing that capacity, the operating carrier has an immediate cost advantage over the non-operating carrier.

## The impact of joint services on consumers

Consumer deception and airline cooperative agreements has been a concern of aviation regulators around the world. Consumer deception occurs when the product received is not the product the consumer intended to purchase. For example:

• being booked on an airline the consumer would rather not be on;

- the service is operated using an aircraft the consumer would rather not be on;
- consumer confusion regarding where to check in or where to make connections;
- the consumer is unaware of baggage limitations and other restrictions; and
- language difficulties.

ICAO believes the information provided to the public is not sufficient and needs to be improved (ICAO 1996, p. 37) However, the consumer deception concern can be overcome through requirements placed on the carriers by the appropriate regulatory bodies. For example, the IASC places a condition on code sharing in its determinations, stating that airlines must take all reasonable steps to ensure the consumers are aware of who is actually operating the flight and of any aircraft changes For Australian domestic routes, a code of conduct has recently been signed by the Commonwealth Government, Ansett Australia, Qantas and the Australian Federation of Travel Agents to ensure passengers are able "to make informed travel choices based on an awareness of the identity of the service provider when codeshared services are being operated" (*Codeshare Disclosure - Industry Code of Conduct*, signed December 5, 1996).

There is also a commercial incentive for airlines to keep their customers informed. The results of the 1995 IATA Corporate Air Travel Survey indicate that when business passengers found themselves unexpectedly on a code share flight, more than 20 per cent were confused or disappointed while another 16 per cent were angry. Also, approximately 25 per cent "remained angry or grew even more so after the event" (IATA 1996, p. 40) Not only does this suggest that it is in the best interest of the airlines to inform passengers of changes in the operating carrier, it also provides a strong reason for airlines to choose their joint partners carefully. Some airlines, such as British Midland, have recognised the marketing advantages of transparency and have introduced a code sharing code of conduct to demonstrate their commitment to passengers.

The consumer deception issue aside, the quality of service benefits of joint services agreements for consumers can be substantial and include:

- providing a seamless service;
- a one stop check in and baggage handling;
- convenience of coordinated schedule times for international and domestic flights;
- shorter elapsed journey times; and
- shared frequent flyer schemes.

Given the anti-competitive potential for joint services, there is a perception that joint services lead to higher air fares. However, there is insufficient evidence in the current literature to substantiate this claim. One empirical analysis of the effect code sharing has on international air fares indicates that when non-market leaders adopt a code sharing agreement on a particular city pair, their action induces an average annual equilibrium fare decrease of eight per cent by the market leader (Oum, Park & Zhang 1996, p. 201).

More recently, the Industry Commission (IC 1997) analysed parallel code sharing agreements (a form of frequency joint services agreements) on Australian international routes. Although the Commission's findings should be treated cautiously, the Commission estimated that where code sharing is present, economy air fares may be 10 per cent lower than the mean air fare. The Commission argues that its results "suggest that code sharing contributes to reduced operational costs and/or greater competition between airlines, which are passed on to passengers as lower economy fares" (IC 1997, p. 53). The Commission found an insignificant relationship between code sharing and discount fares.

While both analyses are limited by the available data, and to specific types of code sharing, both indicate that in some cases the savings to consumers from joint services may be significant, and in addition to the unquantified quality of service benefits.

## Joint services on Australian routes

Australia currently has 49 bilateral agreements with other countries, of which 31 provide for code share or joint service arrangements. In March 1997, Australian international carriers, Qantas and Ansett International, had a total of 19 cooperative arrangements with foreign carriers. Most of these agreements involved hard blocked space agreements with code sharing. In addition, the domestic carrier Ansett Australia had three density type joint services agreements with foreign carriers (note: since Ansett Australia and Ansett International are separate companies, they may also be considered as operating under a form of density joint services agreement)

The majority of joint services agreements currently in place are on Asian, Pacific and North American routes, with the most far reaching agreement being the Qantas-British Airways Joint Services Agreement.

The number and type of joint services agreements involving Australian carriers are changing rapidly. The Ansett group continues to strengthen its relationship with Air New Zealand (Air NZ) and is set to seek approval for a joint services agreement with Singapore International Airlines (SIA). This agreement may rival the Qantas-British Airways Joint Services Agreement Qantas in the mean time has strengthened its relationship with British Airways through code sharing services on Australia-Europe routes

## Conclusion

There is still uncertainty regarding the impact joint services between international airlines may have on competition. What is certain is that the impact of joint services depends significantly on the structure of the market to which the joint services agreement applies, the relationship of the carriers in the market and nature of the joint services themselves. To argue that joint services are anti-competitive because they increase firm concentration in the market can be misleading Instead, the highly regulatory nature of international aviation prescribes many routes as already highly concentrated markets, with little opportunity for entry by new airlines. Joint services agreements can facilitate the entry of new and small carriers into these markets and hence may actually increase competition on some routes.

As aviation routes become fundamentally more competitive, the issue of the impact joint services agreements have on competition becomes more problematic. Although not discussed here, it is already possible that on some highly competitive routes, an agreement between two major carriers may significantly weaken competition However, as the present debate over the proposed British Airways-American Airlines agreement illustrates, the issue of joint services is not clear cut.

On many international aviation routes, the benefits of joint services agreements are likely to be greater than the negative competition effects until bilateral limitations concerning the foreign ownership of airlines, air capacity and traffic rights are further liberalised. The two quantitative studies referred to in this paper tend to support this conclusion. However, the two studies are not comprehensive, and even if a more comprehensive model could be developed which indicated net positive benefits from joint services, not all international aviation markets are the same, and exceptions will always exist. Consequently, it would seem the most appropriate approach for authorities concerned with regulating joint services agreements is to judge each on a case by case basis.

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#### Abbreviations

| AGPS  | Australian Government Printing Service           |
|-------|--|
| BICE  | Bureau of Transport and Communications Economics |
| DoIRD | Department of Iransport and Regional Development |
| GAO   | United States General Accounting Office          |
| IASC  | International Air Services Commission            |
| IC    | Industry Commission                              |
| ICAO  | International Civil Aviation Organization        |
| TPC   | Trade Practices Commission                       |

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