AN ECONOMIC ANALYSIS OF CANADIAN AIRLINE DEVELOPMENT AND AIR TRANSPORT PUBLIC POLICY IN THE PACIFIC OCEAN REGION

by

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A thesis submitted to the Faculty of Graduate Studies of the University of Manitoba in partial fulfillment of the requirements of the degree of

DOCTOR OF PHILOSOPHY

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TO MY WIFE,

JEAN

AND MY PARENTS

HUNG-THU AND YUK-LIN

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ABSTRACT

This thesis is an economic analysis of Canadian participation in the air traffic of the Pacific Ocean region from 1970 to 1985. Based on this analysis an evaluation is made of the effectiveness of Canada's air transport policy and Canadian airline performance.

The thesis is empirical and historical and uses quantitative data. Airline structure, conduct and performance components are used in the context of government and enterprise relationships. The thesis reviews airline economics, the structure of international airline regulation, and Canada's bilateral air transport agreements and public policy. An analysis of the growth of the region's air traffic, the character of specific markets in the region, and Canada's air traffic development in the region, follows. A systematic performance analysis of Canadian government activity and carrier conduct is the focus of the thesis.

The research showed that: the economic determinants of air traffic growth gave the region the highest growth rate in the world in the period reviewed; air transport in the region has been highly competitive with several aggressive carriers, strong national ambitions and relatively deregulated markets; traffic diversion via the U.S. has been a

problem for Canada; market share and load factor analysis revealed that CP Air's scheduled passenger traffic performance faded in important markets after some initial strength; Canada's air cargo and non-scheduled passenger traffic performance has been relatively weak.

The thesis concludes that: Canada's international carrier market allocation policy has been unrealistic and slow in adjustment in the Pacific Ocean region; Canada's bilateral agreements need attention in terms of traffic extension and liberalization of operating clauses; cargo traffic requires development through more effective carrier use, gateway airport facilities improvement, and attention to freight forwarder relationships; the passenger charter market needs evaluation in terms of its current potential in the region. Improvement in Canada's air transport situation in the region requires both effective government and carrier intervention and also government interdepartmental cooperation.

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Chapter I

INTRODUCTION

The international commercial aviation industry has made significant progress since the conclusion of World War II. International Civil Aviation Organization (ICAO) statistics show that tonne-kilometers performed in international service by the industry increased from 56.65 billion in 1970 to 157.33 billion tonne-kilometers performed in 1984.[1] Canada has been an important participant in international commer-

TABLE 1

International and Total Scheduled Services Performed by Canadian Airlines

(In Millions Tonne-Kilometers Performed)

	1970	1975	1980	1984
International	880	1337	1935	2273
Total	1923	2896	4152	4584
International Percentage	48.3	46.2	46.6	49.6

Source: Statistics Canada, Air Carrier Operations in Canada, Catalogue 51-002. 1970, 1975, 1980 and 1984.

cial air transport. About half of Canadian scheduled airline traffic is international (see Table 1). Furthermore, Canadian airlines are important participants in major international markets. For example, in 1982, 1,016,000 passen-

[1] ICAO, Annual Reports, 1971 and 1985.

gers were carried on transatlantic routes and 254,000 passengers flew in in the Pacific Ocean region market by Canadian airlines.[2]

The purpose of this thesis is to provide an economic analysis of Canadian participation in airline traffic of the Pacific Ocean region for the period 1970-1985. More specifically, it will study the evolution and participation of the Canadian government and Canadian air carrier participation in this region from the economic and public policy perspective.

The Pacific Ocean region is an important and increasingly significant region for airline activity. ICAO statistics identify airline traffic volume in six major geographical regions; namely, North America, Europe, Asia/Pacific, Latin America/Caribbean, Middle East and Africa. They show that tonne-kilometers performed in this region have increased from 863 in 1960 to 4,418 in 1970. In 1975, this figure grew to 10,259 and it has subsequently risen to 27,847 tonne-kilometers performed in 1984.[3]

According to ICAO statistics, as shown in Table 2, the Asia/Pacific region has consistently placed third in percentage terms among these six regions. More importantly, though, is the fact that the Asia/Pacific percentage share

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[2] Canada Year Book 1985, p.421.

[3] Tonne-kilometers performed in Asia/Pacific region statistics are estimated from ICAO, Annual Reports, various issues.

TABLE 2

World Airline Traffic--Regional Percentage

(In Tonne-Kilometers Performed)

	1960	1970	1975	1980	1985
North America	61.5	50.8	41.6	38.6	38.5
Europe	22.6	35.2	36.8	35.0	32.7
Asia/Pacific	7.0	7.8	12.1	15.5	17.7
Latin America/Caribbean	5.4	2.7	4.7	5.5	4.9
Middle East	1.3	1.6	2.3	2.8	3.5
Africa	2.2	1.9	2.5	2.6	2.7

Source: ICAO, Annual Reports. Various issues.

of world airline traffic has shown by far the greatest percentage increase among the top three regional markets and that this percentage share has risen from just under 9% of that of the largest market to almost 50%, as shown in Table 2.

For the purpose of this thesis, the Pacific Ocean region includes air transport routes in the North Pacific, South Pacific, and Southeast Asia. In terms of countries the most significant, in addition to Canada, are Japan, Hong Kong, China, Australia, New Zealand, Singapore, Thailand, Korea, Indonesia, the Philippines, and the United States.

Canadian carrier involvement in international air transport in the Pacific started in 1949 with CP Air's first overseas operation on July 13. This enabled CP Air to establish a route linking Vancouver and Sydney with intermediate stops in Honolulu and Fiji. Subsequent to the establishment

of this South Pacific market, in September of the same year, CP Air increased its Pacific involvement with a flight connecting Vancouver to Tokyo and Hong Kong by way of Anchorage and the Aleutians, which provided technical stops. Subsequently, CP Air has continued to engage in the development of its Pacific air transport network.

The period 1970-1985 has witnessed considerable change in the Pacific region. Airline traffic growth has been impressive. International Air Transport Association (IATA) statistics show that scheduled available tonne-kilometers recorded for the North and Mid Pacific market[4] have grown by a factor of 24.0 from 435 millions in 1969 to 10,430 millions in 1985. During the same period, total IATA international airline traffic only increased by a factor of 5.6 from 20,182 millions to 113,898 millions. In 1980, a total of 4,794 millions tonne-kilometers available was recorded in the North and Mid Pacific market; a factor of 2.6 in comparison with the 1985 figure, while the industry only grew by a factor of 1.4 with 81,763 millions tonne-kilometers available.[5] As part of this air traffic development, the Canadian network has been expanded in the Pacific region. At the same time, aggressive airline competition based in countries of the Pacific Ocean region has emerged. Major changes in U.S. airline policy have had important implications for Can-

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[4] IATA definition of regions relevant to this thesis are given in Appendix A.

[5] IATA, World Air Transport Statistics, 1970, 1981 and 1986.

adian participation in this region as well. Within this context, the thesis addresses three principal questions:

1. What has been the nature of the evolution of Canadian commercial air transport participation in airline traffic in the Pacific Ocean region from 1970 to 1985?
2. How effective has Canadian public policy been in supporting the participation of Canadian airline performance in the Pacific Ocean region?
3. How successful has Canadian airline performance been in competing with the carriers of other nations?

A number of more specific questions are related to these basic questions. For example, what has been the character of air transport rivalry in this region? What are the specific characteristics of Canada's network in the region? What types of operations have Canada's carriers conducted? What are the implications of this thesis for Canadian public policy and the future development of Canadian air transport development in the Pacific Ocean region?

The answer to the first basic question will be provided by material which shows the nature of Canadian traffic development in the region, and Canadian carrier participation in it, and the evolution of carrier activity and rivalry.

To give precision to the answer to the second basic question, the following criteria are established for a public interest evaluation of government performance:

1. Has the Canadian government been successful in extending and strengthening the Canadian air transport network in the Pacific Ocean region through new bilaterals and/or major renegotiation of existing bilateral relationships?
2. Has the government been successful in removing "flaws" in the bilateral system present in the region at the start of the period under review through, for example, activation of a bilateral or through lessening the restrictions of an existing bilateral?
3. Has the government been effective in its air transport instrumentation of its bilaterals in the region through its choice of carriers to operate in the region?

This evaluation will be made on the basis of material in Chapter IV. Evaluation of Canadian carrier performance in the Pacific Ocean region, in answer to the third basic question, will be made in terms of the following criteria:

1. Market share performance by specific markets. This analysis will consider both market share levels and trends.
2. Load factor analysis by specific markets.

This performance evaluation will be made in Chapter VIII.

The methodology of this thesis is basically empirical. The subject studied has important institutional constraints which form a basic structure within which international air transport operates. Government public policies play an important role within this framework of government and enterprise relationships.

Organization of material draws on the structure-conduct-performance paradigm used in industrial organization studies. It should be noted, however, that international air transport markets are not "free markets" as indicated by the previously mentioned institutional constraints. Use of the structure-conduct-performance framework is confined to the organization of analysis rather than a technique for the testing of hypotheses. In addition to the use of the components of this framework, a government - enterprise framework also contributes to the thesis design. The thesis is directed basically towards public policy questions but necessarily includes important systematic empirical analysis of the carriers involved. Historical development and quantitative data are the basis of the thesis, which is fundamentally empirical. Characteristic of the operation of the carriers is duopolistic and oligopolistic rivalry.

The evolution of the thesis will be as follows:

The economic aspects of international airline operations, such as the nature of demand, market structure, elements of airline costs, pricing policy, and other important economic characteristics, will be discussed in Chapter II.

The role of Chapter III is to introduce the structure of the international air transport industry and its institutional elements and regulatory framework. Particular emphasis is placed on the restricted "Freedom of the Skies" and how these institutional developments relate to the wide range of regulatory machineries.

In Chapter IV, special attention is drawn to the bilateral air agreements[6] that Canada has concluded with foreign governments. The existing Canadian bilateral air transport agreements that are relevant to the Canadian Pacific region are examined and Canadian public policy on carrier designation is presented. The performance evaluation of Canadian government policy for air transport in the Pacific Ocean region is of special importance in this chapter.

Chapter V examines the economic characteristics of the Pacific Ocean region. It shows that the large population base in this area, coupled with the economic growth, increases in per capita income, expansion of industrialization and the lowering of the fare level together have stimu-

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[6] A bilateral air agreement is a treaty negotiated and signed by representatives of two contracting states for reciprocal international air service between the states by designated carrier or carriers of the respective states.

lated growth in traffic activity in the region.

Chapter VI reviews the international air transport environment for Canada in the Pacific Ocean region. Leading features of the air traffic system and the route structure of the Pacific area's air transportation development will be analyzed. The characteristics of the airlines and their bilateral relationships with Canada is also given attention in this chapter.

The focus of Chapter VII on the development of the Canadian traffic system in the Pacific ocean region shows that the trade expansion observed in the region has led to significant growth in both passengers and cargo traffic. It also indicates the problem of traffic diversion to the United States has inhibited the development of Canadian air transport in this region.

Chapter VIII provides an economic analysis of the market condition for Canadian carriers in the Pacific Ocean region. This evaluation of the performance of Canadian airlines and their relative strength in competing with carriers in this region is made in terms of market share analysis and load factor analysis.

Chapter IX is oriented towards Canadian airline conduct and the role of the Canadian government in the period under review. It presents a critical analysis of the conduct of these two institutional components of Canadian air transport

participation in the Pacific Ocean region in the period under review.

Chapter X concludes this thesis with a concise review and concluding statements on the implications of the thesis.

Each chapter ends with a brief summary. As far as possible, statistical data are presented in tabular form and in areas immediate to the main text wherever possible, otherwise, they can be found towards the end of the thesis in Appendix. It should also be noted that statistical information are complied from various government publications, international agencies reports and trade journals.

In summary, this chapter has pointed out the importance of the Pacific Ocean region in the overall picture of the international commercial aviation development, and that Canada has always been an active participant in the region. In addition, it has provided an introduction to the thesis. The research method is identified and the structure of the chapters in the thesis is clearly defined. Given this overview, the economic aspects of airline operation will now be presented in Chapter II.

Chapter II

AIRLINE ECONOMICS

Certain economic variables in the international air transport industry which play a significant role in determining the conduct of firms that, ultimately, affect the performance of the industry. This chapter will outline the basic economic characteristics of the international commercial aviation industry.

2.1 THE CLASSIFICATION OF THE INTERNATIONAL AIR TRANSPORT INDUSTRY

The international commercial air transport industry can be divided into three different components on the basis of fundamentally different service components. These are scheduled commercial operations, non-scheduled (or charter) commercial operations, and air cargo or air freight operations.

2.1.1 Scheduled Commercial Operations

International scheduled air carriers provide the general travelling public with a convenient programmed type of services with frequency of flight clearly specified. Air transport services that are "open to use by the general pub-

lic" and "provide through a published timetable or with flights so regular or frequent that they constitute a recognizable systematic series" are accordingly classified as scheduled services.[7] This definition of a scheduled service published by ICAO during the early fifties has worked reasonably well. With the introduction of the "programmed charter", the definition appears to be applicable to certain charter service as well.

Within the scheduled international commercial aviation industry, there are normally three sources of revenues from which an air carrier can derive its income; these are revenues generated from performing passenger, mail, and freight services. However, operating revenue generated from international scheduled commercial operations represents well over ninety percent of the total industry's revenue and passenger traffic constitutes the most important element of this scheduled airline traffic. In addition to this scheduled traffic, and the smaller charter and cargo components, some airlines have supplemented their earnings from other aviation activities by accepting work contracts in areas such as aircraft maintainance and overhaul.[8] In some instances, carriers also engaged in the training of pilots and other crew personnel for other airlines as well.[9]

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[7] See ICAO, Definition of a Scheduled International Air Service, Doc.#7278-C/841, May 10, 1952, p.3.

[8] In the Pacific region, Pakistan Airlines has placed heavy emphasis on providing this type of service.

[9] Air Canada is one of many airlines engaged in these activ-

At the very beginning of commercial air transport operation, traffic from mail services provided carriers with a large proportion of their revenues. Since the early fifties, however, the gradual and steady growth in passenger traffic has changed the composition of airline revenues by reducing its reliance on this mail traffic.

2.1.2 Non-scheduled Commercial Operations (Charters)

International charter service[10] has been seen as an effective market alternative to scheduled service for some purposes. While restricted in some ways by regulations, charter carriers have demonstrated a capability to offer international airline service at rates substantially below the prevailing scheduled service fares. International air charter service dates back to the early fifties. The charter explosion of the late sixties and early seventies indicated the existence of a large untapped market for international air transportation, which had changed from a luxury good into a mass-market product.

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ities. In 1986, Air Canada was training DC9 pilots in Winnipeg for a domestic Japanese airline.

[10] For a more detailed discussion of difference types of charter classifications, see Anthony F. LoFrisco and Paul S Quinn, Charters, Rebates And Enforcement In The Travel Industry, New York: (Practicing Law Institute, 1975). Kamp, Jaap., Air Charter Regulation--A Legal, Economic, and Consumer Study, (Praeger Publishers, Inc. U.S.A. 1976).

The concept of air charter was originally intended to offer alternative air services to individual groups and organizations where full occupancy of a plane was expected. When organizers anticipated that, with a large number of people travelling, it might be more economical to lease an aircraft and hire their own crew than to purchase scheduled air tickets for each individual, the charter business was born.

If a traveller were willing to travel according to the charter company's convenience, they could save an amount equivalent to the difference in fares between those offered by scheduled operators and those of the charters.

In 1983, total revenue of $2.8 billion was recorded from charter operations and resulted in an operating profit estimated at U.S. $100 million, with a net profit of $40 million. While non-scheduled air transport represented a significant part of overall operations for European Civil Aviation Conference's (ECAC) nations, it was of minimal importance in the Pacific area[11]

In 1984, over half of the Canadian charter operations were performed by Wardair with operating revenues of $280,396,616 while the industry result was $508,079,915.[12]

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[11] 1982 data from ICAO indicates that the largest non-scheduled market is within the 22 ECAC member states. It is here that non-scheduled air transportation represents 55 per cent of all air transport activities.

[12] In 1982, the figures were $269,899,310 and $533,112,720 respectively. Statistics Canada, Canadian Civil Avia-

In 1970, over half of the international flights were performed by Canadian carriers. Total international charter passengers in 1970 from leading Pacific regions included city pairs such as Toronto-Tokyo, which ranked 16 among the top city-pairs with 4,210 passengers travelling to Canada and 4,561 departures. Vancouver-Tokyo ranked seventeenth, with 4,095 passengers arrivals and 4,454 travelling to Tokyo.[13]

2.1.3 Cargo Operation

International air transportation has become a more important element in facilitating the exchange of world commodities. As economic conditions improve, the demand for goods, especially perishable items, has increased. This increase has in turn increased the demand for air freight transportation.

Operations of the air freight industry can be classified into scheduled and non-scheduled cargo services. Cargo is often carried as a secondary service on scheduled passenger flights. Predominantly cargo shipments are mainly performed on the basis of charter operations. Only recently have specialized scheduled operations experienced growth of such a magnitude that it has almost outgrown non-scheduled air car-

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tion, 1982 and 1984, Catalogue 51-206, pp.20-21.

[13] Statistics Canada, Aviation in Canada, 1971 -- A Statistical Handbook of Canadian Civil Aviation. Catalogue 51-501, p.101.

go operations.

By the nature of the industry, there is usually a directional imbalance in the flow of cargo traffic. In the Canadian Pacific Ocean region, eastbound flights are almost always flying with fully utilized cargo space while the westbound flights are almost always less than half utilized.[14] For example, in 1983, 726 tonnes of freight were transported from Seoul to Seattle while only 32 tonnes were recorded in the other direction. Also for the same year, air freight from Hong Kong to Vancouver was recorded at 607 tonnes performed by Cathay Pacific alone, but only 106 tonnes was reported to have been carried by the same carrier in the opposite direction. This directional imbalance could also be found in other sectors as well.[15]

During 1984, revenue tonne-kilometers--the overall measurement of passenger, freight and mail traffic--rose to 157.33 billion, compared with 32.62 billion in 1967, an increase of 482 per cent.[16] There are three explanations for

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[14] Whelan, Buz, Vice-president, (Cargo), Japan Air Lines. Export By Air: Unfilled Westbound Capacity Beckons, Canada Japan Trade Council Publication. 1987, p.11-15.

[15] Again, in 1983, Tokyo to Vancouver runs recorded 1960 tonnes and Tokyo to Seattle had a recorded high of 9464 tonnes, however, the return flight had only 1278 and 5761 tonnes respectively. In the forth quarter of 1976, total freight transported from Tokyo to Seattle was 907 tonnes while Seattle-Tokyo was 738.4. Also, Tokyo-Vancouver was 281.9 tonnes, and Vancouver-Tokyo was 143.5 tonnes.

[16] 1984 figure is obtained from "ICAO Annual Report, 1984", ICAO Bulletin, July 1985, p.20. 1967 figure is obtained from "ICAO Annual Report, 1977", ICAO Bulletin, January 1978, p.15.

the growth of air cargo demand. The first contributing factor in this observed growth is that air freight transport allows the shipper the convenience of having the cargo delivered within a shorter time-span than other modes of transport, hence, the shipper is able to reduce costs that are time-related, such as the reduction of in-transit capital costs. Second, in relation to other modes of transport, the speed that air transport offers has significantly reduced the necessary transit time and, therefore, reduced the risk. As a result, the shipper may save on insurance costs. Finally, air freight transport usually involves less inland transport than other modes, hence, eliminating unnecessary inland shipment costs that would have occured if the shipment were to be shipped by another mode of transportation. Despite a higher freight rate, the reasons for the strong growth in this industry are apparent. Total costs are offset by the savings that this mode of transport provides, thereby reducing the associated opportunity costs. This is especially true for high-price commodities such as television sets and video-cassette-recorders.

The growing use of air freight by more and more firms is indicated by the healthy increase in the annual freight results. The surprising aspect of cargo development in 1985, however, was the striking growth in the share of traffic by carriers based in the Asia and Pacific region. The twenty-four airlines of the region together accounted for

20.6 per cent of the world's freight traffic, second only to all U.S. major airlines combined.[17] On the international level, air cargo transport represented 10.86 percent of

TABLE 3

International Air Cargo Transport as a Percentage of Total Airline's Revenue

	1960	1965	1970	1975	1980	1983
Percentage	9.8%	10.4%	10.6%	11.9%	11.7%	10.9%

Source: ICAO, Annual Reports. Various issues.

total scheduled airline operating revenues in 1983.

The growth of the cargo traffic of international air carriers has been no less spectacular than the growth of passenger traffic, it should be noted, however, that the growth in international air cargo transport has led to an increase in freight capacity. This is reflected in the steady percentage average weight load factor of around 58% for the world's scheduled air services as shown in Table 4.

[17] Air Transport World, May, 1986. p.73 and 96.

TABLE 4

Percentage Average Weight Load Factor

(Scheduled Services Of Airlines Of ICAO States)

YEAR	INTERNATIONAL	DOMESTIC	TOTAL
1950	59	57	58
1951	63	63	63
1952	62	60	61
1953	61	59	60
1954	60	59	59
1955	61	58	59
1956	61	58	59
1957	61	56	57
1958	58	56	56
1959	60	55	57
1960	58	54	55
1961	52	52	52
1962	51	51	51
1963	51	50	51
1964	53	50	51
1965	54	50	52
1966	54	52	53
1967	52	50	51
1968	51	47	48
1969	52	45	48
1970	51	45	47
1971	49	44	46
1972	51	47	49
1973	53	47	50
1974	53	49	51
1975	52	49	50
1976	53	50	52
1977	55	51	53
1978	58	55	56
1979	59	56	57
1980	45	53	55
1981	59	53	56
1982	58	53	56

Source: ICAO, Annual Reports. Various issues.

2.2 THE DEMAND FOR INTERNATIONAL AIR TRANSPORT

The demand for international air transport has been expanding very rapidly. Increases in real per capita income in many parts of the world and changes in relative prices (intermodal competition) have contributed significantly to the growth of air transport demand. The saving in travel time costs through high-speed air travel has been very important in the expansion in air transport demand, especially for long-range trips. Improvement in the quality of service, measured in terms of frequency and comfort also favoured the international aviation industry as well.

Elasticity of air transport demand is important because it serves as a guide for airline managers and planners in revealing the character of the markets using air transport. It guides their decision making process for factors such as frequency scheduling, type of aircraft to be utilized on a specific route and the timing of flight departures, etc., which can affect every aspect of the airlines operations and, therefore, its performance.

There are many diverse factors which influence the passenger demand for air transportation, such as income levels, price, and flight frequency availability. For air cargo or freight transport, the general level of trading activity between the host and trading countries may also be an important factor.

In the short run, given a particular technology, overall demand for the transport of goods is relatively inelastic. This is because this demand is derived from the general level of economic activity that produces the goods and services for which transportation is demanded. Lower transport costs can act as a stimulus to the economy, but these costs are generally only a small part of the final price. Therefore, even a relatively large decrease in freight rates may result in a relatively small decrease in final prices. Factors such as general economic conditions and price, though important in many respects because of their influence on air transport demand, remain external to the air transport industry in the sense that airline planners and managements alike have no control over them. There are, on the other hand, some other factors such as the number of stops en route, time of day of arrival and departure, frequency of flights and type of equipment used that are mainly internal and airline planners will, therefore, have direct control over them.

The analysis of air transport demand is plagued by many problems. The most obvious are the lack of disaggregated data, the difficulty in segmenting the various travel markets and knowledge concerning the preferences of these travellers. It is generally agreed among economists that the demand for air transportation service is determined by the consumer's desire for performing certain economic activi-

ties. The enjoyment of such economic activities requires the physical presence of the consumer in places where air travel represents one of the available means for achieving that goal. Since air transport demand arises as a substitute for, or complement to, the demand for something else, it is therefore, commonly referred to as a derived demand.

Although the demand for air travel involves many different markets, the simple concept of derived demand gives rise to two distinct categories of demand that can broadly be identified as air services demand for leisure purposes and for business purposes. This division of demand by trip purpose is very important in air transport price elasticity demand analysis. It would be expected that the price elasticity of demand for leisure air transport services tends to be somewhat elastic, while the business passenger market is less sensitive to fare level in general, but more dependent on the availability of flights, their frequency and the duration of flight time. In most tourist travel air fares make up a large, and in some cases, major portion of total expense, so that a reduction in the fare level will cause a significant increase in demand. Hence, the characteristics of the leisure passenger market are such that its demand depends very much on the price level and the level of disposable and discretionary income per capita in that market. Demand for air travel between two countries is directly related to their G.N.P., level of discretionary income (liv-

ing standard), and the relative exchange rate between their two currencies. A stronger Japanese yen and a weaker U.S. dollar, for example, will tend to create more travel demand from Japan to the U.S.

Inherently, air transportation demand is also sensitive to the seasonal variations that impact other types of services. The resulting fluctuation in demand can be very significant and can lead to problems of excess capacity during the relatively slow season. The ability of an airline to fill up its non-storable airline seats can have a substantial effect on its profitability.

Another important aspect of demand is that the number of people who travel at night is generally lower because of the reduction in business travel. The peaks occur in the early morning and late afternoon, and the carrier will have to operate with spare capacity at other times; most notably during the late evening period. Carriers, therefore, are interested in knowing how easy it is to induce daytime leisure travellers to shift their travel to night time by means of a reduction in price during this off-peak period. It is for this reason that the study of demand elasticities and consumer choice or preference becomes most important.

Empirical studies of demand for air travel show the following factors to be useful in predicting demand for air travel: national income per capita, population size and lev-

el of air fares.[18] Table 5 provides a selection of econometric estimates of elasticities of demand for air transporta-

TABLE 5

Empirical Estimates of Demand Elasticities

	Price Elasticity	Income Elasticity
Transport Canada (1984)		
International (1974-1978)		
To Canada	-1.06	1.28
From Canada	-1.8	0.83
Smith & Toms (1978)		
To Australia (low)	-1.9	1.1
(high)		2.6
From Australia	-1.8	2.4
Straszheim (1978)		
North Atlantic (1948-1973)		
First Class (1948-73)	-0.76	
(1952-73)	-0.65	
Economy (1952-73)	-1.48	
(1963-73)	-1.12	
Peak Economy (1952-73)	-1.92	
Standard Economy	-1.96	
High discount	-2.73	1.1
Excursion	-1.82	
Mutti & Murai (1977)		
North Atlantic		
Economy	-0.74	1.69
Charter	-1.43	2.74
Bechdolt (1973)		
U.S. Hawaii (1961-1970)		
Low estimate	-1.6	.96
High estimate	-3.3	1.07

tion. Of all the available estimates on international air

[18] See Cheung, Hym-Kwai and Paul Kochhar. A Model for Forecasting Air Travel Demand Between Canada and Abroad, Statistics and Forecasts Branch (Air), Transport Canada. June, 1984.

transport demand, the Cheung and Kochhar Transport Canada's study conducted in 1984 is of special interest because its data source covered areas that are of vital importance to the present study. The Transport Canada study was formulated on the basis of a modified gravity model known as passenger origin-destination model. Three modules were developed. These are 1) Domestic, 2) Transborder and 3) Other international modules. Each module was structured by sector, trip purpose and direction, with the exception that trip purpose was not included in the international module. Of the three modules, the most relevant one is the "other international" module (hereafter referred to as "international model"). In the international model, data from both scheduled and charter operations were employed by aggregating Canadian data into six super zones and data from all other foreign countries were grouped into five-zone groups. Two separate estimations were made based on trip direction, of which Canadian-origin traffic was distinguished from foreign-origin traffic.

This forecast indicates that the price elasticity of international air transportation demand to Canada is -1.06. For travel originating from Canada, the price elasticity is -1.8. In other words, in the event of a price increase, it would impact more on the number of persons travelling from Canada than those travelling to Canada. With respect to income elasticities, the estimate has the value of 1.28 for

traffic destined to Canada and 0.83 for traffic generated from Canada. These results indicate that with an overall world income increase, one could expect a larger increase in travel would occur from other countries to Canada than Canadian outbound travel.

Similar results in terms of price demand elasticity of origin traffic were obtained by Smith and Toms.[19] In their Australian air transport demand analysis, elasticity of demand originating from Australia was estimated to be -1.8 also. However, a marginally higher price elasticity was reported for traffic destined for Australia, with a coefficient of -1.9. Hence, travel to Australia is more responsive to price changes than travel from Australia. This result is completely different from the Canadian study. With respect to the income elasticity of demand, Smith and Tom's estimates reported the range of 1.1 to 2.6 for travel destined for Australia and 2.4 for travel originating from Australia.

A study by Straszheim,[20] utilized time-series traffic data for the North Atlantic market. In his study, Straszheim employed mostly simple regression analysis. Multiple regression was only applied in the estimation of the high

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[19] A. Smith and J. Toms, Factors Affecting Demand for International Travel to and from Australia. (Canberra: Bureau of Transport Economics, 1978.)

[20] Straszheim, Mahlon R. "Airline Demand Functions In The North Atlantic And Their Pricing Implications." Journal of Transport Economics and Policy, Vol.12, No.2, May, 1978, pp.119-195.

discount fare group. This high discount fare group's estimates showed that better and more reliable results could be obtained when an additional income variable is taken into consideration. The results of this study indicated that high discount travel is most responsive to price change with a price elasticity estimated at -2.73. Other estimates range from -1.12 for economy class travel (1952-1973 data) to -1.96 in the case of standard economy class. As expected, more inelastic estimates were reported for first class travel with value of -0.65 and -0.76.

In addition to the significance of the price elasticity of demand differences by trip purpose, where the empirical studies confirm the a priori expectation of an inelastic demand for business and an elastic demand for leisure travel, it is important to note the strong income elasticity of demand for air travel. This income elasticity of demand is of great importance in areas of high economic growth as rising incomes impact strongly on the air transport industry.

It is interesting to note that elasticity of demand for vacation routes has the tendency of being more elastic. For example, Bechdolt,[21] using time-series travel data between United States and Hawaii, estimated that the demand elasticity for air travel could be as elastic as -3.3 and income elasticity estimation indicated a more or less unitary

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[21] Bechdolt, Burley V. "Cross-Sectional Travel Demand Functions: U.S. Visitors to Hawaii, 1961-70" Quarterly Review of Economics & Business. Vol.13, 1973. pp.37-47.

result for each of the 10 years time period under examination. Therefore, elasticity of demand for air transport is influenced by both the characteristic of the travellers and the nature of the route.

According to a study by Mutti & Murai[22] on the North Atlantic route, income elasticities are estimated to be 2.74 for charter services and 1.69 for the economy class services. For price elasticities, the estimates are -1.43 and -0.74 respectively. Their analysis also included estimates on cross price elasticity of demand for economy class with respect to charter fare, which was estimated to be 0.13. This implies a one percent increase in economy fare would result in more than a 0.13 percent increase in charter traffic. Also included in their study was the result of price elasticity estimates based on total travel expenditures rather than the level of air fare alone. The results indicated that a one percent increase in total expenditure would result in 1.39 percent decrease in charter traffic and, similarly, a 1.1 percent reduction in economy class travel demand.

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[22] Mutti, John and Yoshitaka Murai. "Airline Travel On The North Atlantic." Journal of Transport Economics and Policy. Vol.11 No.1, January 1977. pp.45-53.

2.3 OUTPUT

Air transport is a service industry which provides output to passengers and, to a lesser extent, to shippers of cargo. The basic output is dependent on the characteristics of an airline's fleet capacity. The output is often given as available passenger-seat-kilometers or, more conveniently for cargo, as available-tonne-kilometers per unit of time, often a year. Output from cargo capacity is subject to a volumetric constraint depending on aircraft size and configuration.

Expansion of output occurs through the use of more, or more productive, aircraft, or both. Aircraft productivity is increased by higher speed, greater size, and higher annual hours of utilization. Increased aircraft range enables an airline to reach more distant markets and/or provide more non-stop service.

Given the service nature of the industry, the work of flight and ground personnel and the provision of suitable seating and cargo provision are important to the quality of the output. These personnel, combined with the characteristic of the aircraft in use, are basic to product differentiation of the output in the air transport industry.

Aircraft have multi-product capacity inasmuch as cargo space is available in the belly space of an aircraft as a necessity of high-speed fuselage design. The cabin space

can be modified for mixed passenger/cargo use or, more frequently for different classes of passengers. Specialized freighter aircraft have been developed to deliver cargo with its specialized needs and time constraints which differ from the passenger market.

Airline output is delivered in terms of city pairs as is characteristic of medium to long range transportation. In effect an airline caters to many markets because it is delivering spatial utility.

It is noteworthy that the output of an airline cannot be stored. This fact, combined with the airline efforts to maintain fleet utilization despite demand fluctuations, has important implications for the marketing of airline output. The conversion of available passenger-seat-kilometers (or tonne-kilometers) into revenue passenger-seat(tonne) kilometers is a primary airline business objective. Maintenance of at least a break-even load factor (percentage occupancy) is necessary for the profitable provision of output.

2.4 TRENDS IN AIRLINE COSTS

Air transport costs experienced a long period of uninterrupted decline in terms of unit output in the post-war period until the end of the sixties. Average fares per passenger mile reflected a variety of fare reduction plans and by continuing improvement in the economy and efficiency of

operations. In this phase the distribution of operating costs by categories remained relatively stable. Basic to this impressive performance was the improvement in aircraft productivity as the speed, size, utilization and range of aircraft increased. The introduction of turbo-power, in particular the use of jet aircraft, had a dramatic effect on operating costs in the sixties.

With the arrival of the seventies this decline in unit operating cost through improved productivity was offset by inflationary factor cost pressures in the labor, materials, and capital equipment categories. Especially noteworthy was the impact on costs of increased fuel prices. The introduction of wide-body aircraft, especially the Boeing 747, with its large seat and range capacity and low break-even load factor, acted to improve airline economics.

Table 6 presents operating cost and revenue of world scheduled airlines for selected years. Over the twenty-year period between 1951 and 1971 costs per tonne-kilometer performed dropped by 15.7 per cent, while costs per tonne-kilometer available dropped by 52.3 per cent. For the period between 1975 and 1983, increasing fuel costs and inflationary pressure increased these two costs items by a significant amount, from 34.9 to 70.2 and 16.5 to 41.5 respectively.

TABLE 6

World Scheduled Airlines' Costs and Revenues (1951 - 1983)

(for Selected years)
1951, 1961, 1971, 1975, and 1983
(U.S. Cents)

	1951	1961	1971	1975	1983
Costs/ton-km performed	40.4	39.6	34.9	48.9	70.2
Costs/ton-km available	25.2	21.2	16.5	24.8	41.5
Revenue/ton-km performed	40.9	38.9	35.9	49.5	73.6
Passengers only	43.6	44.5	43.5	58.0	84.3
Non-scheduled flights	32.6	17.6	17.0	30.0	52.3
Mail	66.7	39.8	23.5	32.1	41.5
Revenue/ton-km available	25.6	20.8	17.0	25.3	42.4
Passenger Rve./pass-km (scheduled services only)		3.9	3.9	5.2	7.6

Source: ICAO, Financial Data, Various issues.

2.5 OPERATING COST

Aircraft operating costs normally decline with increased stage lengths. This is due to the better economics of an aircraft operating at a steady cruise speed and the minimization of "down time" and ground costs. Airlines which operate long distance city-pair sectors and non-stop flights are well situated to benefit from this fact.

Larger aircraft tend to have lower unit operating costs than smaller aircraft. Important airline activity in the Pacific Ocean region capitalizes on both this fact and the lengthy stage lengths just mentioned.

The structure of airline operating costs can be seen in the following ICAO classification.

Direct Operating Costs (DOC)

Flight Operations
- Flight crew salaries and expenses
- Fuel and oil
- Airport and en route charges
- Insurance
- Rental of aircraft and/or crews

Maintenance and overhaul

Depreciation and amortization
- Flight equipment
- Ground equipment and property (could be IOC)
- Amortization of development and crew training

Indirect Operating Costs (IOC)

Station and ground expenses

Passenger services
- Cabin crew salaries and expenses (could be DOC)

Ticketing, sales and promotion

General and administrative

Other operating costs

ICAO data presented by Doganis show that direct operating costs of the scheduled airlines of ICAO were 54.2% (1972), 56.5% (1977) and 58.4% (1982) of total operating [23] The percentage tends to be somewhat higher for Pacific Ocean region carriers when compared with carriers operating with North America.

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[23] Rigas Doganis, Flying Off Course -- The Economics of International Airlines, George Allen & Unwin, London, 1985. p.82.

Problems associated with classification of airline costs into "fixed costs" and "variable costs" has long been recognized in the literatures. For example, Caves states:

> If business costs fell neatly into the "fixed" and "variable" categories of economic theory, measuring this aspect of industry structure would be simple. In fact they do not, and the task is correspondingly difficult. Some capital goods may be readily detachable from the firm by open-market sale, so that the cost of their services to the firm is effectively variable even if it is normally financed through the issue of long-term securities; this is an important feature of the airlines.[24]

While some direct operating costs could be viewed as having the characteristics of fixed costs,[25] others are parallel to variable costs.[26] Variable costs can also be seen as a function of the traffic volume. Indirect operating costs may also reflect the extensiveness of the route structures being served, since indirect operating costs include items such as user charges and station expenses,[27] passenger services, ticketing sales and promotion, general and administrative,

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[24] Richard E. Caves, Air Transport And Its Regulators -- An Industry Study, Harvard University Press, Cambridge, Massachusetts, 1962. p.79.

[25] Since direct operating costs, in the short run, do not vary with particular flights and are not escapable in the short term, such as within a scheduling period.

[26] Some direct operating costs can be classified as variable costs because such costs are characterized as escapable costs. That is to say, in the event that carrier cancelled a flight or a series of flights, costs that the carrier can expect to avoid incurring are said to be variable costs.

[27] The more extensive the network of routes, the higher the costs associated with user charges and station expenses are expected to be. In general, user charges and station expenses include landing and associate airport charges, en-route facility charges and station expenses.

plus other operating expenses which are positively related to the level of services provided.

Studies of economies of scale in air transportation have analyzed the effects of various firm sizes on unit operating costs per available tonne-kilometer. Most of the evidence to date has suggested that the airline industry does not have significant economies of scale. In most instances, returns to scale have been fairly constant. Some could find no economies of scale at all. For example, Arthur DeVany found evidence of increasing unit flight costs in the airline industry.[28]

Recent studies in airline economics have introduced a concept similar to that of increasing returns to scale. This concept is known as "economies of scope."[29] Holding firm size constant, economies of scope are said to exist if joint production of two different outputs can be produced at less cost than if the same amount of these outputs were to be produced by two specialized firms.

A further cost variation can be identified when it is realized that there are two dimensions of airline size--the size of each carrier's service network and the magnitude of

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[28] See A.S. DeVany, "The Effect of Price and Entry Regulation on Airline output, Capacity and Efficiency", Bell Journal of Economics, Spring, 1975, Vol.6, pp.327-45.

[29] For a detailed discussion, see Roger Roy, Economies of Scale In The Airline Industry, (Canadian Transportation Commission: Research Branch, June 1980), and J. Panzar, and R. Willig, "Economies of Scope," American Economic Review, Vol.71, No.2, pp.268-272.

passenger and freight transportation services provided. With this in mind, one can make a distinction between returns to density(the variation in unit costs caused by increasing transportation services within a network of given size) and returns to scale(the variation in unit costs with respect to proportional changes in both network size and the provision of transportation services).

The inclusion of points served in the cost function along with output permits us to distinguish between returns to density and returns to scale in airline operations. We define returns to density as the proportional increase in output made possible by a proportional increase in all inputs, with points served, average stage length, average load factor, and input prices held fixed. This is equivalent to the inverse of the elasticity of total cost with respect to output. Economies of density exist if unit costs decline as an airline adds flights or seats on existing flights(through larger aircraft or a denser seating configuration), with no change in load factor, stage length, or the number of airports served.

It would appear that the presence of economies of scope and returns to density put demands on airline management personnel to explore the possibilities offered by their system and thereby achieve greater cost efficiency. Optimal fleet development is also of great importance in airline cost economy.

2.6 PRICING

The importance of the aviation industry to national interests has long been recognized. Thus, the desirability of controlling fares was agreed upon by a number of governments at the Chicago Convention in 1940. Though these governments realized that some form of control of price was necessary they could not agree on the ways to control and regulate it. This problem was not resolved until the establishment of the International Air Transport Association (IATA) to study various methods of regulating fares.

Through IATA, a system of agreement was developed which left final authority in the hands of national regulatory authorities. Because of its prominent role in price-setting, IATA has often been accused of being a cartel. This accusation has long been a debatable issue.

IATA's negotiation procedures meant that fares had to be established with the least efficient carrier (often one that was created primarily for national prestige) in mind in order to achieve unanimity. This practice tended unduly to resist pressure to lower prices by the more progressive airlines.

It should be noted that IATA provided other institutional support to the airline industry which has been clearly beneficial. Examples of this is their work to standardize ticketing and provide for inter-line clearance of fares. These

contributions improved international air transport networks for the benefit of both airlines and consumers.

Membership in IATA among nations operating in the Pacific Ocean region has been incomplete so that the restrictive aspects of the IATA fare establishment procedures have not played as major a role in that region as in the Atlantic region.

For international commercial air transport, the fixing of passenger fares and freight rates are multilaterally determined through the International Air Transport Association's tariff conference machinery. In establishing fares and rates, the tariff conference is held twice a year to take into consideration the conditions of the sector, the classification of routes, and distance. There are three traffic conference areas and four joint traffic conferences.

The first traffic conference area is designated as TC1 which includes regions of North America, Central America and South America. The second traffic conference area includes Europe, Middle East, Northern Africa and Southern Africa, and is appropriately designated as TC2. TC3 includes the Far East and Southwest Pacific. The four joint traffic conferences are: 1) TC12, which includes regions of North, Mid and South Atlantic, 2) TC123, traffic from all regions via the Atlantic, 3) TC23, which includes regions from TC2 and TC3 and finally, 4) TC31 is designated for regions from

North, Central and South Pacific. The pricing decision is made in the form of a resolution which, when passed, is still subject to the approval of individual governments concerned.

International air fares are established by the airlines that participate in the International Air Transport Association's Tariff Coordination. The Tariff conference discusses and arrives at a fare structure that they can recommend to the national governments associated with the IATA carriers. With approval from the governments involved, the fares that their respective airlines can charge is then fixed. It is these legally established and published fares that travellers are supposed to pay. In reality, however, tickets with lower than listed price can be purchased from airline ticket discount outlets, known as "bucket shops" in Europe.

In his study of the international airline industry, Straszheim concluded that the fare structure of IATA does not conform to rational pricing. He further stated that, "it is a complicated value-of-service scheme with a considerable degree of cross-subsidization."[30] The reason is that rational pricing requires some reduction in the fare per kilometer as the distance of the trip and or the route density increases. Straszheim's study also found that fare levels in the Asia/Pacific region are higher than those available in the North Atlantic market. He suspected that the higher

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[30] Mahlon R. Straszheim, The International Airline Industry, The Brookings Institution, Washington, D.C., 1969, p.148.

price levels in the Asia/Pacific region were used to compensate for losses from operations on North Atlantic routes. It should be noted, however, that his study antedates the period of vigorous airline development in the Pacific Ocean region which is reviewed in this thesis. Straszheim also believed that the level of costs on the North Atlantic had been bid up by the introduction of more passenger amenities and through excessive investment in more capacity than would have been provided under normal competitive conditions.[31]

The year 1978 saw major changes occuring in the United States which had important implications for the international air transportation industry. First, there was a dramatic change in government regulatory policy which brought about the domestic deregulation of air transport. In the United States, anti-trust legislation has long been established and immunity had to be provided for the international airlines with respect to their multilateral pricing determination. In addition, there was strong support in the United States on the issue of dismantling IATA's cartel-like "conference pricing".

A second factor was the attitude of the United States in dealing with bilateral negotiations in international air transport. Although it is well-known that the U.S. has traditionally favoured free competition in this industry, it

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[31] Mahlon R. Straszheim, "The Determination of Airline Fares and Load Factors--Some Oligopoly Models", Journal of Transport Economics and Policy, Vol.8, 1974, 260-73.

was not until 1978 that the first major thrust of "liberalized" U.S. bilateral air transportation agreements was seen; this led to a new phase of international commercial air transport treaties. The attractiveness of "liberalized" bilaterals for the contracting parties is the possibility that these bilaterals could result in obtaining long-sought-after U.S.'s gateways. Although, upon acceptance of these bilaterals, contracting states must accept the flexible fares philosophy which, in effect, implies that the lowest possible fares be offered; the response from these smaller nation states, often with an infant airline industry, has been overwhelming. The increase in the number of gateways offered to other countries means increased competitive pressure in North American linked markets.

Third, IATA and other interested parties were required to 'show cause' why the U.S. Civil Aeronautics Board should not withdraw its approval of anti-trust exemption. This, further discouraged multilateral conference pricing activities and consequently led to structural and organizational changes in IATA. In 1978, IATA changed its constitution so that an airline could voluntarily adhere to the fare-making process or could content itself with merely obtaining the other benefits of the trade association. In addition, in the autumn of 1977, carriers such as Laker Airlines, also put tremendous pressure on IATA to lower its rates. Finally, the recent appearance of the "bucket shop" ticket distrib-

utors has not been of any help in easing the competitive pressure either. As noted earlier, airline seats are a highly perishable commodity, and many carriers have resorted to the "bucket shop" operators for disposing of time-sensitive, but unoccupied aircraft seats.

These "bucket shop" operators acted as consolidators or wholesalers for the air carriers that anticipated a number of unoccupied seats. The discounter got the airline seats at a considerable discount; by adding a small commission on the discounted ticket, the discounter was able to make a profit, by selling it to various travel agents or simply through its retail discount outlet.[32] All these factors combined have shifted the stable multilateral pricing regime from the traditional regulatory framework towards a more liberal and a more price competitive environment for the provision of international air transportation services.

The trends of fares on particular routes provide interesting comparison on the direction of fare variations over time. It is generally believed that the real cost of travel by air has remained constant, if not been significantly reduced. It should be noted that during the sixties, a number of special fares proliferated; these included youth fares, group rates etc., Passenger fare movements have generally responded to changes in the level of airline earnings and the subsequent return on investment. Increases in costs

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[32] Lawrence Minard, "Bucket Shops of the Air", Forbes, August 3, 1981, pp.32-33.

have sometimes been among the reasons cited explicitly, but there is no close correspondence between direct flying costs and passenger fares.

Fare structure has always been at least as controversial a subject among carriers and regulators as the question of fare level. The controversy is firmly rooted in very fundamental economic relationships: 1) the cost of providing air service for trips of various lengths; 2) the demand (at various fare levels) for such transportation over the same trip length.

There are basically three pricing principles that airlines can apply in calculating fares and rates. The equal mileage rate principle is the simplest. Fares are determined by multiplying a basic per mile rate with the number of miles between the two cities for which the fares are to be determined. Under the variable base rate principle, the airline is able to cross-subsidize across the various markets that they serve. Since an airline is able to adopt a different rate structure for different route segments, there is some flexibility for charging a lower rate on a low density route and, similarly, a higher rate on a heavily travelled route. Finally, there is the so-called "tapering principle" in price determination that is specifically designed for use on international long-haul routes. Under this tapering principle, rates increase with distance but at a decreasing rate. According to the tapering principle,

therefore, lower fares per mile are established for longer distances.

Theoretically, there could be many variations of these techniques and numerous other pricing techniques that airlines could apply. For example, Air Canada's domestic fare structure, used until recently, is very similar to the equal-mileage principle, with a start-up rate included in the calculation. According to recent data, the 1978 start-up charge was $29.50 with a mileage rate of 8.25 cents per mile.

2.7 PRICE COMPETITION

The duopolistic or oligopolistic rivalry which is characteristics of the international air transport industry takes the forms of price and non-price competition. The primary purpose of this section is to discuss the nature and the use of price competition in the industry.

As noted earlier, air transport passenger demand comes primarily from two sources: business and leisure travel travellers. In general, leisure travellers are price sensitive whereas the demand elasticity for business travellers tends to be inelastic. Price discrimination between these two groups has long been used by carriers in the form of first-class, or business-class, seating and economy seating. This pricing tactic is normally associated with non-price

discrimination in the form of differences in the quality of passenger service and seat size and comfort.

Scheduled carriers are committed to a published timetable to provide "on demand" service. This often means that a load factor of around fifty to sixty percent might be the best that can be achieved without undue risk of turning away passengers. This puts great emphasis on pricing if profitability is to be achieved.

By catering to the discretionary, or leisure travel market, non-scheduled carriers works towards the achievement of high load factors, often 100 percent by targeting departure times and offering low fares. It is difficult for these carriers to sustain as high annual utilization of aircraft and crews and, in order to achieve profitability, control of direct costs, and minimization of indirect costs, is important.

In general, the air transport industry has long offered "high season" and "low season" fares in order to help them cope with peak load periods and, for scheduled carriers, to maintain volume and compete with charter carriers at times of low demand.

In addition to providing some charter service, a variety of promotional price tactics were developed by the scheduled carriers to handle periods and markets with demand weakness. These include excursion fares and advance-booking tech-

niques. These fares were designed to prevent traffic diversion from their standard fare traffic and to generate traffic among travellers who might not otherwise fly. These lower than normal fares have restrictions on length of stay (normally requiring a week-end stay to deter business travellers), advanced-booking time, lessened re-scheduling ticket service, and cancellation penalties.

One of the special characteristics associated with airline output is the inability for airlines to store passenger seats. This, coupled with the very low marginal costs of carrying additional passengers on an airplane with empty seats that is in scheduled service, came to have significant price competition implications for airlines. Through increased ability in seat management, scheduled carriers have been able to forecast when flights would have empty seats. These seats are then offered through "seat sales". Seat sale tickets characteristically have very low fares, severe restrictions in use, and are limited in number. They have become an important competitive device because of their usefulness in high profile advertising, traffic development, and effectiveness in countering charter airline competition.

Cargo pricing is complex. The link between cost and price is obscure at best and pricing appears to be dominated by demand considerations which include value of the goods shipped and time considerations. Sensitivity of the carriers to the needs of shippers is considerably complicated by

the role of freight forwarders. These intermediaries operate a business of organizing and controlling shipment which, while economic, separates the carriers from their markets. This problem is accentuated when the cargo originates in a country which is foreign to the carrier.

2.8 NON-PRICE COMPETITION

Non-price competition is especially important in duopolistic and oligopolistic markets where output can be differentiated. Non-price competition assumes special importance because rivals in small-number markets usually match the prices offered by their rivals. Non-price competition is then used even though it may be cost increasing. These conditions apply to the international air transport industry where non-price rivalry is apparent in the offering of service and in aircraft choice.

Service competition includes such factors as flight frequency, scheduling policies, the quality of in-flight services, aircraft type used and other marketing strategies. Scheduling and flight frequency are important planning variables that airline management can determine and control. Conveniently scheduled flights increase demand for the airline involved and hence, increase its load factor. This has a direct implications for the airline's profits. The quality of in-flight service provided by airline personnel and this competitive device is much used for higher fare seats.

Also, comfort through more spacious seating and lower pitches of seating is an important qualitative feature.

Aircraft choice is of great importance in airline rivalry. Speed and range not only increase productivity but they also are attractive to passengers because of the lessening of time costs. Non-stop flights fully exploit these features. Large aircraft, especially wide-body configurations are attractive to many because of their spaciousness and improved service possibilities.

During the period under review, the air transport industry has been significantly impacted by the availability of high capacity aircraft such as the Boeing 747s. The capacity and performance of these very large wide-body aircraft is important in a relatively competitive environment, such as the Pacific Ocean region where long-range, high-volume movement puts heavy demands on competitive features. They do, however, present problems of utilization in low density traffic markets where they tend to restrict flight frequency.

Non-price competition by charter carriers takes a somewhat special form. Here the emphasis is on destination selection and promotion of attractive holiday locations. Linkages with hotels and car rental agencies may be provided with low rates arranged for the tourist. The best charter operators give special attention to in-flight service to

make the flight part of the holiday. On the other hand, some operators use old aircraft with minimum service in order to minimize cost for price/profitability considerations.

In the cargo business, ground handling personnel and equipment are important. Much air freight is now containerized (auto parts, etc.), although some items shipped are of awkward shape for this technique. The belly capacity of aircraft on scheduled flights is often used. The Boeing 747 has the advantage of especially large volumetric capacity for storage. Use of scheduled passenger flights for cargo as a by-product has the advantage of flight frequency and better economy when volumes are low or moderate. However, the use of specialized freight aircraft can be superior and their use has been important in the Pacific Ocean region. Use of specialized cargo aircraft gives better linkage with cargo handling ground support and divorces the loading/unloading procedures of cargo from those of passengers. Also, the timing of flights, often at night can be patterned entirely according to the special needs of cargo shipments.

2.9 SUMMARY

This chapter identifies and distinguishes three types of air transportation services offered by the world airline industry. It has dealt with the important aspects of airline economics such as output, demand, costs and pricing by

the industry. The role of the chapter is to establish an understanding of the essential economic characteristics of the industry which is a central component in this study. The other major component, government intervention follows.

The sensitivity of material interest considerations to transport has had the inevitable consequence for the international air transport industry of the emergence of various international organizations or agencies to govern or regulate the industry. The establishment of these agencies increases the efficiency of the industry in terms of resolving certain common problems. Ultimately, though, these institutional elements may have implications that are unduly restrictive for the operation of the industry. Chapter III will consider these institutional elements on various aspects of the industry and also study its development.

Chapter III

STRUCTURE OF THE INTERNATIONAL REGULATORY FRAMEWORK

Airlines are usually subject to national regulation for both economic and political reasons, although in recent years deregulation has had a major impact on the U.S. airline industry. In international air transport relationships special conditions prevail which add to the complexity of airline operations. These conditions impose administered barriers to entry and other restraints on international airline operations. The degree of restraint has changed over time and varies with the philosophies and policies of the specific nations involved.

3.1 INTERNATIONAL RELATIONSHIPS

The inherent nature of the international air transport industry invites legal controls because of the need to cross or use air space that belongs to other nations. In a world of sovereign states, international collaboration is an imperative that was recognized as early as 1917 when the International Commission for Air Navigation was established by the so-called Paris Convention. This was followed in 1929 by the creation of the Pan-American Convention for Air Navigation.

These two major Conventions dealt with matters relating to the functioning and operation of the air transportation industry and have frequently been cited as examples of early attempts to seek multilateral regulation of air transportation activities. However, their scope was limited and the Conventions were disappointing as a basis for the development of multilateral regulation.

Despite their limitations, these conventions reinforced the view that international air transport activities do require international cooperation and coordination and that special attention directed towards the functioning of the air transportation system is in the best interest of the world air transport community. By realizing and identifying their common objectives, members of these two Conventions set the stage for subsequent attempts at international cooperation.

Negotiation of operating rights in international air transportation was basically informal before World War II and frequently both national governments were not even involved. An individual carrier of a specific country was often successful in directly securing the necessary landing rights from a foreign government on a private basis. These non-diplomatic, uncoordinated activities reflected the early stage of the industry's development, when the number of commercially available air carriers was limited and the operating environment was relatively simple.

3.2 THE CHICAGO CONVENTION

Subsequently, a number of nations realized that the future success of the air transport industry needed a better standard for operations backed by a more efficient mechanism for the exchange and implemention of traffic rights. Hence, upon the invitation of the United States, representatives of 54 nations participated in a conference held in Chicago. The main objective of the 1944 Chicago Convention was to create a multilateral agreement for the development of the world's aviation needs.

As the conference proceeded, it soon became apparent that there were great differences in view with respect to the establishment of commercial international air traffic rights. On the one hand, the United States possessing one of the largest fleets of aircraft and equipment, opted predictably for a complete freedom of competition and the multilateral granting of freedom of air space without any restrictions. The British delegates, on the other hand, realized that they did not have the necessary resources to match the U.S. competitively in the event that complete freedom of the air was granted. Therefore, they stressed the need for regulatory control and consequently asked for the establishment of an international agency to control such things as frequency of flights, seating capacity, and tariffs.[33]

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[33] The term "tariffs" generally refers to the notification of fare level and rate in the international aviation

The Chicago Conference ended in a stalemate on the key issues of international air tariffs and on the determination of capacity, but delegations reached agreement through the Chicago Convention on the technical matters of civil aviation, such as safety regulation, aircraft registration and the issuance of licenses. Furthermore, the Convention's recognition through Article 1 that "every state has complete and exclusive sovereignty over the air space above its territory" formed the basis for its formulation of the famous "five freedoms of the air" which enable nations to trade their air space.

While the Convention failed in its objective of reaching a multilateral agreement on the exchange of air traffic rights, it did achieve its practical objective of designing a system for international air transport operation. Two agreements, the "International Air Services Transit Agreement" and the "International Air Transport Agreement", played a role in the development of the structural elements that made scheduled international airline operation possible.

Most nations accepted the "International Air Services Transit Agreement" in 1944. Article 1 of this agreement provided that each contracting State should grant to the other contracting States the first and second freedoms of the air for commercial scheduled international air services. The

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industry.

"first freedom" refers to "the privilege of flying over the territory of the contracting State without landing" and the "second freedom" is "the privilege to land for non-traffic (i.e. technical reasons.) purposes only". The other three, of the five, freedoms are directly concerned with traffic. The "third freedom" is the right to disembark passengers, mail and cargo which are taken on in the territory of the State whose nationality the aircraft possesses. The "fourth freedom" is the right to take on passengers, mail and cargo destined for the territory of that State. Lastly, the "fifth freedom" is the right to carry traffic which neither originated in, nor is destined for, the home country of the airline.[34]

It was obvious that the "International Air Services Transit Agreement" alone did not provide a sufficient basis for international commercial scheduled air transport. The crucial elements that were missing in this Agreement were the third, fourth, and fifth freedoms of the air. These were included in the "International Air Transport Agreement."

The United States government proposed that the "five freedoms of the air" become the basis for multilateral negotiations and unilaterally signed the "International Air Transport Agreement". The agreement, however, did not gain support from other nations and the United States was forced

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[34] Richard Y. Chuang, The International Air Transport Association-- A Case Study of a Quasi-Governmental Organization A.W. Sijthoff, Leiden, Netherlands, 1972, p.25.

to withdraw its proposal in mid 1947. Hence, the "third, fourth, and fifth freedoms of the air" were left to be negotiated separately between interested nations.

3.2.1 Chicago Convention And Ancillary Instruments

Although the Chicago Convention did not explicitly make the distinction between scheduled and non-scheduled air transportation services, Article 5 of the "International Air Services Transit Agreement" had a provision regarding the rights of aircraft not engaged in scheduled international air services. This ancillary provision led to the classifications of scheduled and non-scheduled air transportation services. This provision later provided a framework and formed the legal basis necessary for a unique form of agreement relating to the provision of non-scheduled air transport services, namely, the charter or "Non-scheduled Air Transport Services Agreement".

Initially, and usually, charter operations have been based on landing rights obtained from foreign governments through charter operation permits or licences. These rights are issued unilaterally in the sense that the granting of such rights may not require the applicant's nation to grant the same to carrier(s) of the other country for operation to the applicant's nation. More recently, however, many nations have either negotiated a separate agreement for charter services or included this service in its scheduled

bilateral negotiation. There have been few bilateral agreements negotiated for non-scheduled air services.[35]

Beyond the bilateral air transport agreements and the charter operation permits or licences, there exists a special form of rights to be exchanged that are less formal than the bilateral. These are known as "statements of understanding." It should also be noted that all bilateral air transport agreements concluded between 1946 and 1974 governed only scheduled international air services.

3.3 BILATERAL REGULATION

For all practical purposes, the lack of sufficient ratification of the "International Air Transport Agreement" ended the U.S. dream of a multilateral agreement for international air transport. After the failure to regulate international commercial scheduled air transportation on a multilateral basis, the delegates representing the fifty-four nations were quick to devise and support an alternative solution: the bilateral negotiation of air transportation agreements. This move, emphasized the role of national sovereignty in international air transport and introduced political rigidity which constrained the "freedoms of the air" concept. And this one basic fiction inevitably gave birth to a whole lot of subsidiary fictions concerning all

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[35] See P.P.C. Haanappel, Pricing And Capacity Determination In International Air Transport --A Legal Analysis, (Canada: Montreal), 1984.

sorts of things like the "territorial air space" or the nationality of air carriers.

The Chicago Conference failed to reach a multilateral agreement on the important economic matter of international aviation, that is, the exchange of third, fourth and fifth freedom traffic rights. In addition, other important questions were also left unresolved such as the determination of tariffs, aircraft capacity and flight frequencies. Governments were forced to deal with the question of exchanging traffic rights via bilateral agreements, and the airline companies were left to create an international organization called IATA to handle the determination of tariffs.

Subsequent to the Chicago Conference, the third, fourth and fifth freedoms became the main elements of bilateral air services negotiation between national governments. A pattern was developed in all the bilateral agreements which became known as the "Chicago Standard Form". These agreements allowed governments to control entry into international civil aviation and enabled them to negotiate for particular routes. The capacity which could be operated on these routes was determined either by a process of predetermination or by ex post facto review method. Fares, rates and tariffs were to be subject to governmental approval.

3.3.1 Bermuda 1

With the bilateral system in place for international air transport agreements, and the "Chicago Standard Form" emerged as the model for these agreements. It was not until the bilateral agreement signed between the United States and the United Kingdom in 1946 in Bermuda that bilateral air transport agreements took on a different form; this form later became known as the "Bermuda 1".

Subsequently, other states adopted the principles of this agreement and concluded similar types of bilateral agreements. The principles of the Bermuda agreement were essentially that capacity and frequency of service on any route between the two countries would not be regulated, nor would the number of airlines operating out of each country. The possibility of an *ex post facto* review of capacity was, however, provided for in the event of what might seem to be an unrealistic capacity provision.

In addition, tariffs would be established by the airlines through the "Tariff Conferences" of the International Air Transport Association (IATA), subject to mutual governmental approval. It is important to recognize that Bermuda 1 was a formal agreement between two governments which enabled designated airlines to arrange services as they thought appropriate. The "equal opportunity" clauses of bilateral agreements continued to be adopted to specific circumstances.

These subsequent bilateral air service agreements have taken many forms. Some are much more restrictive. For example, they contain the stipulation that frequency of service and capacity should be determined ex ante. Usually the capacity is equally shared between the two countries and the agreement involves only a single designated airline from each country. In some cases it was stipulated in the agreement that capacity must be shared between the two airlines in terms of a pooling agreement. Thus, a typical post-Bermuda 1 bilateral agreement put in place a system of predetermination of capacity replacing the liberal Bermuda 1 capacity clauses. This type of bilateral agreement usually specified total capacity and frequency of flights. Sometimes they also included matters such as scheduling of flights and/or aircraft type.

3.3.2 Bermuda 2

In principle, the Bermuda 1 Agreement worked relatively well until the British unilaterally announced in June 1976 that the agreement would be terminated on June 22, 1977. The United Kingdom's main objection was that the capacity share of the American carriers was far greater than that of the British; the British called for a more equitable distribution. The threat of disrupting air services between the two countries brought both contracting states back to the negotiating table in Bermuda. A new agreement was signed on

July 23, 1977, even though Britain's requests were not completely satisfied. This 1977 United Kingdom - United States bilateral agreement has since become known as the "Bermuda 2" Agreement.

A Memorandum of Consultations was subsequently filed by the Governments of the United States and the United Kingdom in London on November 9, 1982, as a supplement to Bermuda 2. It modified a certain number of rights exchanged in Bermuda 2.

It is worthy of note that evidence of repeated attempts at further regulation appeared in two paragraphs of this agreement; these referred to the need for further action in the areas of tariffs and capacity. They are Paragraph 7, which indicated an intention to refer pricing problems to the Tariff Working Group established under Article 12 of Bermuda 2, and Paragraph 9, which called for the formation of a new Working Group to examine "on a factual basis" the operating procedures that were set out in Annex 2 and adhered to in the Bermuda agreement. In particular, Paragraph 9 was very specific that the role of the Working Group was to deal with the extent to which the procedures succeeded in avoiding either the provision of excess capacity or the under-provision of capacity. In addition to this, the Group was expected to make recommendations to the two Governments for the improvement of these procedures if necessary. Evidently, lessons had been learned from the devasta-

tion caused on the North Atlantic routes by excess capacity and by price-cutting activities.[36]

3.3.3 Liberal Bilateral Air Transport Agreements

Less than one year after Bermuda 2, the United States entered into a new bilateral agreement with the Netherlands in March, 1978; it took a form that was radically different from Bermuda 2. The agreement clearly reflected the differences in attitudes that existed between the British and United States and, for that matter, between the British and the Netherlands. It reflected a similarity in ideologies between the United States and the Netherlands. This agreement signifies a step forward in the U.S. liberalization policy regarding the air transportation industry.

This United States--Netherlands Agreement established the "country of origin" principle by which "country of origin rules" were applied to both charter operations and the scheduled tariff determination. This method of scheduled tariff determination has subsequently been referred to as "country of origin pricing". Each government party to the agreement not only agrees to have full control over the fares for traffic originating in its own country but also to refrain from capacity or frequency control of any kind. Furthermore, multiple designation of carriers was granted

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[36] Arnold Kean, "Bermuda III ?", Air Law, Vol.VIII, No.2, 1983, p.117.

and unlimited sixth freedom[37] traffic were included in the agreement.

The United States - Israeli Agreement of 1978 represented an even more liberalized attitude in the sense that the agreement contained the innovative "dual disapproval pricing" principle. This interesting provision permitted designated airlines to set their own fares. In addition, no government on its own could disapprove of the proposed fares. Both governments had to agree that the fare was unacceptable before it could be rejected. A further feature of the United States--Israeli and the United States--Netherlands agreements was the fact that previously prohibited charter traffic was now authorized. These two agreements represented a transition period in which the pattern and the construction of these agreements were to be followed by other countries in subsequent bilateral agreements.

While it cannot be said that the new United States policies received wide acceptance, the significance of some of these liberal agreements for the competitive environment of air transportation cannot be overlooked. Any one of the strategically important agreements might become the lever to pressure neighbouring countries to accept more liberal principles. Current agreements with Singapore or Korea may well have a bearing on bilateral discussions the U.S is having with Japan or, for that matter, on the deliberations which

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[37] The sixth freedom is a combination used of the third and fourth freedoms.

have started recently with China. Similarly, one may find more liberal bilateral clauses in air transport agreements that are concluded between Canada and countries that are party to new bilaterals with the United States.

Since 1978 the United States has concluded liberal bilateral agreements with several countries in Europe, the Middle East and Asia. Generally speaking, greater access to the U.S. market for the non-U.S. carriers with more gateways and greater frequency of operation has been traded for greater freedom of operation for U.S. carriers in the provision of capacity, routings and lower fares. It should be noted that many nations may have entered into these liberal bilateral agreements with the U.S. primarily to obtain route benefits for themselves rather than to endorse the U.S. deregulation philosophy.

It is too early to assess the extent to which these developments will affect the international air transport system in the longer term. The short term effects are, however, quite apparent for those services and routes subject to the new bilaterals. Fewer restrictions on capacity and greater freedom to introduce innovative fares has already radically altered the balance between scheduled and non-scheduled operations in some markets where both compete. By offering a wide range of "basement" fares, scheduled carriers have been able to penetrate the discretionary travel market and force the non-scheduled operators to cut back their operations quite severely.

The experience in Europe with respect to pro-competitive agreements can be compared with that in the Far East. Four Asian states have entered into liberal bilaterals with the United States: South Korea (March 1979), Singapore (June 1979), Thailand (June 1979), and the Philippines (October 1980). Following implementation of these agreements, each country experienced a marked increase in passenger traffic to and from the U.S., well above the aggregate U.S.-Far East growth rate. At the same time, the traffic growth rate to Japan, which did not enter into a similar agreement, declined. For the twelve months ending 30 June 1980, passenger traffic between the U.S. and South Korea increased approximately 76 percent over that of the previous twelve-month period; for Singapore, traffic increased sixfold; for Thailand, the increase was close to 500 percent. Yet, for Japan, the increase in traffic during the same twelve months was under 15 percent and overall U.S.-Far East traffic increased 20 percent. Since Japan typically generates between 65 and 75 percent of total U.S.-Far East traffic, very small diversions of traffic from Japan to these other Asian states can produce startling growth rates in their passenger traffic.

3.4 INTERNATIONAL INTER-GOVERNMENTAL ORGANIZATIONS

As mentioned earlier, the International Civil Aviation Conference, assembled in 1944 adopted an agreement for the establishment of the Provisional International Civil Aviation Organization (ICAO) in 1945. This agreement reflected a compromise between a radical proposal by Australia and New Zealand that called for complete international ownership of world airspace and U.S. position which sought complete freedom of the sky and unrestrained competition. Shortly thereafter, an agreement to establish the International Civil Aviation Organization was ratified in 1947 by the necessary 26 states. Subsequently, ICAO became a specialized agency of the United Nations. The Chicago Convention and the technical work of the International Civil Aviation Organization have been essential to the safety and security of air passengers.

3.4.1 International Civil Aviation Organization

The task of ICAO was to develop the principles and techniques of international air navigation and to foster the planning and development of international air transport. These tasks included as particular objectives: 1) the safe and orderly growth of international civil aviation throughout the world, 2) the encouragement of the development of appropriate airways, airports, and air navigation facilities, 3) the assurance of safe, regular, efficient, and eco-

nomical air transport, 4) the ensuring of respect for the rights of the member-states and their fair opportunity to operate international airlines, and 5) the promotion of flight safety in international air navigation. It should be pointed out that the total world air-traffic market is far bigger than the sum of the bilateral air-traffic markets. Each state forms part of this world market. A state is not only a pair of origin and destination points, but is also a junction of international air service and international traffic.

Members of ICAO retain their basic autonomy over the operation of their aircraft as it best suits their purposes or those of their national carriers. The fact that governments often refer to their national carriers as a national instruments, thus identifying themselves with the management of these carriers, illustrates the protectionist approach of many states to international civil aviation regulation. According to the terms of the Convention, the Organization is made up of an Assembly, a Council of limited membership with various subordinate bodies and a Secretariat. The chief officers are the President of the Council and the Secretary General. The Assembly, composed of representatives from all member states, is the legislative body of ICAO. It meets every three years to review in detail the work of the Organization and set the policy for the coming years. It also votes a triennial budget.

3.4.2 Association of South East Asian Nations(ASEAN)

The Association of South East Asian Nations, whose membership in 1983 consisted of Indonesia, Malaysia, The Philippines, Singapore and Thailand, is a socio-economic economic grouping with a Secretariat based in Jakarta, Indonesia. In recent years this Association has provided a forum for the discussion of fares affecting the airlines of the member States. In particular, the Association has played a role in enabling South East Asian airlines to apply very low fares developed by other airlines and states for traffic passing through their region, thereby enabling the South East Asian airlines to participate in this traffic and South East Asian States to benefit from the generation of stopover traffic.[38]

3.5 INTERNATIONAL NONGOVERNMENTAL ORGANIZATIONS

It will be recalled that the Chicago Convention left the establishment of fares to subsequent organizational efforts. This led to the establishment of the International Air Transportation Organization (IATA). IATA is composed of both public and private-enterprise carriers. While ICAO has played the role of coordinator between governments, IATA has

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[38] Manual on the Establishment of International Air Carrier Tariffs, p.44. For the Multilateral Agreement On Commercial Rights Of Non-Scheduled Air Services Among The Association Of South East Asian Nations, See I.A. Vlasic and M.A. Bradley, The Public International Law of Air Transport-- Materials and Documents, McGill University, Volume 1, 1974, p.30-34.

assumed the role of coordinator between individual airlines.

3.5.1 International Air Transport Association

In the spring of 1945, 31 scheduled airlines, many of whom had sent observers to the Chicago Conference, assembled in Havana to organize their own international body. As a result, IATA was created and incorporated by an Act of the Canadian Parliament on December 18, 1945. The following winter, aviation officials from the United States and the United Kingdom met in Bermuda to give an official stamp of legitimacy to IATA and to deal with questions of fare regulation. At Bermuda, the deadlock of the Chicago Conference was resolved by a basic compromise. Britain retreated from demands for restrictions on frequency and capacity in return for American acceptance of a machinery for direct control of rates but subject to government approval.[39]

IATA was initially entrusted with establishing air fares and rates via its "traffic conferences" and to recommend agreed upon fare related matters to various governments for ratification. Other distinctive work of IATA has included standardization of forms and procedures for interline agreements and landing agreements making the quick and easy exchange of traffic between airlines possible. IATA has also acted as a clearing-house for settling airlines'

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[39] R.Y. Chuang, The International Air Transport Association-- A Case Study of a Quasi-Governmental Organization A.W. Sijthoff, Leiden, Netherlands, 1972, p.29.

accounts with each other.

There is no doubt that the establishment of standard airline practices has since the inception of IATA, becomes the most important part of IATA's activities. Resolutions of traffic conferences of IATA standardize not only tickets, but also way-bills, baggage checks and other similar documents. These resolutions also co-ordinate and unify handling and accounting procedures for interline bookings, connections etc. They maintain standard international practices applicable to more than 100 member airlines all over the world. Usually, IATA established practices are also accepted by non-IATA international airlines. In effect, IATA has succeeded in converting world airline systems run by different nations of the world into a single public service system. An example is the financial management role that IATA assumed. The IATA Clearing House through which the airlines settle monthly accounts for interline revenue transactions is the most valuable services that IATA provides. It enables world's international air carriers to collect and pay their world-wide debts internationally by a single cost settlement in either dollars or sterling, regardless of the number of national currencies involved.

As an organization, IATA is voluntary, non-exclusive, non-political and democratic. Membership is automatically open to any operating company which has been licensed to

provide scheduled air service by a government eligible for membership of ICAO. As of September 15, 1986, there were 120 active members and 24 associate members in the International Air Transport Association.[40] Airlines engaged directly in international operations are active members, while domestic airlines are associate members.

Most nations have agreed that the enormous and complicated work of negotiating detailed fare agreements to meet the constantly changing conditions of world air commerce should be delegated, in the first instance, to an IATA Conference, and these agreements should become effective only after all interested governments have reviewed and approved them. In the area of fastest growth, the Far East, IATA membership is patchy and some important carriers, such as CAAC, Cathay Pacific and Singapore Airlines have chosen not to participate in IATA's fare and rate conferences.[41] International traffic by the members of IATA grew by 10 per cent last year, the highest figure since 1979. Also encouraging for these carriers, was an improvement in their overall load factor, from 59.6 per cent in 1983 to 61.3 per cent in 1984. The International Air Transport Association was not formed by airlines seeking a cartel. Rather, it was organized so that carriers could work together to approach their governments with a common purpose. The IATA view is that there is

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[40] IATA, Annual Report, 1986, Canada, 1986, p.12.

[41] "Third World problems high on agenda--Our 1985 air transport special is opened by an interview with IATA's D-G, Gunter Eser", Interavia, October, 1985, p.1069.

a need for evolution toward a more liberal regime in air transportation regulation worldwide, but it should be evolution rather than revolution.[42]

Another current development of considerable significance in the evolving pattern of international air transport is the growing importance of regional airline associations in various parts of the world, partly as a defensive reaction to deregulatory trends. The existence of these groups emphasizes the value of cooperation and multilateral discussion. The advantages of mutual support are particularly beneficial to the emerging airlines of developing countries which appreciate the strength of joint endeavors.

3.5.2 Orient Airlines Association

The Orient Airlines Research Bureau (OARB) was formed in 1968 to stimulate the development of regional Asian traffic. Membership is open to carriers based in States or semi-autonomous territories in an area extending from Thailand in the west to Japan in the east. Original members were PAL (Philippines), KAL (South Korea), CAL (Taiwan), MAS (Malaysia), THAI Airways (Thailand), Garuda (Indonesia), JAL (Japan), Air Vietnam (Vietnam) and Cathay Pacific Airways (Hong Kong). In 1970, the Association was renamed the Orient Airlines Association. OAA has its headquarters in Manila, the Philippines. Membership in 1983 stood at 11

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[42] David M. Kennedy, Chief Executive of Aer Lingus, President of IATA(1984), Air World, Vol.36, Number 3, 1984.

scheduled airlines of which 4 were also members of IATA's Tariff Co-ordination activities. More recent members have included Papua-New Guinea and Australia. OAA's general objectives are as follows: 1) to promote the development of air commerce in the Orient, to foster closer co-operation among members and serve as a forum for the expression of members' views in matters of common interest, and 2) to stimulate travel and tourism in the area and encourage international co-operation in economic, social and cultural fields. In the tariff field the Association has aimed at the elimination of "ruinous" competition in the area by means of a "yield improvement programme". Towards this end the Association has sought to control the discounting of official fares being practised in the region. The Association has also agreed on a tariff prorating system for application to, from, and within, the region.

As a forum for discussion of tariff matters concerning many routes between Europe/Middle East and Asia/Pacific, OAA airlines and some IATA Tariff Co-ordinating members have held meetings under the term "Orient Region Air Transport Conference[43] (ORATC)"

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[43] Manual on the Establishment of International Air Carrier Tariffs, p.38.

3.6 SUMMARY

One of the most distinctive feature of the international aviation industry is its operating environment, that is, international airlines are not only subject to domestic political constrains, but also international legal and economic regulatory control. These constraints imposed upon the aviation industry remind us of the nature and the uniqueness of the structure of this market. This chapter has traced the development of the international regulation of international air transportation industry from its early stage of multilateral efforts through the current bilateral regime. It has pointed out some of the institutional elements, both governmental and non-governmental agencies that interact and affect the very structure of this important industry and that these elements are critical to our understanding of the current situation in the Canadian Pacific Ocean region's air transport development.

The network of bilateral air transport agreements which have evolved as a framework for scheduled operations are basically restrictive in nature but there has been variety and evolution in their application. International cooperation has set up institutional conditions which greatly simplify airline operations and provide very efficient international service to passengers.

Chapter IV

CANADIAN BILATERAL AIR TRANSPORT AGREEMENTS AND PUBLIC POLICY

The primary purpose of bilateral agreements is to establish certain rights and protections for international air transport operations controlled or operated by companies of one party in the territory of the other party to the treaty. Negotiation of bilateral agreements has led to the complex and rigid structure to which world airline operations are subject. However, without such agreements entry into the international airlines industry is impossible because the individual state has complete control of its air space. Thus, bilateral air transport agreements have structured scheduled international airline operations over and above any economic structural conditions. In addition, government public policy may also affect the outcome of how its bilateral agreement is negotiated.

4.1 CANADIAN PUBLIC POLICY ON AIR TRANSPORT

The bargaining on international bilateral agreements is mainly determined by the needs of the carriers in terms of economics and satisfaction of the public interest. However, politics and governmental policy objectives may also have some influence in terms of deciding whether international

bilateral negotiations are even to take place or not. The Canadian government has long established policy guidelines for international air transport; the result of which is the well known "sphere of influence" policy. The impact of the "sphere of influence" policy on the Canadian air transport industry will be examined in a later chapter.

The Canadian government entered into its first bilateral commercial aviation treaty in 1946 for the purpose of facilitating commercial air transportation activities between itself and its contracting partners. In Canada, representatives from the Ministry of Transport, the International Transport Policy Committee[44] of the Canadian Transport Commission, the Department of External Affairs and the Department of Industry, Trade and Commerce together formed the Interdepartmental Committee on Civil Aviation. It is through this Interdepartmental Committee on Civil Aviation that international civil aviation policies are developed and put forward. The exercise of jurisdiction over the control of international air transport by the government of Canada, however, rests with the Department of External Affairs and the Ministry of Transport. When a bilateral air transport agreement is to be negotiated, representatives from the

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[44] Subject to the jurisdiction of Parliament, the International Transport Policy Committee was formed with the responsibility to act on behalf of the Canadian Transport Commission. It announcement was made in November 1967 and no regulatory function was created for the said committee. See Canadian Transport Commission, The Second Annual Report of the Canadian Transport Commission, 1968, p.7.

Department of External Affairs and the Canadian Transport Commission are involved as part of the negotiating team. There are also observers representing Canadian carriers in the negotiation process. During the 1984-85 winter season, there were fifty-nine Canadian and foreign air carriers offering scheduled services to international destinations from within Canada. These services varied from Torontair's transborder operation between Kingston and Syracuse, New York, to Air Canada's new international route from Toronto to Bombay(India), and Singapore.

Due to the nature of the air transport industry, it is easy to realize why the success of an international commercial aviation industry depends so profoundly upon an open, efficient and co-operative system of operation. This is not merely because protectionist views or actions would reduce the possibility of international specialization, but also because they would have adverse effects on competition and possibly on scale economies, resulting in less than optimal profitability.

4.2 THE NATURE OF THE BILATERAL AGREEMENTS

"Bilateral Air Transport Agreements" are also referred to as "Bilateral Air Services Agreements" in many situations. There has not been a specific name assigned to an air transport agreement negotiated between two contracting states that is internationally recognized or used. However, for

all intents and purposes, any one of the two names mentioned above is quite acceptable and understood by the participants.

The basic framework of bilateral agreements by which air routes are exchanged among nations and the rights to carry traffic on them are determined according to certain broad principles. In general, it should be noted that there are three sets of bilateral clauses available for practical applications. The first set follows the tradition of the Chicago protocol, commonly referred to as a "Chicago Standard Form". The second set of norms came into existence after fourteen years of the "Chicago Standard Form" and was an improvement over the Chicago type. This second set of bilateral clauses was adopted by the European Civil Aviation Conference (ECAC) and has frequently been referred to as ECAC Standard Clauses. Finally, the agreement signed between the United States and the United Kingdom in Bermuda provided yet another popular standard form. This is the "Bermuda type" agreement.

Some bilateral air transport agreements are formally initialled and signed; these agreements take each of the above-mentioned forms. Other bilaterals include a "Memorandum of Understandings" and "Diplomatic notes" or "Exchange of letters". Most Canadian bilateral agreements are typical Chicago Standard Form with slight variations in the construction of clauses. Early treaties focused on the need

for gaining access rights. Each bilateral agreement usually begins with a preamble.

The use of preambles in bilateral air transport agreements is common and can be found in almost all Canadian cases. Its main function is to express and describe the goal of establishing such an agreement, or to give some indication of why such an agreement is desirable. In the preamble of an agreement one often finds a clause that makes reference to the Chicago Convention. This serves as an expression of reaffirmation of the understanding that the current agreement recognizes this multilaterally agreed convention. Of all the bilateral air transport agreements signed between Canada and the countries in the Pacific region that were examined, only the agreement between China and Canada does not refer to the Chicago Convention.

Apart from the preamble, a standard Canadian bilateral agreement is further divided into two major parts. The first part is the main body regulating the exercise of various rights granted. It is here that the substance of the bilateral agreement can be found. Although there is no particular sequence or pattern followed, all bilateral agreements separate major provisions into different articles. One of the major provisions that have to be made is the granting of operating rights. Such provision could be found in one of the articles. It is in this part of the agreement that further distinction among "in-transit" traffic and

"stop-over" traffic rights are typically spelled out. One may also find some articles that give legal meanings to the terms used. Most of the other articles deal with the terms of the agreement, and frequently discussed matters such as aircraft registration, airworthiness[45] and customs duties exemption for equipment being introduced to the contracting states for the purpose of maintenance and repair of aircraft. Provisions are also made in this part of the agreement for future amendment of the agreement.

Another provision is made in a different article regarding the designation of airlines for the air services to be performed. All Canadian bilateral agreements require each contracting party to designate the airline or airlines which will operate such services. Furthermore, all bilaterals require the designated airline to obtain appropriate operating authorization prior to the inauguration of the agreed services.

Yet another article in the bilateral agreement states the various operating conditions that are required. It is usually in this section that the control, ownership and the competence of the designated airlines are made explicit. Stipulated in another article are matters related to customs

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[45] Two different types of airworthiness certificates are issued by Transport Canada. The first deals with the approval of aircraft design and usually issue to and pay by the aircraft manufacturer. The certificate of airworthiness for which aircraft owner has to apply annually is strictly a mechanical inspection of the aircraft and issue upon the completion of a test flight by a specially certified pilot.

duties and other charges (i.e.the reciprocal exemption of duties and other fees).

Other provisions, contained separately in different articles, are as follows: (a) airport and facility charges, (b) tariff determinations, (c) methods for capacity determination and, finally, (d) provision for settlement of disputes. The specification of routes to be operated by the designated airlines of the contracting parties to a bilateral agreement is usually mentioned but further reference is made in the "annex". It is in this article that the bilateral can be seen as an instrument for regulating the rights granted.

The annex is the second part of a bilateral agreement. It spells out the details of the rights granted and the routes the designated airlines of each contracting party will fly. Normally, the agreement does not give the name of the designated airlines, which may follow later through diplomatic channels.

The preamble, along with various articles and the annex are therefore important elements in determining the scope of the coverage of bilateral agreement. Although all bilateral air transport agreements concluded by Canada are drawn up in both official languages, English and French, there are instances where foreign languages are used. Such is the case with Japan, where the Canada-Japan bilateral is in Japanese, English and French with all texts being equally authentic.

Commercial Agreements

All bilateral air transport agreements discussed so far are negotiated through government authorities or by representatives of the contracting parties. There are, nevertheless, other bilateral agreements that are related to the air transportation services which do not require government involvement. Furthermore, these agreements are mainly negotiated on the industry (i.e. air carriers) level and therefore, are not necessarily bilateral. These agreements are generally known as "commercial agreements". They include "pooling agreements" and "inter-carriers agreements".

A "pooling agreement" is an agreement that usually involves the provision for an equal sharing of capacity and joint revenue, irrespective of the traffic actually carried.

Since pooling is a condition of operation on certain routes, unilateral abandonment of the pool could lead to the loss of traffic rights and a loss of service to the travelling public. Nevertheless, pooling is a restrictive arrangement that is likely to militate against innovations in marketing and pricing strategy, and whatever it may do to protect the interests of a single nation, it is liable to produce an inefficient allocation of resources on an global basis.

Pooling prevents the scheduling of excess capacity and, therefore, enables the participating airlines to achieve a

higher load factor. The pool is the legal basis for integrating the operations of various airlines. It represents a contract between two or more aeronautical enterprises. The principles and conditions for joint operation of given air services are determined with a view to creating possibilities for the rational use of aircraft capacity, thus achieving maximum economic benefits for both parties. It is obvious that the joint operation of a given air service prevents competition between the carriers participating in its operation. This co-operation finds expression in a co-ordinated commercial and tariff policy, mutual assistance, etc. With this form of integration it is very important to design the economic mechanism of the pool correctly, i.e. to determine the system of economic and operation indices and targets which stimulate each partner to participate actively in the fulfillment of the pool programme, and to achieve a fair distribution of the economic results among the pool partners.

There have been intensive efforts by both governments and airlines to secure and negotiate cooperative agreements. Such agreements are most notable in the recent opening up of the Chinese economy where various countries have made joint-venture initiatives with the Chinese government and its airlines or aircraft manufacturing companies. These cooperative arrangements range from the coordination of air transportation development activities, which includes the

training of ground and maintenance personnel, to the joint operation of services. One example of a pooling agreement in the Pacific region that has been in force since 1963 is the agreement between Cathay Pacific Airways, Thai Airways International, and Malaysian Airways. They entered into an agreement to pool revenues on their services between Hong Kong, Bangkok, Kuala Lumpur and Singapore, an event seen as possibly foreshadowing a unified South-East Asian airline.[46]

The international airline system is presently characterized by procedures and practices which make it especially easy for passengers to make their travel arrangements, including travel between any two points even though the trip may involve the use of two or more carriers. These procedures and practices include joint fares (established on the basic of independently determined local fares and a formula to divide revenues under such fares among the participating carriers pursuant to inter-carrier agreements.

A major feature of the current international air transport system is the capability for interline transportation. Within the Orient region, as anywhere else around the world, interline travel is pervasive, serving the interest of both tourist and business travellers. This trend to interline travel has developed much as a result of the nature of market demand, which is largely geared to multiple-destination travel. This, in principle, requires agreed upon uniform

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[46] ICAO, Annual Report Of The Council To The Assembly For 1963, p.51.

tariffs and efficient fares satisfactory to both the airline industry and users of air transport.

4.3 CANADIAN BILATERAL AGREEMENTS IN THE PACIFIC OCEAN REGION

The Pacific Ocean region covers a very large expanse and, for that reason, bilaterals between Canada and nations in this region have often incorporated intermediate points. With technological improvements in aircraft resulting in greater range capability, this type of provision has faded in relative importance. It is also worthy of note that relatively few bilateral fifth freedom rights negotiated by Canada have been exercised. Bilaterals which relate to the Pacific Ocean region, i.e. those for Japan, the United Kingdom, and India, have been of outstanding importance among those exercised.

Tables 7 and 8 provide a chronology of those bilaterals of relevance to the Pacific Ocean Region.

Canada's bilateral air transport with the United States dates back to 1942. An agreement concluded in January, 1966, was a major step forward in this air transport relationship. On 8 May, 1974, this agreement was amended and two other agreements on preclearance and non-scheduled service were concluded.[47]

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[47] For a detail discussion on the development of and issues related to public policy of U.S.- Canada bilateral agreement, see R.F. Harris, "The United States - Canada Air Transport Agreement And The Public Interest," Proceedings

TABLE 7

Bilateral Air Transport Agreements concluded by Canada with countries of the Pacific Ocean Region 1938-1966

Country	Date of Signature	Subject
United States	28/07/38	Exchange of Notes relating to Air Navigation
Australia	11/06/46	Air Transport Agreement
Britain (U.K.)	01/02/47	Air Services Agreement For Services Into Canton Islands
Britain (U.K.)	19/08/49	Air Services Agreement replaces Agreements dated 21/12/45; 17/7/47 and 7/7/48.
New Zealand	16/08/50	Bilateral Agreement
Australia	16/03/51	Exchange of Notes Amending the 1946 Agreement -- Provision for Sixth Freedom Traffic On Canada-Australia-New Zealand route.
New Zealand	29/09/52	Exchange of Notes Amending the 1950 Agreement -- Provision for Sixth Freedom Traffic On Canada-Australia-New Zealand route.
Australia	01/09/54 28/09/54	Amendment to 11/06/46 and 16/03/51 Agreements
Japan	12/01/55	Air Services Agreement
Britain	18/08/58	Air Services Agreement amending Agreement dated 19/8/49.
Britain	06/09/60	Modification of Agreements dated 19/8/49 and 18/8/58.
Britain	10/03/65	Confidential exchange of letters Permitting additional rights
United States	17/01/66	Air Transport Agreement between Canada and the USA

TABLE 8

Bilateral Air Transport Agreements concluded by Canada with countries of the Pacific Ocean Region 1973-1985

Country	Date of Signature	Subject
China	11/06/73	Air Transport Agreement
Australia	15/03/74	Bilateral Agreement replacing the 1946 agreement and the 1951 Amendment
Fiji	30/04/74	Air Transport Agreement
United States	08/05/74	Exchange of Notes Amending the 1966 Agreement
Britain	14/04/81	Air Services Agreement replacing the 1949 agreement.
United States	28/08/81	Exchange of Notes amending the 1966 Agreement as subsequently amended by Exchange of Notes of May 8, 1974
India	26/02/82	Bilateral Agreement Initialized
India	20/07/82	Bilateral Agreement Signed
United States	21/03/83	Exchange of Notes with respect to the Air Canada Seat Sale, and the participation in the Canada - - Australia market of US carrier Continental
Fiji	30/04/84	Confidential Memorandum of Understanding dealing with Capacity, tariffs and taxation
Singapore	12/06/84	Air Services Agreement
New Zealand	30/11/84	Amendment for capacity determination
New Zealand	04/09/85	Bilateral Agreement replacing the 1950 agreement and the 1952 amendment.

The agreements are comprehensive but certain items relating to United-States Pacific coast cities, northern intermediate points and Honolulu are of interest in the study of Pacific Ocean region air transport activity.

The 1942 agreement gave Canada access to Seattle and a Vancouver - Honolulu - Australia route (an example of a fifth freedom). The 1966 agreement again specified Victoria - Seattle and beyond, and certain specified points such as Vancouver - Honolulu - Australia and Vancouver - Anchorage and beyond. It also provided Canada with new deep penetration routes to U.S. Pacific coast points in the form of a Vancouver - San Francisco route and a Toronto - Los Angeles route. The 1974 amendments introduced Canadian rights to routes from Edmonton/Calgary to San Francisco and to Los Angeles and Montreal/Toronto routes to San Francisco and to Los Angeles. The West Coast linkage was changed to Vancouver/Victoria -Seattle and Vancouver - San Francisco/Los Angeles. Intercontinentally Canada continued to have its route to Honolulu - Australasia and beyond.

Canadian deep penetration of the Pacific Ocean area by air transport began with a British Commonwealth link with Australia. The bilateral air transport agreement with Australia was signed on June 11, 1946. It provided the necessary rights for both contracting states to operate flights

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of the Seminar Series on Transportation, 1974 - 1975, Volume 8, Center for Transportation Studies. University of Manitoba, pp.23-61.

between Vancouver and Sydney via an intermediate stop at Auckland with beyond rights to New Zealand. Under this 1946 agreement, there is a provision for a fifty percent sharing of traffic generated between the two carriers designated by both contracting states. This type of "capacity predetermination" clause is not common in Canadian bilateral agreements. In addition, the agreement also has a provision for a pooling agreement.

Subsequently, there were three amendments made to this agreement. The first was made on March 16, 1951, to amend the designation of the Canadian route. This amendment specified the route to be served by both contracting states to be Vancouver-San Francisco-Honolulu-Canton Island-Fiji-Auckland-Sydney in both directions. Furthermore, this amendment specified that the airline designated by the Government of Canada shall pick up at Sydney only traffic destined for points beyond New Zealand and shall disembark in Sydney only traffic which originated at points beyond New Zealand.

The second change occurred in September of 1954 with regard to the period of time required for notice to be given. At the request of the Canadian Government, further adjustment were made to the 1951 routing provisions in 1974. Paragraphs 1,2,3 and 4 of the Annex to the 1946 agreement were cancelled and replaced with the following provisions:

1. An airline designated by the Government of Australia may operate a return service originating in Australia and terminating in Canada on the route specified

below and may take on and put down at Vancouver international traffic in passengers, mail and cargo taken on or discharged at other points so specified.

2. The route to be operated by the designated airline of the Government of Australia shall be:

   Any point or points in Australia to Vancouver via Fiji, Tahiti, Honolulu, San Francisco and other intermediate stopping places as may be mutually agreed on in both directions.

   Intermediate stopping places may at the option of the designated airline be omitted on any or all flights.

3. An airline designated by the Government of Canada may operate a return service originating in Canada and terminating in Australia on the route specified below and may take on and disembark at Sydney international traffic constituted of passengers, mail and cargo uplifted or discharged at other points so specified.

4. The route to be operated by the designated airline of the Government of Canada shall be:

   Any point or points in Canada to Sydney via San Francisco, Honolulu, Tahiti, Fiji, and other intermediate stopping places as may be mutually agreed on in both directions.

   Intermediate stopping places may at the option of the designated airline be omitted on any or all flights.

This 1974 amendment to the 1946 Canadian-Australia air transport agreement became a new bilateral agreement and as of November, 1986, was still in force.

In 1947 Canada concluded an air transport agreement with the United Kingdom through an exchange of letters that dealt with the traffic rights for Fiji and Canton Island. The agreement granted Trans-Canada Airlines (Air Canada) all

five freedoms for traffic between Canada and Fiji and Canton Island. Provision was made for beyond rights to a point in Australia and one point in New Zealand. In return, Canada granted British Commonwealth Pacific Airlines all traffic rights at Vancouver. This 1947 Canada-U.K. agreement was superseded by the 1949 Air Services agreement which established traffic between the United Kingdom of Great Britain including its overseas territories and Canada.

The 1949 agreement was first amended on August 18, 1958, with respect to route schedule and was further amended on 6th September, 1960, at the request of the Government of the United Kingdom. Two routings were given to Canadian carriers. The first gave Prestwick and London as gateways and Brussels, Dusseldorf, Zurich and Vienna as points beyond. Traffic was to originate in the following Canadian points: Vancouver, Edmonton, Winnipeg, Toronto, Montreal, Gander and Halifax through intermediate points such as the Azores, Iceland and Shannon. The second routing gave Hong Kong as the gateway with points beyond to be agreed on later. Points of departure included Toronto, Edmonton and Vancouver. Intermediate points were Whitehorse, Alaska, the Aleutians, points in Japan and Shanghai. In return, the British obtained Gander, Montreal and Toronto as gateways for traffic discharge from London, Prestwick and Manchester through intermediate points such as Shannon, Iceland, and the Azores.

It should be noted that since April 30, 1974, an international air transportation agreement has been reached with the government of Fiji, separating the Canadian - United Kingdom agreement from dealing with landing rights and matters thereof regarding Fiji. This agreement provided a continuation of traffic rights for CP Air which also allowed the island's only international carrier, Air Pacific, the rights to Vancouver. This agreement has subsequently been amended by an exchange of notes on April 30, 1984, which clarified to respective governments confidentially the nature and constraints of the bilateral with regard to capacity, tariffs and taxation matters.

The latest amendment to the U.K. agreement however, was made on 14 April, 1981, included three routing groups. The amendment gave Canada Prestwick, London and one additional point to be named by Canada as gateways for the first routing. In this routing group, Canada had almost complete freedom to decide the origin of service in Canada, provided that the British were notified. The intermediate points were the Azores, Iceland and Shannon. There were three alternatives for beyond rights given by the United Kingdom for this routing group:

1. Any one or several of: Dusseldorf, Brussels, Zurich, Vienna.

2. Paris, but with no traffic rights except for origin traffic carried in-transit through UK's gateway(s).

3. Points in Western Europe excluding Frankfurt, Copenhagen, Lisbon and West Berlin; points in Africa excluding Johannesburg, Lagos, Nairobi and Cairo; points in the Middle East excluding points in the United Arab Emirates, Bahrain, Oman and Qatar; Points in South Asia (i.e. West of Burma) excluding Calcutta and Delhi with provision for service to Bombay only after January 1, 1982. Singapore was offered as another alternative effective January 1, 1984.

The second route group made provision for Caribbean traffic from either Toronto or Montreal by way of Tampa or St. Petersburg. In the third route group, Britain gave Hong Kong as a gateway with beyond rights into Bangkok, Manila and Jakarta. However, capacity restrictions imposed on these beyond rights effectively limited the frequency to three round trips per week and only one point was to be served on any one flight. Canada might choose Vancouver and two further points in Canada as departure points. However, three months advance notice by diplomatic note is required for points other than Vancouver. Intermediate points are Whitehorse, Alaska, Shanghai and points in Japan. The intermediate and beyond rights at points mentioned earlier were only made available to one Canadian airline designated for such routing.

In return, Britain got Gander for traffic from London, Manchester and Prestwick by way of Shannon, Iceland and the Azores as the first route group, with beyond rights to New York and beyond and/or Bermuda and beyond. On the second route group, one further point from the United Kingdom as a departure point was also allowed, with the same intermediate

points provided as the first route group. In addition, points in the USA were also named as intermediate points for this route group with certain restrictions. A significant difference in this route group compared with the earlier one was the number of gateways that Canada had to offer. In addition to Gander, other cities such as Halifax, Montreal, Toronto, Winnipeg, Edmonton, Calgary and Vancouver were included in the route group. Furthermore, full traffic rights from Gander to New York and other points were granted by the Canadian Government, while stopover rights were granted for beyond points such as Boston, Detroit and Chicago. For traffic extended beyond Montreal, points in USA granted with only one stopover rights. The third route group provided traffic rights from Bermuda and points in the Caribbean by way of Havana to Montreal with beyond points in the United Kingdom.

Finally, in the route group that made traffic provision for Hong Kong, Canada gave Vancouver, and one further point not east of Winnipeg as gateways. Traffic for this route group may route through points in Japan and/or points in California. Beyond points in this route group were California. There were certain restrictions with respect to intermediate and beyond points for this route group. First, in-transit traffic is allowed to and from Hong Kong through Canadian gateways to and from Seattle and points in California. Second, these intermediate and beyond rights at points

mentioned is restricted to only one United Kingdom designated airline. The final restriction stated that in-transit traffic is granted to and from points in Japan through Canadian gateways to and from Seattle until such time that the exercise of full traffic rights between points in California and points in Canadian territory is commenced.

Canada began its direct bilateral air transport relationship with New Zealand subsequent to the signing of an agreement on 14 August, 1950. The agreement made provision for point to point air transport services between the two countries, with Vancouver on the one hand, and Auckland on the other, as gateways. No intermediate point was specified. It was, nevertheless, mentioned that intermediate stops were to be determined and agreed between the two parties. A provision for pooling was provided and, also it was specifically stated that capacity offered was to follow the equal sharing principle. Provision was made for upward capacity flexibility for meeting unexpected increases in demand. Fares and rate determination were referred to IATA and were subject to approval by the respective aeronautical authority.

In 1952, an amendment was made that provided sixth freedom traffic to Australia. No fifth freedom traffic rights were granted. It was not until Nov 30, 1984, that another formal bilateral air transportation agreement was initialled with New Zealand. The agreement was signed in 1985. This 1985 Canada-New Zealand Air Transport Agreement followed a

pattern very similar to the 1984 Singapore Agreement. These agreements may be seen as tending towards the restrictive category in the sense that even the aircraft type to be used must follow the principle of the bilateral clause:

> A designated airline of one Contracting Party may make a change of gauge[48] at any point on the specified route only on the following conditions:
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> 1. that it is justified by reason of economy of operation;
>
> 2. that the aircraft used on the section of the route more distant from the territory of the Contracting Party designating the airline is not larger in capacity than that used on the nearer section;
>
> 3. that the aircraft of smaller capacity shall operate only in connection with the aircraft of larger capacity and shall be scheduled to do so; the former shall arrive at the point of change for the purpose of carrying traffic transferred from, or to be transferred into, the aircraft of larger capacity; and their capacity shall be determined with primary reference to this purpose;
>
> 4. that there is an adequate volume of through traffic;
>
> 5. that the airline shall not hold itself out to the public by advertisement or otherwise as providing a service which originates at the point where the change of aircraft is made, unless otherwise permited by the Annex;

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[48] "Change of gauge" means the operation of one of the agreed services by a designated airline in such a way that one section of the route is flown by aircraft different in capacity form those used on another section.

6. that in connection with any one aircraft flight into the territory of the other Contracting Party, only one flight may be made out of that territory unless authorized by the aeronautical authorities of the other Contracting Party to operate more than one flight; and

7. that the provisions of Article XI of the present Agreement shall govern all arrangements made with regard to change of gauge.

The 1985 Canada - New Zealand Air Transport Agreement allows more than one airline to be designated. It allows Air New Zealand or another carrier designated by the New Zealand government to change intermediate point or points to Canada every six months on sixty days notice. Also included in the agreement was the provision for charter operations for both contracting states.

Of all the bilateral air transport agreements under review, the Canada-Japan agreement signed on 12 January, 1955, is the oldest agreement still in force without amendment. This agreement contains Bermuda type capacity clauses. In addition, the obligation to exchange statistical data for capacity review is specified. More than one airline is allowed to provide services according to the terms of the agreement. The route schedule in the agreement makes provision for a Canadian airline, or airlines, to operate air transport services from any points in Canada through intermediate points in either Alaska or the Aleutians to Tokyo.

Full traffic beyond rights were granted for Hong Kong and point or points to be agreed upon when the situation warrants it. The same condition for intermediate points as specified for the Canadian carrier is also applied to the Japanese carrier and traffic is to be discharged at the Vancouver gateway. Beyond rights are granted for Mexico City, Caracas, any point or points in Brazil, and a point in the west or central part of the United States of America, with full traffic freedoms.

The China-Canada agreement signed in 1973 has a provision on charter services and "capacity pre-determination" clauses. As specified in the Annex of the agreement, the People's Republic of China can originate traffic from any point in China by way of Tokyo through one intermediate point. The route granted enables the People's Republic of China to carry passenger, mail and cargo into Vancouver and/or Ottawa, with beyond rights for one point in a third country. The accord also enables the Canadian government to designate one airline to perform the service from any points in Canada with technical landing right for Alaska, through Tokyo or another point in Japan. The two gateways designated are Shanghai and Peking (now known as Beijing) with a point to be agreed upon later. The beyond rights allowed the Canadian carrier one extension point beyond

China, again, to be agreed upon at a later time. One particularly important aspect of the agreement is the stop-over privilege granted indiscriminately for passengers at intermediate points.

Of all the agreements between Canada and other Pacific area nations, only China included a Protocol concerning technical requirements and procedures related to the operation of the agreed air services. There were several articles in the Protocol. In article one, both contracting states's designated airlines are assigned the air corridor, airports and alternate airports to be served. In article two, the Protocol specifies that the aeronautical authorities of both parties are required to provide each other with the necessary aeronautical information such as information on radio communication and navigational facilities, flight rules and air traffic control. Article three provides both parties the opportunity to exchange meteorological information. Article four spells out the Air Traffic Rules and Procedures which both countries are to observe. Radio navigation and communications are discussed in article five. Article six deals with aircraft airworthiness, and also indicates that the international minimum standard of airworthiness must be met before the aircraft is allowed to receive the airworthiness certificate. Article seven deals with miscellaneous items and the validity of the Protocol.

In July, 1982, an agreement with India was signed. Air India initiated air services between Delhi and Montreal via Frankfurt and London in October, 1982.[49] Modifications to this agreement were made in 1984. An Indian designated airline is permitted to serve Toronto in addition to Montreal on a transatlantic route via Asia west of India and/or Europe, and beyond Montreal to a point in the U.S., and to serve Vancouver on a trans-pacific route. One Canadian carrier now has the right to serve Bombay and Delhi on a transatlantic route via Europe and Asia west of India and points beyond India, and another carrier can serve Delhi or Calcutta on a trans-pacific route.[50]

The agreement with Singapore, signed on 12 June, 1984, provides air services between and beyond the respective territories on a transatlantic route via Europe and/or the Middle East and Asia, and a transpacific route via intermediate points in Southeast Asia and/or the Pacific. As mentioned earlier, the Canada-Singapore Agreement contains clauses which also appeared in the Canada-New Zealand Agreement. Provision for "change of gauge" is specified. Article four of the agreement indicates that more than one airline

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[49] Transport Canada, Annual Report 1982-83, Catalogue No. L 31-54/1984, 1984.

[50] Canadian Transport Commission, The Eighteenth Annual Report of the Canadian Transport Commission 1984, Catalogue No. TT1-1984, 1985, p.34.

was allowed to perform the services derived from the agreement, subject to the condition that only one airline is allowed for each designated route. Since there is only one airline in Singapore, it may be assumed that permission to designate designation for two airlines was the result of a request made by Canada, probably at the wish of its two airlines.

4.4 CANADA'S PUBLIC POLICY ON AIR CARRIER DESIGNATION

International air transport market is characterized by the need of governments with more than one major carrier to specify which one is to be used for international traffic and, if more than one operates internationally, what carrier choice is to be made if a bilateral agreement has a carrier restriction. Canada's international air transport system began on the basis of monopoly. TCA (later Air Canada) was the chosen instrument. TCA began scheduled international service on the route to Seattle. To provide Canadian service to Australia as a result of the 1946 bilateral with Australia, the Canadian government offered its route to TCA. TCA, operating under a financial break-even policy guideline from the Canadian government, declined to begin transpacific operations because the range and traffic conditions were expected to lead to losses. Canadian Pacific wanted to restore and expand its passenger service previously based on its fleet of ocean liners. Wartime sinkings had depleted

the fleet and changing economics indicated that air travel was to be the major mode for future oceanic passenger travel. As a result, Canadian Pacific Airlines obtained the route to Sydney and Auckland.[51] Subsequently, Canadian Pacific Airlines gained other international traffic routes in other parts of the world, but TCA remained the main Canadian carrier. In order to clarify the roles of Canada's carriers in the international field, the Hon. J.W. Pickersgill, Minister of Transport, declared in 1964 that "Air services provided by Canadian airlines should serve the Canadian interest as a whole; these services should not be competitive or conflicting, but should represent a single integrated plan, which could be achieved by amalgamation, partnership or by a clear division of the fields of operations."[52]

In 1965 the two airlines were asked what they wished to do. They recommended a division of the world for airline operation. Neither airline would serve any point served by the other. Of significance for this study, CP Air was to serve the whole Pacific area, the whole continent of Asia, Australia and New Zealand. In 1973 the Hon. Jean Marchand, Minister of Transport, in a statement of policy included the comment on international aviation that he would

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[51] R.F. Harris, "Competition, Monopoly, and Transportation Efficiency: Some Lessons from Canadian Airline Experience," The Logistics and Transportation Review, Vol.14, No.3, 1978, pp.211-228. Also appears in Proceedings, Transportation Research Forum, 1978.

[52] Department of Transport, Press Release, 24 April, 1964.

"....encourage more co-operation between CP Air and Air Canada in the context of benefits to Canada.... The degree of co-operation which is achieved will be a factor in determining future route awards within the flexibility afforded by the division of the world outlined in this statement and would influence the timing of any review of this division."[53] Mr. Marchand then asserted the pre-eminence of Air Canada and announced a somewhat changed global division. In Europe, Air Canada was given Northern Europe except the Netherlands, Central Europe and Eastern Europe (Warsaw Pact countries), while CP Air received Southern and Southeast Europe plus the Netherlands. Air Canada was given the Caribbean countries and bordering South American countries of Colombia, Venezuela and the three former Guianas. CP Air was granted the balance of Central and South America except that either airline might be assigned to serve Brazil. CP Air retained Australia, New Zealand and the Pacific Island countries. Air Canada was assigned all of Africa except for CP Air's right to Morocco, Algeria and Tunisia, and either Egypt or Sudan if selected as a route in a Canada - Italy agreement. In Asia, Air Canada was given Lebanon, India and Pakistan, while CP Air was assigned most of the balance of Asia including Israel, Iran, China and Japan. However, Air Canada could include China if Canada obtained the right to designate two carriers. Southeast Asia was left for future consideration. In Europe, Air Canada was to serve Yugosla-

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[53] Directorate of Public Affairs, Transport Canada, Press Release, 29 March, 1973.

via and CP Air, Milan.

4.5 CANADIAN GOVERNMENT PERFORMANCE EVALUATION

National governments have a strong public interest concern with international air transport because of its role in the extension and development of a nation's economic infrastructure. Evaluation of the Canadian government performance in the Pacific Ocean region is, therefore, of prime importance.

Economic evaluation of bilateral air transport agreements can be extremely difficult simply because it is often difficult to attach a precise monetary value to an individual bilateral agreement. However, the basic criteria established in Chapter I, provide a framework for this review and evaluation. Essentially, these criteria require that these three basic questions be addressed. First, how effective has the Canadian government been in extending and improving Canada's Pacific Ocean region network for air transport through new, or major revisions of existing bilaterals? Second, how effective has the government been in solving problems existing at the start of the period under review? Third, how effective has the government been in its policy of carrier choice in the region?

At the beginning of the period under review, Canada's air transport network was based on five bilateral air transport

agreements with countries from the Pacific Ocean region. These bilateral relations provided air transport linkage between Canada and United States, the United Kingdom, Australia, New Zealand and Japan. Of these agreements, the only non-active agreement was the Canada - New Zealand bilateral. Air transport services between the two countries has been suspended since May, 1969.

During the period under review, Canada renegotiated its active bilaterals with the United States, the United Kingdom and Australia. Of these bilaterals, revisions that had the most important implications for air transport network extension was the one with the United Kingdom. A more important result of the revised U.K. agreement was the competition for CP Air introduced by Cathay Pacific from Hong Kong. Cathay Pacific obtained fifth freedom rights from Vancouver to one point in California while Canada was granted fifth freedom traffic rights from Hong Kong to Bangkok, Manila and Jakarta. Because of the capacity restriction imposed on the Canadian beyond rights, the agreement has effectively limited the frequency to three round trips per week. In addition, the agreement allowed only one of the three points specified to be served on any one flight. In other words, instead of beyond rights for multiple destinations, it is a single point beyond right but with multiple-destination selection. Although Cathay Pacific had already began utilizing its fifth freedom rights, Canada's designated carrier, CP Air,

has yet to benefit from this fifth freedom exchange. The United Kingdom bilateral renegotiation also led to the addition of fifth freedom traffic rights for a Canadian carrier from London to Bombay. This right was exercised by Air Canada.

The renegotiation with the United States, though significant in many respects, had little impact on the structure or route expansion on traffic in the Pacific Ocean region. Intercontinentally, Canada continued to have link with Honolulu and fifth freedom traffic to Australia. Similarly, the revised Australia bilateral has little impact on Canadian carrier participation in the region. The only changes that affected the route structure was the termination of the fifth freedom rights to New Zealand, since the cancellation of the Canada - New Zealand agreement had effectively made those rights useless.

Canada has been able to strengthen its network of bilaterals by the addition of new bilateral agreements with China in 1973, India in 1982 and Singapore in 1984. The agreement with China provided Canadian carrier with two major points in China, Peking and Shanghai. In addition, beyond rights is also granted subjected to mutual agreement. The Canada - China agreement also provided Canadian carrier an equal footing in competing with foreign carriers in the Pacific, including United States carriers.

The agreements with India and Singapore also changed the nature of air transport competition in Pacific Ocean region. This is because scheduled passengers and cargo can now be indirectly competed away by carriers operating from Canada to countries in the Pacific Ocean region through North Atlantic. The fifth freedom rights granted to Bombay by the United Kingdom and the addition of the India and Singapore agreements enable Air Canada to reach Singapore. Also, negotiations with Thailand and Korea were brought to fruition shortly after the period under review.

Through major renegotiation of existing bilaterals and the negotiation of new agreements, the Canadian government succeeded in substantially extending Canada's air transport network with the inclusion of important Asian destinations in the North Pacific region and penetration of Southeast Asia.

With respect to problems existing in 1970, the restriction clauses in the bilateral with Japan should be noted. Most bilaterals have been flexible enough to allowed continuous negotiation and infrequent revision to the original agreement. Ability to lessen restrictive clauses are important for route enhancement and network development. The agreement that Canada would like to renegotiate but has not been successful was the agreement with Japan. Canada laid the foundation for CP Air's Toronto - Hong Kong services with stop-overs at Vancouver and Tokyo ever since the sign-

ing of U.K. agreement in 1981. However, the Japanese government has been reluctant to grant rights for CP Air to start the Toronto - Hong Kong service with an intermediate traffic stop in Tokyo. Five years after the negotiation process had begun, Canada had yet to realize success in this bilateral with respect to flexibility.

Another important development during the period under review was the renegotiation of the non-active bilateral with the New Zealand government. Renegotiation was completed only after over fifteen years of air services suspension in 1985. This 1985 agreement allowed the re-establishment of air transport linkage between Auckland and Vancouver. This renegotiation was successful but was unduly slow. Disruption of traffic linkage based on already established bilateral is obviously detrimental regardless of the reason, whether it be political or based on economic imbalances.

The "division of the world" policy is the primary means whereby the Canadian government allocates Canadian carrier resources. This basic policy is an effective means of conserving Canadian air transport resources to increase their effectiveness in international competition. However, the policy has had serious problems in its application to the Pacific Ocean region. It did not seem to be sufficiently responsive to changing competitive conditions in the region.

During the period under review, some bilaterals negotiated have not been effectively implemented. For example, CP was given all scheduled traffic rights, including scheduled passengers traffic and scheduled all cargo services to Hong Kong, Japan, Fiji, Sydney and Auckland, even though the carrier has no freighter aircraft. Also,CP Air had not been effective in utilizing the rights granted in this agreement until 1985, when it had been under heavy pressure from Air Canada. As it will be seen in Chapter VIII CP Air's performance on established routes also raises questions about the allocation policy.

In summary, it appears that the government has had, on balance, substantial success in the development of Canada's air transport network through new bilaterals and major renegotiation of existing bilaterals. Its success has been limited in the solving of problems deriving from bilaterals in existence in 1970. Its "division of the world" policy, while not questioned as a basic policy, raises questions with respect to its application in the Pacific Ocean region in the period under review.

4.6 CONCLUSION

This chapter has revealed that air transport, commonly a regulated industry, operates under particularly restrictive conditions in the international scheduled traffic sector where bilateral air transport agreements are normally

required between nations. A general discussion of bilateral agreements has shown them to range from very restrictive to reasonably liberal in their nature. After a presentation of a chronology of Canada's bilateral agreements of relevance to the Pacific Ocean region, the character and historical evolution has been developed. It shows the changing geography of this fundamental provision for Canada's air transport network and specifies the nature of the agreements. The conditions for air transport operation are shown to be complex. The chapter concludes with an important analysis of Canadian government performance in the Pacific Ocean region from 1970 to 1985.

Chapter V

ECONOMIC CHARACTERISTICS OF THE PACIFIC OCEAN REGION MARKET

The economic growth of international air transport and the economic growth of regions within which it operates are strongly interrelated.[54] Economic growth strengthens the demand for air transport services, both passenger and cargo, while, reciprocally, the development of air transport systems is an important element on international economic growth. In Chapter I, a preliminary indication was given of the strong surge of air transport activity in the period under review in this thesis. This chapter will analyze the determinants of the growth of international air transport in the Pacific Ocean region and indicate the character of the economic activities to which it provided support. The general character of the economies of this substantial world regional market is reflected in high rates of growth.

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[54] See Lucien Rapp, "Public Corporations and Economic Development: The Example of Air Transport in Various Third World Countries", ITA Magazine, No.31, January 1986, pp.9-14. Also, Emile Quinet, "Air Transport and Development", ITA Magazine, No.6, May 1983, pp.29-46.

5.1 THE ECONOMIES OF THE PACIFIC OCEAN REGION

The Pacific Ocean region consists of a vast diversity of states many of which have experienced significant economic growth during the past fifteen years. This growth in real income has been very supportive of the demand for air transport. It was shown in Chapter II that income elasticity of demand for air transport is thought to be high and, therefore, supportive of this effect. Increased economic activity, especially business, have basically strengthened demand. Further, aggressive and innovative marketing for both business and tourist travel has been backed by technologically improved aircraft fleets operating in a competitive environment which have kept fares and rates at levels which have helped to expand the economic activity in the region.

Three distinct types of economies can be identified in the Pacific Ocean region. The first is comprised of five industrialized developed countries, namely, Australia, Canada, Japan, New Zealand and the United States. In 1986 their combined population was 394 million. Japan, Australia and New Zealand accounted for almost half of the Pacific Ocean region's GNP, even though they together represented only six percent of the population of the region. In 1984 their average per capita income was $9,655 ($10,263 in Japan, $11,720 in Australia and $6,983 in New Zealand).

The second type of economy includes four countries that are at an advanced state of industrialization. They are South Korea, Taiwan, and the two city states of Hong Kong and Singapore. They are classified as industrialized developing countries. These countries are often exporters of manufactured goods.

The third group includes China, Indonesia, the Philippines and Thailand. These nations are mainly agricultural and are exporters of raw materials with an industrialization process that is just beginning. In general, these states, and virtually all the dependent territories, are situated at a considerable distance from external and potential markets, making air transport an essential and desirable part of their transport systems. Other Asian Pacific nations, such as Vietnam, are under-developed low-income countries with little international air transport potential.

5.2 AIR TRANSPORT GROWTH TRENDS

Certain trends are important elements in explaining the rapid growth of air transport activity in the Pacific Ocean region. They include increases in population, the strong growth of industrial output and trade, and rising per capita real income. Accompanying these favourable trends in the determinants in the demand for air transport has been a gradual decline in the real cost of air travel which, when combined by marketing improvement has been reflected in a

decline in the real cost of international air fares in the region.

The strength of the development of the air transport industry in the Pacific Ocean region has been reflected in substantial improvement in the size and scope of the industry's traffic. The enlargement of passenger traffic has resulted from both business travel and tourism. Air cargo, with its emphasis on high value products, has participated actively in this phrase of traffic expansion.

Economic development and commercial air transport growth in the Pacific Ocean region had suffered from political instability during the sixties. This underlying condition was pervasive in its impact. In the period under review the political environment stabilized and confidence in economic commitments was restored. What had been a serious obstacle to economic development and the accompanying development of international air transport, now became a catalyst.

5.2.1 Population Size and Growth

Demographically, the Pacific Ocean region contains countries with very large populations and several with high rates of population increase. Table 9 presents data for the period under review.

For sheer size, China has over one billion population, almost sixty percent of the region's total population. The

TABLE 9

Population Size For Selected Years and Average Annual Population Growth For Selected Countries

Country	Population Size (Millions)				Average Annual Population Growth
	1970	1975	1980	1985	1970-1981
Australia	12.5	13.7	14.6	15.7	1.4%
Canada	21.3	22.7	23.9	25.3	1.2%
China	825.8	895.3	956.8	1059.5	1.5%
Hong Kong	3.9	4.3	5.0	5.5	2.4%
Indonesia	119.4	135.2	150.5	163.3	2.3%
Japan	104.3	111.5	116.7	120.7	1.1%
Malaysia	10.3	11.9	13.4	15.5	2.5%
New Zealand	2.8	3.0	3.1	3.2	1.5%
Philippines	36.8	42.0	48.4	54.3	2.7%
Singapore	2.0	2.2	2.3	2.5	1.5%
South Korea	32.2	35.2	38.1	41.2	1.7%
Thailand	36.3	41.8	47.1	51.3	2.5%
United States	204.8	213.5	227.6	239.2	1.0%

Source: Population size figures for 1970, 1975 and 1980 are from UNESCO, Statistical Yearbook 1984, pp.I7-I10. 1985 figures are from United Nations, Demographic Yearbook, 1985, New York, 1987, pp.151-154. Average annual population growth figures 1970-1981 are from The World Bank, World Table, Volume I, Economic Data, Third Edition, 1983. pp.486-488.

region also includes countries and city states with high population growth rates. For the period 1970 - 1981 the Philippines had the highest average annual population growth rate, 2.7 percent. From 1970 to 1985, the population of the Philippines grew by 17.5 millions. Next came Thailand with

an average growth of 2.5 percent per year resulting in a population increase of 15 million in fifteen years. Malaysia, a country of smaller population, had a growth rate of 2.5% while Hong Kong's growth rate was 2.4% in the 1970 - 1981 period.

Both large population concentrations and high rates of population growth have favourable implications for growth in international air traffic. A rise in per capita real income in a country of large population can spur the demand for air transport while a high rate of growth, even with moderate increases in per capita income, can impact favorably on air traffic.

5.2.2 Growth Of Gross Domestic Product

Countries in the Pacific Ocean region have experienced significant economic growth from 1970 onwards. The East Asia and Pacific region as a whole has recorded, on average, an eight percent real gross domestic product growth per year from 1970 to 1981. This rate of growth is significantly higher than those recorded by other regions such as Africa and Southern Europe. It is especially interesting to note that the region's rate of growth is almost triple that recorded in industrial market economies. Table 10 puts these facts in perspective.

TABLE 10

Comparative Review of Average Annual Real GDP Growth and Per Capita GDP Growth For World Economies

By Type and By Region 1970-1981.

	GDP Growth	Per Capita GDP Growth
World Economies By Type:		
Developed economies	5.2	2.8
High Income Oil Exporters	6.7	2.1
Industrial market economies	3.0	2.3
Developing economies by region:		
Africa South of Sahara	3.3	0.4
Middle East and North Africa	7.1	4.1
East Asia and Pacific	8.0	5.6
South Asia	3.8	1.6
Latin America and the Caribbean	5.2	2.7
Southern Europe	5.0	3.3

Source: The World Bank, World Table, Volume I, Economic Data, Third Edition, 1983. pp.486-488.

Another significant aspect of this region's economic performance is its significant improvement in living standards, as measured by per capita gross domestic production growth. Of all the regions in the world classified by the World Bank, the East Asia and Pacific region achieved the highest rate of growth in per capita gross domestic production from 1970 to 1981. The 5.6% growth recorded reflects not only the highest growth rate achieved, but it is almost ten times that recorded in the South Africa region and is 1.5% higher than the Middle East and North Africa region, which has the second highest rate of growth. Further to put this performance into perspective, the average annual real rate of growth of 5.6% is more than double that recorded in high

income oil exporter economies and also those recorded in industrial market economies. This strong increase in per capita incomes in the Pacific Ocean region has provided strong support to air transport activity.

Table 11 shows the gross domestic product and average annual increase in real gross domestic product for selected countries in the Pacific Ocean region for the same years. For the period from 1970 to 1981, Hong Kong achieved the highest growth in domestic product, with an average ten percent per year. Output for its economy expanded almost ten times during that period. Growth for Indonesia and Malaysia were also significant with average growth rates of 7.8 percent per year. Six countries had growth rates over 4 percent.

Table 12 shows growth rates in per capita terms which are equally impressive. Of the Asian countries, Japan had the highest per capita gross domestic product in the region in 1984, followed by Singapore (U.S.$7,232) and Hong Kong (U.S.$5,969).

TABLE 11

Gross Domestic Product and Average Annual Real GDP Growth For Selected Countries

Country	Gross Domestic Product (Millions U.S. Dollars)				Average Annual Real GDP Growth
	1970	1975	1980	1984	1970-1981
Australia	37779	95446	148630	182136	2.8%
Canada	82810	163964	255011	336746	3.8%
China	78293	134570	247185	241630	5.0%
Hong Kong	3610	9137	21981	31996	10.0%
Indonesia	8871	30464	72482	83745	7.8%
Japan	203569	498774	1036204	1157456*	4.5%
Malaysia	3459	9297	23812	33974	7.8%
New Zealand	6531	13954	23493	23368*	2.0%
Philippines	6999	15812	35411	32836	6.2%
Singapore	1896	5640	11304	16740*	1.5%
South Korea	8588	20561	58246	83284	1.7%
Thailand	6541	14663	33450	41954	2.5%
United States	989513	1542180	2606630	3634582	1.0%

Source: Gross Domestic Product figures are from United Nations, Statistical Yearbook 1983/84, New York, 1986, pp.107-110. and United Nations, National Accounts Statistics; Analysis of Main Aggregates, 1983/1984, New York, 1987, pp.3-6. Figures marked with an asterisk are for the year 1983.
Average Annual GDP Growth 1970-1981 are from The World Bank, World Table, Volume I, Economic Data, Third Edition, 1983. pp.486-488.

TABLE 12

Per Capita Gross Domestic Product and Average Annual Real Rate Of Growth For Selected Countries

Country	Per Capita Gross Domestic Product (U.S. $)				Average Annual Per Capita GDP Growth
	1970	1975	1980	1984	1970-1981
Australia	3022	6906	10282	11720	1.4%
Canada	3888	7223	10815	13400	2.6%
China	94	144	246	230	3.8%
Hong Kong	912	2077	5445	5969	7.4%
Indonesia	75	225	495	524	5.3%
Japan	1969	4471	8907	10263	3.4%
Malaysia	333	781	1773	2235	5.2%
New Zealand	2324	4603	7659	6983	0.5%
Philippines	187	376	733	615	3.4%
Singapore	916	2496	4707	7232	6.9%
South Korea	272	599	1634	2052	7.2%
Taiwan				2150*	6.6%*
Thailand	182	355	720	832	4.6%
United States	4826	7141	11446	15357	1.9%

Source: Average Annual Per Capita GDP Growth for 1970-1981 are from The World Bank, World Table, Volume I, Economic Data, Third Edition, 1983. pp.486-488.
Figures marked with an asterisk are from ICAO, International Air Passenger and Freight Transport -- Asia and the Pacific, 1987.
Per Capita GDP are from United Nations, National Accounts Statistics; Analysis of Main Aggregates 1983/1984, New York, 1987. pp.3-7.

5.2.3 Industrialization

During the 1970s and 1980s industrialization has been given high priority by a number of nations in Pacific Ocean region. This has been the case for Japan, already industrialized, and for several other nations which have been intensifying or initiating their industrialization. The average annual growth of gross industrial product for selected countries is shown in Table 13.

TABLE 13

Average Annual Growth Of Gross Industrial Product For Selected Countries

Country	Average Annual Rates Of Industrial Growth		
	1970 - 1975	1975 - 1980	1980 - 1983
Australia	2.3%	2.7%	0.4%
Canada	5.0%	3.4%	-2.4%
Indonesia	13.1%	10.0%	1.7%
Japan	5.4%	8.8%	6.9%
Malaysia	10.1%	10.3%	5.5%
New Zealand	..	2.2%*	..
Philippines	7.3%	6.6%	2.3%
Singapore	10.9%	11.2%	2.3%
South Korea	17.5%	13.7%	7.1%
Thailand	9.4%	10.9%	5.6%
United States	2.8%	4.0%	-0.5%

Source: Figures are from United Nations, Statistical Yearbook 1983/84, New York, 1986, pp.147-154. Figures marked with an asterisk are for the years 1977 - 1982.

Throughout the period under review, the rate of growth experienced by South Korea has consistently been the highest achieved among these countries. Between 1975 and 1980, five newly industrialized nations had an average growth of over ten percent per year; they are South Korea, Singapore, Thailand, Malaysia and Indonesia. From 1980 to 1983, a period of world economic recession, negative rate of growth can be noted for the United States and Canada. Japan rate of growth was, however, 6.9%, while all the Asian nations maintained a positive rate of growth. Their average growth was about five percent per year. This remarkably strong industrialization performance in the Pacific Ocean region has been very supportive of international business travel by air.

5.3 AIR TRANSPORT RESPONSE

The character of the aircraft fleets developed to meet these favourable demand-side developments is of considerable interest. The supply of output by an airliner is a product of seat or payload capacity, speed, and aircraft service availability on an annual basis. Market access is provided by flight range and by the attractiveness and practicality of aircraft capacity, competitive economic strength is provided by low break-even load factor levels for the aircraft used.

The 1970 - 1985 period is marked by the establishment of dominance by jet-powered airliners in the world's commercial air transport systems. Their quietness, speed, range and high utilization rates have been the basis for their superiority.

Among these jet aircraft, the development of wide-body jet aircraft has given the air transport industry some very high productivity aircraft. They are especially well-suited to international air transport in the Pacific Ocean region. These aircraft can provide the long-range flights that are often needed and the spaciousness, quietness and seat-availability which is attractive to passengers. Their cargo capacity is especially noteworthy as it is large enough to permit the use of containers, a very progressive and effective cargo handling technique. Further, these jets have low break-even load factors to give them very good unit cost and profitability potential. Their main limitation is their requirement of sufficiently high traffic densities. The developments discussed in the preceding material have provided an excellent setting for their use.

The steady increase in the use of jet aircraft in the Pacific Ocean region is apparent in the rise from 24% to 65%. Even more striking is the rise in the percentage use of wide-body jet aircraft from 3% in 1972 to 30% in 1985. Use of wide-body jets had almost equalled that of narrow-body jets in aircraft by 1985.

In the use of wide body jet aircraft, it is noteworthy that Japan Air Lines became the world's largest operator of Boeing 747s. The airline placed its first 747 order in 1966 and began its use on trans-Pacific services in July, 1970. By 1984 it had 41 in its fleet with four on order and plans for further additions. Japan Air Lines has used five variants of the 747. Korean Air Lines was among the first in Asia to introduces 747 and, by 1984, had a fleet of sixteen. Qantas, the first airline to establish a round-the-world passenger route has based its fleet on 747s with 25 of these aircraft in use by 1984.[55]

The adoption of wide-body jets among carriers in the Pacific Ocean region is placed in a world perspective in Table 14. This table shows these carriers to be significant users of this class of aircraft.

Have the carriers in the Pacific Ocean region been progressive in their response to these technological development in the air transport industry? A revealing perspective is provided in Table 15.

This strong emphasis in the use of large capacity jet aircraft by the Pacific Ocean airlines is reflected in the seats per aircraft data on a comparative regional basis. Table 16 gives regional figures for selected years.

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[55] Hiroshi Seo, Boeing 747, Jane's Publishing Company Limited, London, 1984.

TABLE 14

Pacific Ocean Region Wide-Body Jet As Percentage Of World Total

Year	Wide-Body Jet		
	World Total	Pacific Total	Percentage Of World Total
1969	16		
1972	273	26	10
1975	592	85	14
1979	940	196	21
1982	1330	295	22
1985	1572	345	22

Source: Figures for the years 1975 - 1985 are obtained from ICAO, The Economic Situation of Air Transport Review and Outlook 1986, 1986. Circular 200-AT/78. p.11
Figures for the years 1972 - 1982 are from ICAO, A Review of The Economic Situation of Air Transport, 1972 - 1982, 1983, Circular 177-AT/67, p.8. Figures for the years 1969 - 1979 are obtained from ICAO, A Review of The Economic Situation of Air Transport 1969 - 1979, 1980, Circular 158-AT/57, p.10.

It is noteworthy that the airlines of the Asia and the Pacific region maintained the highest number of seats available per aircraft in this period and that their margin had risen to thirty percent over the world average by 1984. In general, it is clear that these airlines have been aggressive in the adoption of large capacity aircraft in a region with a favourable environment for their use. Table 16 reflects the impact of this fleet development policy in summary form.

TABLE 15

Distribution Of Commercial Aircraft Operated By Carriers In The Pacific Ocean Region

Year	Jet						Other		Total
	Wide-Body		Narrow-Body		Total				
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number
1969			180	24	180	24	585	76	765
1972	26	3	284	31	310	34	594	66	904
1975	85	9	365	37	450	46	530	54	980
1979	196	17	464	40	660	57	490	43	1150
1982	295	26	415	36	710	62	430	38	1140
1985	345	30	395	35	740	65	390	35	1130

Source: Figures for the years 1975 - 1985 are obtained from ICAO, The Economic Situation of Air Transport Review and Outlook 1986, 1986. Circular 200-AT/78, p.11.
Figures for the years 1972 - 1982 are from ICAO, A Review of The Economic Situation of Air Transport, 1972 - 1982, 1983, Circular 177-AT/67, p.8. Figures for the years 1969 - 1979 are obtained from ICAO, A Review of The Economic Situation of Air Transport 1969 - 1979, 1980, Circular 158-AT/57, p.10.

TABLE 16

A Comparison Of Average Number Of Seats Per Aircraft By Region Of Airline Registration

Region	Seats Available Per Aircraft		
	1974	1979	1984
Asia and the Pacific	186	236	289
Africa	142	164	182
Europe	160	192	193
Latin Am./Caribbean	120	143	175
Middle East	118	171	215
North America	175	225	251
World Average	160	198	221

Source: ICAO, ICAO Bulletin, July 1986. p.23.

5.4 PASSENGER FARES IN THE PACIFIC OCEAN REGION

Several factors have contributed to active fare rivalry and flexibility in the Pacific Ocean region. First, it should be noted that the airlines of this region have operated outside the IATA framework which has restricted the range of price rivalry in Europe and elsewhere. Second, the airlines of industrializing nations in this region have been very aggressive in their pricing techniques. Carriers such as Singapore Airlines have developed extensive networks of travel agencies to access passenger markets. Commission rebates for the travel agencies at premium levels as part of aggressive marketing and, as a result, the prices paid by consumers were often lower than the official published fares. The high level of air transport growth in this

region has been supported by declining fares as measured in real terms. On the other hand, Asian airlines have raised the level of their scheduled business passenger fares by effective product differentiation of their services. Third, the United States deregulation policy has increased competition pressure among their airlines participating in the region.

Since the level of air fares is of particular importance for leisure air passenger services, innovative designs of air fare plans such as excursion, group and special reduced fares have attracted more passengers from these relatively elastic segments of the air travel market. The intelligent use of marketing techniques has no doubt contributed to the growth of air passenger transport and, as a result, has helped to keep fares substantially below what they would otherwise have been. As is shown in Table 17, the majority of passengers who travel on international sectors opt for discount-fare tickets.

Further interesting observations can be made regarding passenger responses in the Pacific Ocean region. Table 18 shows that the composition of passenger traffic has changed with an increase of business class traffic for members of Orient Airlines Association during the past few years. In 1982, first class passenger revenue represented 8.9% of the total revenue mix. It dropped to 8.4% in 1983 and remained at 7.8% for both 1984 and 1985. A similar decline can be

TABLE 17

Passenger Distribution For the Asia and Pacific Region By Scheduled Fare Category, 1984

Airlines	First Class	Normal Economy	Economy Excur-sion	Inclu-sive Tour	Other
Between the Americas and the Western Sub-region					
Air India	2.1	4.8	7.4	- -	85.7
Pan Am	4.3	80.5	<-- 13.2 -->		2.0
Between the Americas and the Central Sub-region					
Singapore Airlines	4.7	10.8	62.2	19.5	2.8
Continental	- -	52.3	<------ 47.7 ------>		
Pan Am	9.6	66.6	<-- 13.5 -->		10.3
Northwest Airlines	1.1	9.1	<-- 89.9 -->		- -
Between the Americas and the North-Eastern Sub-region					
Varig	2.0	8.0	25.0	65.0	- -
Korea Air	2.8	46.9	21.7	18.4	10.2
Continental	- -	46.3	<-- 53.7 -->		- -
Northwest Airlines	3.3	4.3	<-- 91.8 -->		.06
Pan Am	10.3	68.5	<-- 12.1 -->		9.1
United Airlines	4.8	0.1	<-- 94.3 -->		0.8
Between the Americas and the South-Eastern Sub-region					
Qantas	6.0	19.0	66.0	- -	9.0
France (UTA)	- -	20.6	23.7	42.7	13.0
Air New Zealand	2.7	10.7	80.7	4.2	1.7
Continental	6.1	51.5	<-- 41.9 -->		0.5
Pan Am	10.0	61.4	<-- 16.5 -->		12.1
Lan Chile	2.9	<---------- 97.1 ---------->			
Within Asia/Pacific					
Qantas	3.0	22.0	53.0	7.0	15.0
France (UTA)	0.6	32.7	11.5	52.7	2.5
Korea Air	3.7	40.8	15.0	29.6	10.9
Air New Zealand	1.9	27.0	49.7	20.5	0.9
Singapore Airlines	5.7	20.3	54.0	17.8	2.2
Air Lanka	1.2	33.7	47.6	3.6	13.9
Air India	2.6	3.3	14.6	<--- 79.5 --->	

Source: ICAO, International Air Passenger And Freight Transport -- Asia And Pacific, 1986, Circular 201-AT-79, 1986, pp.135-137.

TABLE 18

Passenger Revenue Mix For Members of Orient Airlines Association 1982 - 1985

Fare Categories	1982	1983	1984	1985
First Class	8.9%	8.4%	7.8%	7.8%
Business Class	3.1%	9.1%	15.4%	17.2%
Economy Class	88.0%	82.5%	76.8%	75.0%

Source: Orient Airlines Association, Annual Report April 1985 - March 1986, 1987, p.41.

observed in the economy class travel. Its revenue share was 88% in 1982, but a consistent decline can be seen and, by 1985, its share was only 75%. In contrast, however, business class revenue experienced a steady growth of the total revenue mix from 3.1% in 1982 to 17.2% in 1985. This significant growth of business class travel is part of a trend among the region's carriers towards greater service orientation.

Table 19 illustrates the diverse range of passengers fares offered by airlines in the North and Mid Pacific markets. Within this sample group, the highest first class fare differential was 175 percent above the normal economy class as offered on the San Francisco - Hong Kong route. The lowest differential was found in the competitive Singapore - San Francisco market where the first class fare was 148 percent above the normal economy fare. With respect to APEX-type fares, the difference typically ranged from 44

percent to 77 percent below the normal economy fare class. Group fares offered a discount of up to 56 percent while the cheapest fares available are classified under "other" fares, which are available for military, student and youth. These "other" fares were 25 to 50 percent below the applicable normal economy fares.

Fares per kilometer vary widely from one market to another, and often have no obvious or consistent relationship to costs or the journey distance. There are as many as seventeen different fares available for a flight from Vancouver to Hong Kong offered by CP Air alone. Furthermore, there are over ten airlines that quoted fares for this sector.[56]

In Table 20, average normal economy fares per passenger-kilometre for the period 1976 to 1985 are given for major route groups. Percentage changes in these fares have been computed. It is interesting to note that the percentage change in fares for passenger traffic in the North and Mid Pacific and Local South/East Asia, South West Pacific were consistently below the world level, while passenger fares within the South Pacific and between Canada, Mexico and United States were well above the world average.

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[56] See Air Canada, British Airways Broad, Japan Air Lines Company Ltd., Qantas Airways Ltd., Trans World Airlines Inc. Air Tariff, May, 1985.

TABLE 19

North and Mid Pacific Passenger Unit Fares: 1985

City-Pairs	Normal Economy	First Class	Excursion	APEX	Other	Group Inc.Tou	Group other
Lima - Tokyo	19.1	29.4	17.0				
Bangkok - Dallas	14.5	23.4	10.9	9.5	9.2	12.1	9.9
Singapore - San Francisco	15.4	22.7	7.5	8.5	7.7	10.8	10.4
New York City - Okinawa	18.2	29.7		11.8	9.5	14.2	
Tokyo - Mexico	15.0	24.6		11.6			
San Francisco - Hong Kong	15.0	26.2	9.1	6.6	7.2	10.5	8.2
Hong Kong - Vancouver	13.1	21.6	8.9	7.2		9.6	7.1
Los Angeles - Osaka	16.3	25.8		9.5	7.5	10.9	10.3
Seoul - Seattle	18.2	28.5	12.0		9.5	13.1	9.6
Honolulu - Tokyo	17.0	27.1		9.7	6.6	10.6	10.7

Source: Figures are calculated from ICAO, Survey of International Air Transport Fares and Rates September 1985, Circular 198-AT/76, 1986, p.102.

Table 21 summarizes, for comparative purposes, passenger flight costs by regions.

TABLE 20

Comparison of Average Normal Economy Fares Per Passenger-kilometre: 1976-77, 1983-85

By Route Group and By Distance

Route Group	Year	Cents per Passenger Kilometre by Distance (km)							
		250	500	1000	2000	4000	8000	12000	16000
International Average--World	1976	15.6	13.3	11.4	9.7	8.3	7.1	6.5	
	1977	16.9	14.3	12.2	10.4	8.8	7.5	6.8	
	1983	27.8	23.1	19.2	15.9	13.2	11.0	9.9	9.1
	1984	27.1	22.5	18.6	15.4	12.8	10.6	9.5	8.8
	1985	28.7	23.6	19.4	16.0	13.2	10.8	9.7	8.9
% change (76/85)		84.0	77.4	70.2	64.9	59.0	52.1	49.2	
Between Canada, Mexico & U.S. North America	1976	12.2	9.6	7.5	5.9	4.6			
	1977	12.1	9.4	7.4	5.8	4.5			
	1983	21.9	17.1	13.3	10.3	8.0			
	1984	23.7	18.0	13.7	10.4	7.9			
	1985	25.3	19.1	14.4	10.9	8.2			
% change (76/85)		107.4	99.0	92.0	84.7	78.3			
Local Pacific Asia/Pacific	1976	11.5	10.6	9.8	9.0	8.3	7.7	7.3	
	1977	11.5	10.6	9.8	9.0	8.3	7.7	7.3	
	1983	19.8	17.5	15.4	13.6	12.0	10.5	9.8	
	1984	19.2	16.9	14.9	13.1	11.5	10.2	9.4	
	1985	18.2	16.3	14.6	13.0	11.7	10.4	9.8	
% change (76/85)		58.3	53.8	49.0	44.4	41.0	35.1	34.2	
North & Mid Pacific	1976					8.2	6.8	6.1	
	1977					7.9	6.9	6.3	
	1983					11.8	9.8	8.7	8.1
	1984					12.1	9.9	8.7	8.0
	1985					12.1	9.8	8.6	7.9
% change (76/85)						47.6	44.1	41.0	
South Pacific	1976					8.4	7.3	6.7	
	1977					10.1	7.8	6.7	
	1983					12.8	11.4	10.7	10.2
	1984					11.6	11.2	11.0	10.9
	1985					14.8	12.2	11.0	10.1
% change (76/85)						76.2	67.1	64.2	

Source: ICAO, Survey of International Fares and Rates, various issues.

TABLE 21

Unit Passenger Cost By Region (1980-1984)

Passenger flight costs by region

Region	Avg km 1983-84	1980	1981	1982	1983	1984
Canada,Mexico and U.S	1800	7.7	8.7	10.0	10.0	10.8
N.Am/Cen.Am./Caribbean and South.AM.	3800	9.3	10.1	11.6	11.0	12.5
North Atlantic	7100	8.8	8.5	9.5	11.0	10.5
Mid Atlantic	8500	12.0	11.2	11.0	11.0	10.8
South Atlantic	10100	11.2	10.7	10.7	11.0	10.7
Local Asia/Pacific	2900	12.0	12.5	12.1	12.0	12.2
Europe/Mid.East/Africa and Asia/Paci	7700	11.9	11.1	11.4	11.0	11.3
North and Mid Pacific	10800	7.1	7.5	8.5	9.0	9.0
South Pacific	9100	7.6	9.5	9.8	11.0	11.1

Source: Calculated from ICAO,Annual Reports, various issues.

5.5 TRAFFIC FLOWS

Within such a favourable climate for air transport activity, it is not surprising that traffic flows have increased substantially. ICAO figures for scheduled passenger traffic for the Pacific Ocean region are instructive. They are given in Table 22. The rise in the over 40% figure of traffic flows between the Pacific Ocean region and other parts of the world between 1979 and 1984 is impressive and is based on a 8.9% average annual rate of growth. Within this compo-

nent, the 15.5% and 15.4% figures for North America ties are noteworthy. These facts should not, of course, obscure the impressive strength of the intraregional figures which show an annual growth rate of 11.5% for traffic between sub-regions.

According to World Tourism Organization statistics, total receipts earned from international tourism for the Asia/Pacific Ocean region as a whole were approximately U.S.$12.2 billion in 1984, approximately 12 percent of the total world tourism receipts. International tourist arrivals in the Asia/Pacific Ocean region increased from 16,693 in 1979 to 22,745 in 1984. For the region as a whole, average annual rate of growth was 6.4% for the period 1979 to 1984. The majority of this tourist traffic was by air. For example, of the 22,745 arrivals recorded in 1984, 17,251 passengers (79%) used the air mode.[57]

Traffic based on tourism is given in data provided by the World Tourism Organization.[58] Table 23 shows the regional distribution of international tourist arrivals.

Table 24 shows the number of tourist arrivals and the average annual rate of growth in the Asia Pacific Ocean region for the years 1975, 1980 and 1985. Of all the countries in the region, Japan has recorded the highest rate of

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[57] ICAO, Annual Report, 1985, p.21.

[58] World Tourism Organization, Tourism Forecasting, Madrid, Spain, 1984.

TABLE 22

International Scheduled Passenger Traffic Flows To, From And Within The Pacific Region 1979 and 1984

Passenger Flows	Passengers				Average Annual Growth (1979-84)
	Number 1979	(%)	Number 1984	(%)	
Inter-regional					
To & from Europe	5094	16.2	6509	14.1	5.0%
To & from Middle East	2831	9.0	5869	12.7	15.8%
To & from North America	4853	15.5	7152	15.4	8.0%
To & from other regions	328	1.0	519	1.1	9.6%
Sub-total	13106	41.7	20049	43.3	8.9%
Intra-Asia/Pacific					
Within sub-regions	12051	38.3	15424	33.3	5.1%
Between sub-regions	6237	20.0	10819	23.4	11.5%
Sub-total	18324	58.3	26243	56.7	7.5%
Total Asia/Pacific	31430	100.0	46292	100.0	8.0%

Source: ICAO, ICAO Bulletin, July 1986, p.23.

growth in tourist traffic, with an annual average growth of 11.1%. Malaysia, on the other hand, experienced a reduction of 8% in tourist arrival. In fact, Malaysia is the only state that reported a reduction during this period.

The average annual increase in tourist arrivals for the 1974-1980 period shows that the East Asia and Pacific region performed at almost double the world average.

TABLE 23

Regional Distribution of International Tourist Arrivals

Region	Arrivals 1980 (Millions)	Percentage of total	Average annual increase 1974-1980 (%)
AFRICA	5.8	2.0	6.8
THE AMERICAS	52.5	18.4	4.6
EAST ASIA AND PACIFIC	15.0	5.2	12.2
EUROPE	208.0	72.9	6.9
MIDDLE EAST	3.0	1.0	-5.8
SOUTH ASIA	1.5	0.5	2.4
TOTAL	285.0	100.0	6.4

Source: World Tourism Organization, Tourism Forecasting, 1984, p.3.

Tourism from Europe, but also from Australia and North America, has contributed to this growth, especially in the case of Hong Kong, Singapore, Thailand and Indonesia. At the same time, rising standards of living have encouraged the development of intra-regional tourism within the Far East.

Trends in tourist flow in East Asia and Pacific during the earlier 1967-1976 period indicate that intra-regional demand grew by a factor of five, yielding an average annual growth rate of approximately 19 percent. Again, this is the highest growth rate recorded by any part of the world.[59]

[59] World Tourism Organization, Tourism Forecasting, 1984, p.6.

TABLE 24

Tourist Arrivals In The Pacific Ocean Region -- 1975, 1980 And 1985

Country	Number of Arrival (000)			Average Annual Growth Rate (%)	Percentage Change
	1975	1980	1985	(1975 - 85)	
East Asia					
China	853	1393	1451	5.4	70
Hong Kong	1300	2301	3443	10.2	165
Japan	811	1316	2327	11.2	187
Korea	632	976	1426	8.5	125
Macau	410	641	739	6.1	80
Subtotal	4009	6629	9387	8.9	134
South East Asia					
Indonesia	366	561	749	7.4	104
Malaysia	1183	895	1082		-8
Philippines	502	1008	773	4.4	54
Singapore	1169	2562	3030	10.0	159
Thailand	1180	1858	2438	7.5	107
Subtotal	4400	6885	8074	6.3	83
South Pacific					
Australia	516	904	1149	8.5	123
New Zealand	377	465	669	5.9	77
Subtotal	893	1369	1818	7.3	104
Total	9302	14883	19279	7.5	107

Source: Pacific Asia Travel Association.

In its annual report the Japan National Tourist Organization indicated that in 1983, a total of 1,968,461 foreign arrivals were recorded. This number represented a 9.8 per

cent increase from the previous year. Tourist and business arrivals were 61.5 per cent and 27.9 per cent of this total respectively. Of all the travellers arriving in Japan in 1983, a total of 978,794 visitors, representing 49.7% of total arrivals that arrived from other destinations within Asia. This represented an increase of 10 per cent over 1982. Although the number of North Americans travelling to Japan also increased by 11.3 per cent in 1983, there was actually a decline in their share from 38 per cent of total traffic in 1977 to 26.5 per cent in 1983.[60]

Since Southeast Asia contains some of the world's most popular destinations, it is helpful to have some perspective on the level of traffic activity within the Orient region. During 1979, airlines in the Orient region handled almost 15 million passengers, over 90 percent of which were carried by the eleven members of the Orient Airlines Association. Major factors contributing to this traffic growth included continued efforts to promote tourism, improved trade, technical and economic cooperation among the countries in the region, the temporary relaxation of restrictions on foreign travel by Chinese residents in Taiwan, and the demand for labor in the Middle East. An increase in the number of airlines in Asia and the Pacific, also helps to explain some of the increase in their market share. It is noteworthy that in the context of this strong regional growth performance,

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[60] "Stable Prices Help Tourism to Japan", Canadian Travel Press, Vol. 17, No.14, March 14, 1985, p.21.

the growth of freight traffic was particularly high.

5.6 SUMMARY

In this chapter it has been shown that economic factors have been highly supportive for the growth of air transport in the 1970 - 1985 period. Demand side determinants, in terms of real income growth, population increase and industrialization, supported by the high income elasticity of demand characteristic of air transport, have been very strong. The technological development of aircraft has been capitalized upon in the Pacific Ocean region in the form of the emphasis on wide-body jets, often long-range versions. These aircraft have very good economics in dense traffic markets useful for cargo moved by modern lohidyivd. Responsive performance by air transport carriers has kept fare at favourable levels and has facilitated strong traffic development in the Pacific Ocean region in the 1970 - 1985 period.

Chapter VI

THE INTERNATIONAL AIR TRANSPORT ENVIRONMENT FOR CANADA IN THE PACIFIC OCEAN REGION

This chapter will examine three components of the air transport environment facing Canada in the Pacific Ocean region. First, leading features of the air traffic system will be given in terms of leading traffic hubs and stage length characteristics in the region. Second, the strength of competitive rivalry will be examined. Third, Canada's bilateral relationships in the region will be analyzed in terms of the nature of the bilateral agreements and the operating characteristics of the foreign carriers. This component of the chapter will discuss both effective and pending bilateral relationships during the period under review.

6.1 THE INTERNATIONAL AIR TRANSPORT NETWORK

The Pacific Ocean region contains some of the world's busiest and most competitive routes and, also, some of the longest. According to ICAO estimates, a total of 75.5 million passengers were embarked and disembarked at airports in the Asia/Pacific region in 1984. Approximately 27 million of these passengers used three of the busiest airports: Hong Kong, Tokyo and Singapore (Table 25). These three airports

together accounted for 36 per cent of the region's total international passenger traffic. It is economically important for carriers to gain access to these and other important traffic hubs. In the period under review, Canadian carriers have been actively involved in three of the six leading airports in the region. On the basis of selecting new destinations according to the amount of traffic generated, one would expect the next logical places to follow the following pattern; Bangkok of Thailand, Taipei of Taiwan and Seoul of Korea. With these three cities, Canadian carriers would then cover all of the top six traffic - generating airports in the region. However, other consideration could alter the sequence of actual development in the region. For example, governments and carriers are likely to place emphasis on Seoul, Korea, because of the potential traffic that the summer Olympics might generate. Table 25 shows the eight busiest hubs for air transport activity in the Pacific Ocean region.

To show the most intense city-pair traffic in the region, figures for the ten city-pairs with the heaviest traffic are given in Table 26. The link between Singapore and Kuala Lumpur is short-range but the other links are 500 miles or more. The Pacific Ocean region is characterized by the considerable stage length of many of its flights. It is noteworthy that the long stage lengths in the Asia/Pacific Ocean region have had an impact on aircraft development. Of the

TABLE 25

The Eight Busiest Airports In The Pacific Ocean Region -- 1984

City	Passengers (000)	Average Annual Growth Rate (%) (1974 - 84)	Percentage of regional total
Hong Kong	9539	10.0	12.6
Tokyo	8993	7.2	11.9
Singapore	8411	10.7	11.1
Bangkok	5177	9.4	6.9
Taipei	5000	7.2	6.6
Seoul	3382	12.3	4.5
Osaka	3355	11.0	4.4
Manila	3203	15.5	4.2
Total	47060	10.1	62.3
Other airports	28440	8.9	37.7
Regional Total	75500	9.7	100.0

Source: ICAO Bulletin, Special Report: Air Transport Development -- Asia/Pacific Region, July 1986. p.25.

twenty city-pairs that were crucial to Boeing's decision to develop the long-range, wide-body 747-400, eighteen involved a capital city in the Asia/Pacific area.[61] The longest of these was the New York - Seoul city-pair, with a flight distance of 6,100nmi (11,200km). Korean Air already operates a daily non-stop service on this route, using the 747SP.

[61] See Woolley, David, "Pacific Rim -- A driving force in long-range operations", Interavia, May, 1986. p.497-498.

TABLE 26

The Leading Ten High Density Traffic City-Pairs In The Pacific Ocean Region -- 1984

City - Pairs		Revenue Passengers Carried		
(A)	(B)	(A) To (B)	(B) To (A)	Total
Singapore	- Kuala Lumpur	718,782	710,586	1,429,368
Taipei	- Hong Kong	718,470	701,085	1,419,555
Hong Kong	- Tokyo	660,605	631,194	1,291,799
Bangkok	- Hong Kong	635,224	588,854	1,224,078
Jakarta	- Singapore	625,255	588,579	1,213,834
Honolulu	- Tokyo	552,003	514,755	1,066,758
Tokyo	- Taipei	500,495	496,670	997,165
Singapore	- Bangkok	495,256	455,739	950,995
Hong Kong	- Singapore	451,145	433,728	884,873
Tokyo	- Seoul	429,302	428,650	857,952

Source: Calculated from ICAO, Traffic By Flight Stage -- 1984, Digest Of Statistics, No.321. Series TF-NO.99. 1986.

A comparative statistical perspective on the stage length characteristics of the region is given in Table 27. The five-year figures for the 1974 - 1984 decade show the clear margin that this region has over the five other major regions of the world. The implications for airline fleet development for many of the airlines operating in this regions are obvious. Figure 1 shows the flight distances between principal points in the Pacific Ocean region.

TABLE 27

A Comparison Of Average Stage length Per Aircraft By Region Of Airline Registration

Region	Average Stage Length Per Aircraft (In Kilometers)		
	1974	1979	1984
Asia and the Pacific	2158	2333	2604
Africa	1385	1550	1629
Europe	1231	1299	1395
Latin Am./Caribbean	1408	1571	1399
Middle East	1372	1630	1737
North America	1792	2023	2143
World Average	1447	1586	1689

Source: ICAO, ICAO Bulletin, July 1986. p.23.

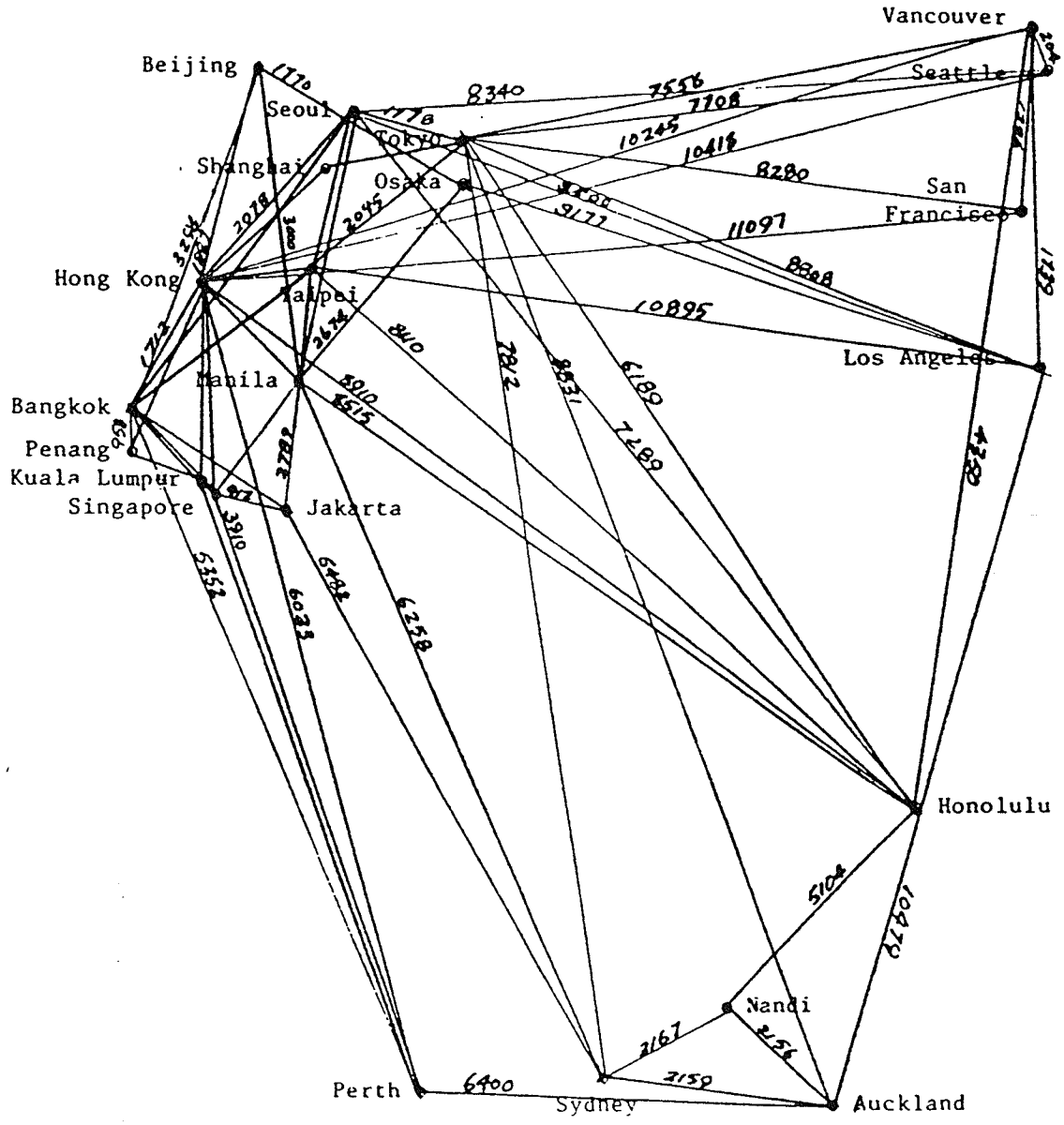

Figure 1: Flight Distances Between Principal Points in the Pacific Ocean Region

6.2 AIR TRANSPORT RIVALRY IN THE PACIFIC OCEAN REGION

The Pacific Ocean region has been the scene of a number of disputes over the bilateral air transport agreements. The significance that nations attach to their air transport agreements is evident in these disputes. The importance of the specific nature of bilateral agreements for the development of the carriers involved is also a basis for the contentious nature of some bilateral relationships, either existing or under negotiation.

6.2.1 The Climate For Bilaterals In The Pacific Ocean Region

Bilateral air transport agreements focus both national economic objectives and traffic development plans of national carriers between the contracting parties. On occasion sharp conflicts have arisen between these contracting parties. Negotiations in the Pacific Ocean region have often been complex and difficult. For example, Japan and Malaysia failed to reach agreement during the talks held in November, 1984 in Tokyo between the two countries. Malaysia requested Japan's approval for the operation of the Malaysian Airline System's trans-Pacific routes to the U.S. using a joint system under which the airline leased cabin space from Northwest Orient Airlines. Japan, however, refused the request on the basis that Malaysian Airline System was not allowed to fly to the U.S. under the rights set forth in the existing bilateral agreement.

In a similar vein, Japan Air Lines and Qantas Airways have been at odds over the Australian carrier's request for an additional flight between Japan and Australia. While Qantas insists on year-round operation of the additional flight, JAL claims it should be only for a limited season.

The dispute between Hong Kong's Civil Aviation Department and Dragonair is yet another example that remains unresolved. This dispute is over the refusal of charter rights by the Hong Kong Civil Aviation Authority. Dragonair has been seeking rights for two charter flights daily from Hong Kong to Beijing and once daily from Hong Kong to Shanghai. However, the matter is complicated by the fact that Cathay Pacific has only recently been granted rights into both of these markets. Furthermore, the timing of the formation of Dragonair is a sensitive one, and on the surface, may even appear to be opportunistic. There is speculation that Dragonair is backed by a Chinese state-owned financial institution, but registered in Hong Kong as a Hong Kong airline.[62]

The fact that political forces have been an increasingly important influential factor in sharpening or manipulating the structure of the airlines industry is apparent. In many instances they have disrupted the proper functioning of bilateral air transport agreements that were in force. What happened within the local Pacific region during the mid-seventies between Japan and the Peoples Republic of China

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[62] See also, "Dragonair keeps the heat on", Flight International, October 12, 1985. p.7

clearly illustrates this point. In April of 1974, Japan and the Peoples Republic of China signed a civil aviation agreement which involved Japan Air Lines's proposed flight into mainland China. Although Taiwan was not favourably impressed with what had happened, it was nevertheless prepared to accept the fact and allowed JAL to maintain its flights into Taiwan. However, when China exerted pressure on Masayoshi Ohira, then Japanese foreign affairs minister, he had to make a public statement to the effect that he considered the Taiwan Nationalist flag on the tail of China Air Lines(CAL) aircraft only a trademark. As a result, the Taiwan government withdrew all rights that had been granted to Japan, ordered JAL's aircraft not to cross the Taipei flight information region and, at the same time, terminated all China Air Lines' services to Japan. Because the route to South Korea crosses over Japan's Naha flight information region. China Air Lines decided to cancel services to South Korea as well. For the same reason, CAL also had to reroute its United States flights via Guam and Honolulu. This conflict was finally resolved in July, 1975 when Japan withdrew its statement and created Japan Asia Airways to serve Taiwan.[63]

Another politically motivated dispute happened recently when China Airlines was barred from flying into Manila after carrying Benigno Aquino into Manila with inadequate docu-

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[63] William Glenn, "The UFO Soap Opera," Far East Economic Review, February 14, 1975. p.28.

ments; Aquino was assassinated immediately after his arrival in late-August, 1985.

The 1983 Singapore's and Air Lanka's (Sri Lanka's) conflict is an example of yet another type of problem that may arise from bilateral agreements. It illustrates how an unsatisfactorily negotiated agreement can affect the exchange of routes or landing rights. Air services between Singapore and Sri Lanka stopped in November of 1983. The dispute between the two countries was over the issue of the distribution of fifth freedom traffic rights. Air Lanka's claim was that since the creation of Air Lanka, Singapore had more fifth freedom rights beyond Colombo to the Middle East and Europe than Air Lanka had beyond Singapore rights. But most important of all, it was Singapore that had always been successful in exercising those granted rights, while Air Lanka was unable to exercise most of their rights, simply because they did not have the necessary agreements with other countries to implement these services. It is interesting to note that from an economic point of view, if SIA were to end its Singapore-Colombo services, this would result in a loss of 2% of its revenues. However, Air Lanka would lose 16% of its revenues. Since much of Air Lanka's traffic was sixth freedom movement from Australia, Japan and Hong Kong, the ending of its Singapore-Colombo links would not cause too much inconvenience to Air Lanka. In addition, after the dispute began, Air Lanka switched some services

through Kuala Lumpur, following a joint service agreement with Malaysian Airline System. The airline also signed an agreement with Thai International to make their Colombo-Bangkok services a joint operation.

A similar dispute was developed between the United States and China when Pan American World Airways resumed it service to Taiwan after receiving authority to service the mainland. According to media reports, Pan Am had promised China it would terminate air service to Taiwan as a condition of being allowed to fly into China.

A dispute involving Northwest Orient erupted when Northwest Orient's application to fly into China was rejected by the Chinese Civil Aeronautic Authority (CAAC). The original reason for China's rejection of Northwest Orient's initial application was the fact that Northwest Orient insisted on maintaining its services into Taiwan. But when the Civil Aeronautics Board threatened to suspend flights to the U.S. by China's airline, the CAAC relented.

Similarly, Malaysia and Singapore Airlines also sought additional services into the United Kingdom but soon were confronted with the same protectionist attitude. The issue remained unresolved for over two years.

Malaysian and Philippine national airlines have also pressed unsuccessfully for extra flights to Britain.[64] A

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[64] The Globe and Mail, "SIA angry at Britain", International Business--Transportation, Monday, December 17, 1984.

dispute over the addition of a third Manila-London service by Philippine Airlines ended in the British courts. When the British lost their case, the Department of Transport unilaterally decided that the air services agreement between the two countries be terminated. A twelve months termination notice was then served to the Philippines as was required under such circumstances.

Air Niugini, Papua New Guinea's airline, was barred from Indonesian air space after it scraped its Jakarta-Port Moresby route. Air Niugini's action was prompted by the country's aggressive Transport Minister Iambakey Okuk, who decided to cut the unprofitable Jakarta stop[65] on its route to Singapore.

In retaliation, Indonesia then closed its air space to Air Niugini, which resulted in adding an additional seventy minutes to the Singapore run and ten minutes to Air Niugini's Manila route. Indonesia, on the other hand, was prepared to negotiate its air space in exchange for rights that would enable its national carrier, Garuda, to use Port Moresby for its international operation.[66]

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p.IB6.

[65] There were only twelve passengers on average, connecting with this weekly one stop flight.

[66] Rowan Callick,"Air Niugini under fire," Far East Economic Review, November 28, 1980. p.52

These illustrations serve to show that relations affecting aviation rights cannot be considered independently of general international relations. One of the most marked developments over the past decade has been the steady growth of economic nationalism. The narrow nationalistic trends which became more and more apparent in the world economies were also reflected in international aviation. Increasingly, dissatisfaction with air transportation arrangements has led many nations into conflict situations, which in most cases, resulted in a net loss of economic benefits for the countries involved. While these illustrations were selected from nations that did not include Canada, they provide a basis for understanding the complexity of the Pacific Ocean region within which Canadian air transport operates.

6.3 AIR TRANSPORT CARRIERS IN THE PACIFIC OCEAN REGION

Operating statistics for carriers operating in the Pacific Ocean region are given in Table 28. For certain airlines, figures are given for their total system (S) and their Pacific Ocean operations (P). Cargo revenues have been about 10% of total revenues.

The average passenger revenue earned per passenger-kilometre flown on scheduled international services within the Asia/Pacific region was 6.5 U.S. cents in 1978, some 8% above the world average. Unit revenues earned on long-haul routes between the Asia/Pacific region and other regions

TABLE 28

1981-84 Average Operating Statistics

	(In U.S. Cents) AVERAGE (1981-1984)				YEARS
	OR/ TKP	OE/ TKP	OR/ TKA	OE/ TKA	
Qantas Airways	63.2	62.6	38.7	38.3	3
Air Canada	65.1	66.7	34.9	34.5	4
CP Air	55.0	54.7	32.6	32.4	4
Japan Air Lines	57.3	56.1	36.6	35.8	4
Malaysian Airlines	70.9	64.6	47.9	43.7	3
Air New Zealand	66.5	64.5	44.1	42.6	4
Singapore Airl	48.4	46.6	34.1	32.8	4
Thai Internat	57.5	50.2	36.2	31.6	4
Garuda Indonesia	76.7	73.9	33.5	32.3	4
Japan Asia Air	78.8	74.8	56.4	53.5	4
Philippine Air Lines	53.7	55.6	30.7	31.7	2
Korean Air Lines	50.8	46.6	35.6	32.6	2
Pan Am (System)	60.8	64.5	34.9	37.0	4
Pan Am (Pacific)	58.0	58.0	33.7	33.5	4
NorthWest (S)	55.1	54.2	28.4	27.9	4
NorthWest (P)	44.8	42.7	25.5	24.3	4
Flying Tiger (S)	27.7	27.7	19.4	19.4	4
Flying Tiger (P)	27.3	25.2	20.1	18.6	4
United (S)	70.8	69.5	38.8	38.1	4
United (P)	54.1	65.8	26.0	29.2	2
Continental (P)	64.6	62.1	36.5	35.0	4
Continental (S)	73.7	76.6	37.8	39.3	4
All Nippon Air	113.4	110.8	53.0	51.8	3
Trans World (P)	19.7	21.8	11.5	12.7	
Trans World (S)	30.8	29.2	14.5	13.8	

CODE: OR/TKP = Operating revenue per tonne-km performed
OE/TKP = Operating expenses per tonne-km performed
OR/TKA = Operating revenue per tonne-km available
OE/TKA = Operating expenses per tonne-km available

Source: ICAO, Financial Data, Digest of Statistics, Series F, various issues.

were well below the world average and, in cases of transpacific routes, among the lowest in the world. This fact reflects the competitive conditions among carriers in the Pacific Ocean region.

Unit operating expenses of Asia/Pacific airlines are compared with the world average in Table 29. It is interesting to note the improvement in their comparative total operating expense performance in the 1974 - 1984 period.

Partial labour productivity measures are given in Table 30 for a number of airlines operating in the Pacific Ocean region. A caution must be given on two counts. First, productivity measurement is statistically very difficult. Second, partial productivity measures, by their nature, give an incomplete perspective.

An ICAO study on productivity of personnel showed that Asian carriers, with the exception of Japan Air Lines, experienced higher productivity growth than North American carriers for the decade from 1972 to 1982.[67] The study was updated in 1986 and the updated version, using personnel data from 1975 to 1985, showed a similar pattern.[68]

Load factor performance is another important indication of the operating efficiency of airlines. Carriers based in the Pacific Ocean region have largely operated outside IATA and have generally had freedom to price with flexibility. The relationship between pricing flexibility and load factor has been noted by Bailey and others in their study of U.S. domestic operations under deregulation. They comment that

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[67] ICAO, A Review of The Economic Situation of Air transport 1969-1982, Circular 177-AT/67, pp.65-66.

[68] ICAO, The Economic Situation of Air Transport -- Review and Outlook 1986, Circular 200-AT/78, 1986.

TABLE 29

Unit Operating Expenses Of Asia/Pacific Airlines Compared With The World Average -- 1974, 1979 and 1984

Operating Expenses	Year	Operating Expenses Per Tonne-km Available (In U.S. Cents)	
		Asia/Pacific	World Average
Flight operations less fuel and oil	1974	3.0	3.0
	1979	2.8	3.8
	1984	3.1	4.0
Fuel and oil	1974	5.1	4.3
	1979	9.4	8.0
	1984	10.2	9.3
Maintenance and overhaul	1974	2.8	2.9
	1979	3.8	3.9
	1984	3.6	4.0
Depreciation and amortization	1974	2.8	1.9
	1979	3.0	2.3
	1984	4.1	2.9
User Charges and station expenses	1974	3.7	3.9
	1979	5.6	5.9
	1984	5.9	6.4
Passenger services	1974	2.4	2.2
	1979	3.4	3.3
	1984	3.3	3.7
Ticketing, sales and promotion	1974	4.1	3.2
	1979	6.1	5.2
	1984	6.6	6.6
General, administrative and others	1974	1.2	1.4
	1979	1.6	2.1
	1984	1.6	3.0
Total operating expenses	1974	25.1	22.7
	1979	35.7	34.5
	1984	38.4	39.9

Source: ICAO, International Air Passenger and Freight Transport -- Asia and the Pacific, 1986, Circular 201-AT-79, p.89.

TABLE 30

Partial Productivity Measures For Scheduled International Airlines -- 1983, 1984

(International Operations Only)

Airlines	1983 Revenue Tonne-Km per Employee	1983 Available Tonne-Km per Employee	1984 Revenue Tonne-Km per Employee	1984 Available Tonne-Km per Employee
Qantas	164.26	271.8	177.36	272.65
Air Canada	55.99	110.78	59.27 *	110.40 *
CP Air	90.53	144.25	106.74	175.60
Garuda	71.34 *	150.63 *	73.64 *	167.18 *
Japan Airlines	214.92	317.31	246.07 *	356.70 *
Japan Asia Airways	382.81	516.29	393.75 #	524.78 #
Malaysia Airlines	57.15	82.59	61.73 #	85.66 #
Air New Zealand	110.20	165.21	113.79 *	156.01 *
Philippines Airlines	91.58 *	157.32 *	78.46 *	125.75 *
Korea Airlines	259.56	359.65	108.27	157.07
Singapore Airlines	265.76	376.96	293.28	412.24
Thai International	124.93	197.97	127.38	192.37
Cathay Pacific	241.83	348.42	251.30 *	357.17 *
Northwest	142.89	247.82	170.33 #	294.56 #
Pan Am	146.06	257.29	170.86 *	280.53 *

Source: Calculated from ICAO, Civil Aviation Statistics of the World -- 1984, Tenth Edition, 1985.

Notes: Figures marked with an asterisk (*) are estimates using 1985 personnel figures obtained from Air Transport World, May, 1986. p.64. Figures marked with (#) are estimates using 1983 personnel figures from ICAO.

"....load factors increased dramatically when the (Civil Aviation) Board began granting carriers greater pricing flexiblity early in 1977."[69]

[69] Bailey, Elizabeth E., David R. Graham and Daniel P. Kaplan., Deregulating the Airlines. The MIT Press, Massachusetts: Cambridge. 1985. p.135.

Load factor performance is also affected positively by seat management performance related to discount fare performance.

Table 31 compares the load factor performance by region of airline registration for six region of the world for 1974, 1979 and 1984. The strong performance of the Asia and

TABLE 31

A Comparison Of Average Load Factors By Region Of Airline Registration

Region	Percentage of Passenger Load Factor		
	1974	1979	1984
Asia and the Pacific	60	66	68
Africa	53	58	58
Europe	56	63	65
Latin Am./Caribbean	57	62	61
Middle East	60	58	60
North America	53	65	66
World Average	56	63	65

Source: ICAO, ICAO Bulletin, July 1986. p.23.

Pacific region airlines is striking.

TABLE 32

Top Load Factor Traffic In The Pacific - 1983

ORIGIN	ARRIVAL	CODE	SEATS	CARRIED	LF	TYPE	FQ
TAIPEI	HONG KONG	SQ	142764	128951	90	B747	365
HONG KONG	SYDNEY	CX	63114	54639	87	B747	157
HONG KONG	TAIPEI	SQ	142760	123642	87	B747	365
SINGAPORE	TOKYO	SQ	65152	55312	85	B747	159
BANGKOK	TOKYO	TG	57876	48872	84	B747	156
BANGKOK	HONG KONG	SQ	95952	80285	84	DC10	237
HONG KONG	SINGAPORE	CX	146536	123079	84	B747	365
HONG KONG	OSAKA	JL	129008	105867	84	B747	368
HONG KONG	HONOLULU	SQ	105526	88458	84	B747	261
OSAKA	MANILA	TG	51087	42331	83	EA30	196
HONG KONG	SINGAPORE	SQ	247984	206762	83	B747	626
OSAKA	HONG KONG	CX	111378	91590	82	L101	363
SINGAPORE	HONG KONG	CX	146536	120325	82	B747	365
HONG KONG	SINGAPORE	JL	41916	34363	82	DC8S	208
MANILA	OSAKA	TG	51579	42218	82	EA30	198
HONG KONG	TOKYO	PA	150151	122043	81	B747	367
TOKYO	TAIPEI	SQ	142764	115400	81	B747	365
LOS ANGELE	TOKYO	SQ	64368	52441	81	B747	157
TOKYO	TAIPEI	EG	144384	114984	80	DC8S	
HONG KONG	OSAKA	CX	112095	88624	79	L101	365
TOKYO	LOS ANGLE	SQ	64368	50659	79	B747	157
HONG KONG	TOKYO	NW	140864	111581	79	B747	362
TAIPEI	SINGAPORE	SQ	120159	94344	79	B747	249
SINGAPORE	COLOMBO	SQ	86954	68137	78	B747	222
MANILA	TOKYO	NW	98398	76488	78	B747	254
HONG KONG	BANGKOK	SQ	95952	74432	78	DC10	237
SINGAPORE	HONG KONG	SQ	248288	193920	78	B747	626
BANGKOK	DELHI	TG	62172	48462	78	EA30	117
TOKYO	HONG KONG	JL	276308	211925	77	B747	763
TAIPEI	TOKYO	EG	174990	134490	77	DC8S	
BANGKOK	MANILA	TG	104820	80481	77	EA30	238
BANGKOK	HONG KONG	AI	63196	48924	77	B747	161
SEOUL	TOKYO	JL	128352	98602	77	B747	351
SYDNEY	SINGAPORE	SQ	103078	78891	77	B747	261
TOKYO	HONG KONG	CX	145324	110356	76	B747	350
TAIPEI	HONG KONG	TG	159366	120935	76	EA30	647
BANGKOK	MANILA	PR	95860	72933	76	DC10	207

Source: Extracted from ICAO, Traffic By Flight Stage, 1983, Digest of Statistics No.309. Series TF-No.98. 1984.

Note: LF = Load Factor FQ = Frequency

Key For Airlines Code:			
Singapore Airlines	(SQ)	Air India	(AI)
Japan Air Lines	(JL)	Pan Am	(PA)
Cathay Pacific	(CX)	Philippines Airline	(PR)
NorthWest Airlines	(NW)	Japan Asia Air	(EG)
		Thai International	(TG)

Table 32 gives the results of calculations based on ICAO data for 242 city-pairs with 762 observations. This table shows the very strong load factor performance in the Pacific Ocean region and city-pairs. The strong performance of carriers based in the Pacific Ocean region is again evident.

Table 33 shows the strength of the international scheduled traffic development in the Asia/Pacific region for the period 1970 - 1985. The shift in the world importance of

TABLE 33

Regional Percentage Distribution Of International Scheduled Tonne-Kilometers Performed

(In Percentage)

	1970	1975	1980	1985
North America	32.9	22.7	19.6	19.9
Europe	43.8	43.5	40.8	37.5
Asia/Pacific	11.7	18.7	23.5	26.7
Latin America/Caribbean	4.3	6.6	6.9	5.7
Middle East	3.5	4.6	4.9	5.9
Africa	3.8	4.5	4.3	4.3

Source: ICAO, ICAO Annual Reports, Various Issues.

this region is evident in these figures.

The rise of carriers based in the Pacific Ocean region is shown in a study of U.S. carriers' share of total passenger traffic by world region given in Table 34. While the U.S. share has fallen somewhat in the North Atlantic and Other

categories, it has risen in South America. However, the share for the Pacific and for Oceania has fallen very sig-

TABLE 34

U.S. Carriers' Market Share Of Total Passenger Traffic

By World Region 1971-1981 (Percentage Of Market)

Year	World	North Atlantic	Pacific	Oceania	South America	Other
1971	56.5	48.0	55.9	61.6	40.2	69.5
1972	53.9	46.4	46.6	57.1	42.4	67.0
1973	54.2	48.5	50.4	56.2	43.5	63.7
1974	52.6	46.1	50.9	50.7	44.1	61.4
1975	49.6	44.0	40.7	50.1	42.9	59.1
1976	50.3	44.7	45.1	49.2	39.0	59.6
1977	50.4	45.4	43.7	49.9	41.3	60.3
1978	50.0	43.9	41.3	46.5	44.1	60.9
1979	50.8	44.2	44.3	50.9	44.9	61.0
1980	49.1	42.1	41.4	48.2	44.6	60.0
1981	48.7	41.0	38.7	48.3	43.6	61.3
	A	B	A	A	A	C

A> First three quarters of 1981 only.
B> Calendar year 1981.
C> Includes U.-Africa/Mideast/Caribbean/Central America.

Source: Douglas L. Adkins, Martha J. Langelan, Joseph M. Trojanowski., Is Competition Workable In North Atlantic Airline Markets? International Economic Analysis Group, Bureau of International Aviation, Civil Aeronautics Board. March 1982. p.36.

nificantly.

6.4 CANADIAN SOUTH PACIFIC MARKETS

Canada's major bilateral partners in the South Pacific region are Australia and New Zealand. A major characteristic of the operations of the international carriers of these nations is their unusally long stage lengths. With the exception of intra-regional traffic, virtually all international routes operated by Qantas and Air New Zealand involve very long flight stages. This is especially true for their operations to and from the North American continent.

Canada entered into a bilateral relationship with Australia on June 11, 1946. The bilateral agreement signed then is the earliest bilateral giving Canada access to markets in the Pacific Ocean region. An especially noteworthy and unusual provision of this agreement was a capacity predetermination clause which provided for a fifty percent sharing of capacity by the designated carriers of the contracting nations. The agreement allowed CP Air to operate flights between Vancouver and Sydney via an intermediate stop at Auckland with beyond rights for New Zealand. On March 16, 1951, an amendment was made to the agreement, the amended paragraph four of the Annex concerning the designation of the Canadian route. This amendment specified the route to be served by both contracting states to be Vancouver - San Francisco - Honolulu - Canton Island - Fiji - Auckland - Sydney in both directions.

The second change occurred in September of 1954 in regard to the period of time required for notice to be given. At the request of the Canadian Government, further adjustment were made to the 1951 routing provisions in 1974 to provide more flexibility in the use of international points by carriers. This 1974 amendment to the 1946 Canadian-Australia air transport agreement became a new bilateral agreement and, as of November 1986, was still in force.

6.4.1 Australia

The Australian flag carrier, Qantas, dates back to 1920 when it was then known as the Queensland and Northern Territory Aerial Services Limited; its first scheduled service began in November, 1922. The Queensland and Northern Territory Aerial Services Limited and BOAC (then known as Imperial Airways) formed Qantas Empire Airways Limited in 1934 to operate the Brisbane-Singapore portion of the England-Australia route. In July, 1947, the Australian Government took control of the carrier by share purchase and designated it to be Australia's scheduled international air carrier. In 1967 the carrier's name was changed to Qantas Airways Limited, commonly called Qantas. Table 35 shows the international scheduled passenger traffic of Qantas.

Table 36 shows the seven route sectors linking the west-coast of North America and Australia. Two non-stop services have been provided by Qantas and United Airlines of the United States.

TABLE 35

Passenger Traffic Of Qantas

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	10104		19.7	19.3
1976	11366	12.5	19.0	18.7
1977	11576	1.8	17.2	17.6
1978	12614	9.0	16.2	17.2
1979	15679	24.3	17.1	16.6
1980	15769	0.6	15.0	14.9
1981	14458	-8.3	12.2	12.6
1982	15355	6.2	12.0	12.7
1983	14334	-6.6	10.9	12.1
1984	16154	12.7	11.5	12.1
1985	17305	7.1	11.5	
Average Annual Growth (1975-1985): 5.5%				

Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

Table 37 shows the performance of Qantas with respect to the international traffic of its host country, Australia, for the period 1979 to 1982.

TABLE 36

North America - Australia Air Transport Route Network

City-pairs	Airlines	Flight
Los Angeles/ Sydney:	Qantas, United Qantas, United Continental, Air New Zealand	non-stop one or more intermediate stops
Honolulu/ Sydney:	Qantas, United	non-stop
San Francisco/ Sydney/ Melbourne:	Continental, United	via Honolulu
Los Angeles/ Sydney/ Melbourne:	Continental, United	via Honolulu
Los Angeles/ San Francisco/ Cairns/Brisbane:	Qantas	via Honolulu
Vancouver/ Sydney:	CP Air	via Honolulu

TABLE 37

Market Share Of Host Country Carriers -- The Australia Case

	1979	1980	1981	1982
	(In thousands of passengers)			
Passengers traffic to Australia:				
By Qantas	919	920	947	933
By Foreign carriers	1140	1211	1245	1224
Total by air	2059	2132	2193	2157
Ratio carried by Qantas	44.6	43.2	43.2	43.3
Passengers traffic from Australia:				
By Qantas	864	838	885	898
By Foreign carriers	1095	1141	1193	1162
Total by air	1959	1979	2078	2060
Ratio carried by Qantas	44.1	42.3	44.7	43.6

Source: Australian Bureau of Statistics, Year Book, Australia, Various issues. Canberra: Australia.

6.4.2 New Zealand

Canada's air transport link with New Zealand began in 1947, when Canada, in a bilateral agreement negotiated with the United Kingdom, obtained fifth freedom traffic rights for Fiji and beyond rights into New Zealand. In 1950, building upon the agreement with the British, Canada sought and concluded an air transport agreement with New Zealand that enabled CP Air to began air service linking Vancouver and Auckland on December 28, 1951. On April 24, 1969, CP Air suspended this service because of a dispute with Air New

Zealand.[70] Unable to resolve the problem, New Zealand government withdrew CP Air's right on May 14, 1969. More recently, Canada has renegotiated a new bilateral agreement with the New Zealand government. Service between the two countries resumed in November, 1985.

New Zealand set up a carrier as an international joint-venture in 1939. The New Zealand government became half owner of its flag carrier Tasman Empire Airways Ltd (TEAL) with the rest of the company interest shared by Australia (30%) and the United Kingdom (20%). Scheduled international traffic was inaugurated between Sydney and Auckland in 1940. In October, 1953, withdrawal of British interest in the company left the New Zealand and Australian governments with equal share holdings of 50% . By July, 1961, the New Zealand government took control of the company and in April, 1965, changed its name to Air New Zealand. DC-8 service to Los Angeles via Nandi and Honolulu was inaugurated on 14 December, 1965, and the following year saw the opening of routes to Hong Kong and Singapore.

A merger of three private domestic carriers (Union Airways of New Zealand, Cook Strait Airways and Air Travel (NZ) Limited) in November, 1945, led to a state-owned national domestic airline, New Zealand National Airways Corporation (NZNAC). Amalgamation of NZNAC with Air New Zealand on 1 April, 1978, eliminated a two airlines policy for New Zea-

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[70] See CP Air News, February, 1981, p.14. also, CP Air News, May, 1982, p.1.

land and left one enlarged national flag carrier known as Air New Zealand. By 1985, Air New Zealand operated a route network encompassing 24 domestic points and 15 international destinations. Table 38 shows the international passenger

TABLE 38

Passenger Traffic Of Air New Zealand

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	2982		5.8	5.6
1976	3282	10.1	5.5	5.2
1977	3556	8.3	5.3	5.3
1978	4113	15.7	5.3	5.0
1979	4314	4.9	4.7	4.4
1980	4563	5.8	4.3	4.1
1981	4614	1.1	3.9	4.0
1982	4837	4.8	3.8	4.0
1983	5354	10.7	4.1	4.2
1984	5856	9.4	4.2	4.1
1985	6462	10.0	4.3	
Average Annual Growth (1975-1985): 8.0%				

Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

development of Air New Zealand. Table 39 shows the air

transport services available for travel to and from New Zealand. In this South Pacific route group, non-stop services were made available by Air New Zealand between Los Angeles

TABLE 39

North America New Zealand Air Transport Route Network

City-pairs	Airlines	Flight
Los Angeles/ Auckland:	Air New Zealand	non-stop
Los Angeles/ Auckland:	joins Continental and United	via Honolulu
Los Angeles/ Auckland:	Qantas	via Sydney
Vancouver/ Auckland:	Air New Zealand	via Honolulu

and Auckland.

6.5 CANADIAN NORTH PACIFIC MARKETS

In the North Pacific area, significant Canadian air transport activity has long been present in markets such as Japan and Hong Kong. It is not until recently, however, that China and Singapore were added to the list as Canada's active air transport partners.

6.5.1 Japan

The Canada - Japan bilateral agreement was signed on January 12, 1955, and has never been amended. The agreement contains Bermuda-type capacity clauses and, in addition, a requirement for the exchange of data for capacity reviews. Each nation can designate more than one airline to provide service. Under the agreement, Canadian carrier routing can originate from any point in Canada through intermediate points in either Alaska or the Alentians for travel to Tokyo. It is significant that full traffic beyond rights give access to Hong Kong with another point, or points, to be agreed upon when warranted. The Japanese carrier(s) is to discharge traffic at the Vancouver gateway with the same condition for international points as specified above. Beyond rights apply for Mexico City, Caracas, any point or points in Brazil, and any point in the west or central part of the United States with full traffic freedoms. In general, Japaness bilateral air transport agreements have a higher than usual incidence of fifth freedom rights. It is also worth noting that Japan has a large population base with a large trading volume to provide traffic and and a strategic geographical position in the Pacific Ocean region for air transport linkages.

Japan's main international carrier, Japan Air Lines (JAL), was incorporated on August, 1951, as a domestic carrier. As a private company, it was unable to meet the

financial requirements that would allow it to expand its operation into the international market. To meet the heavy capital investment required, the Japanese government intervened in Japan Air Lines in 1952. In August, 1953, Japan Air Lines was reorganized with a fifty percent government interest. The international scheduled passenger traffic of

TABLE 40

Passenger Traffic Of Japan Air Lines (JAL)

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	12054		23.6	24.2
1976	13533	12.3	22.6	23.0
1977	15783	16.6	23.5	23.2
1978	17872	13.2	22.9	22.9
1979	20799	16.4	22.7	22.4
1980	21339	2.6	20.2	21.3
1981	24328	14.0	20.6	20.7
1982	25380	4.3	19.8	20.2
1983	25040	-1.3	19.1	18.9
1984	27918	11.5	19.8	18.4
1985	29832	6.9	19.8	
Average Annual Growth (1975-1985): 9.5%				

Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

Japan Air Lines is shown in Table 40. Table 41 gives the air transport route network between North America and Japan.

Table 42 shows the market share gained by Japanese carriers in Japanese traffic. A high point of 38.4% was reached in 1980. It is interesting to note that in Japan, Japan Airlines has faced competitive pressure for international traffic from Japanses sources. Pressure on the Japanese government from the privately owned All Nippon Cargo, and Toa, forced a renegotiation of the Japan - United States bilateral to allow additional airlines to serve the transpacific cargo market. Before the renegotiation, JAL had shared the Japan - United States traffic with Flying Tiger, a United States cargo specialist.

TABLE 41

North America - Japan Air Transport Route Network

City-pairs	Airlines	Flight
New York/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
	United	non-stop
San Francisco/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
	United	non-stop
Seattle/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
	United	non-stop
Los Angeles/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
	Singapore Airlines	non-stop
	United	non-stop
Portland/Tokyo	United	non-stop
Oregon/Tokyo	United	non-stop
Chicago/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
Honolulu/ Tokyo:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
Anchorage/Tokyo	Japan Air Lines	non-stop
Vancouver/Tokyo	Japan Air Lines	non-stop
Los Angeles/ Tokyo/Nagoya:	Japan Air Lines	non-stop
Honolulu/ Tokyo/Saporo:	Japan Air Lines	non-stop
Honolulu/ Osaka:	Japan Air Lines	non-stop
	Northwest Orient	non-stop
Toronto/Tokyo	CP Air	via Vancouver

TABLE 42

Market Share Of Host Country Carriers -- The Japanese Case

	1965	1970	1975	1980	1984
	(In thousands of passengers)				
Passengers travel by air and sea:					
Total outgoing passengers	578	1742	3313	5585	6729
Japanese passengers	159	663	2466	3909	4659
Total incoming passengers	581	1735	3311	5233	6727
Foreign visitors	367	854	812	1317	2110
Passengers travel by air:					
Total passengers by air	1141	3838	7940	12146	16695
Passengers by Japanese carriers	340	1333	2570	4669	6150
Japanese flag carriers share	29.7	34.7	32.4	38.4	36.8

Source: Ministry of Transport, Japan, Annual Report of Transport Economy Summary, (Fiscal 1985). 1986, p.34.

6.5.2 Hong Kong

The 1949 agreement between the United Kingdom and Canada, subsequently amended in 1958 and 1960, included access to Hong Kong for Canada. Points of departure included Toronto, Edmonton and Vancouver with intermediate points listed as Whitehorse, Alaska, the Aleutians, points in Japan and Shanghai.

An amendment on 14 April, 1981, with Hong Kong as a gateway, gave Canada beyond rights with limited frequency to three round trips per week and with only one point to be

served on any single flight. Canada could choose Vancouver and two other points in Canada for departure but three months advance notice by diplomatic note is required for points other than Vancouver. Intermediate points are Whitehorse, Alaska, Shanghai, and points in Japan. The intermediate and beyond rights are only available to one designated Canadian carrier. It may be recalled that the Canadian agreement with Japan provides full traffic beyond rights for Hong Kong.

Limited air transport services based in Hong Kong were provided by Cathay Pacific as early as 1946. Two years later, the Swire Group and Australian National Airways together acquired and managed the carrier. Cathay Pacific, owned 71 per cent by the Swire Group and 29 per cent by the Hong Kong and Shanghai Bank, currently operates an average of 400 flights per week with an extensive route network covering over twenty countries. Operating from Hong Kong, the carrier now flies to Osaka, Tokyo, Seoul, Taipei, Manila, Bangkok, Kuala Lumpur, Singapore, Kota Kinabalu, Brunei, Jakarta, Fukuoka, Perth, Sydney, Bahrain, Melbourne, Penang, Dubai, Kaohsiung, Port Moresby, Shanghai, London, Abu Dhabi, Bombay, Vancouver and Seattle. International passenger traffic statistics for Cathay Pacific are given in Table 43.

The route between Hong Kong and Tokyo is the world's busiest. It was served by 12 carriers in 1983, most of them operating Boeing 747 aircraft. The Canadian carrier operat-

TABLE 43

Passenger Traffic Of Cathay Pacific Airways

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	2632		5.1	4.9
1976	3009	14.1	5.0	4.8
1977	3671	22.0	5.5	5.3
1978	4594	25.1	5.9	5.4
1979	5210	13.4	5.7	5.8
1980	6181	18.6	5.9	5.7
1981	8256	33.6	7.0	6.4
1982	9235	11.9	7.2	6.7
1983	9629	4.3	7.3	6.9
1984	11233	16.7	8.0	7.6
1985	12494	11.2	8.3	
Average Annual Growth (1975-1985): 16.9%				

Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

ing in this region, CP Air, recently converted its fleet of 747s to smaller DC10s. This reduced the number of carriers operating with 747s within this sector. However, the volume of traffic was not expected to decrease since CP Air also increased its frequency on this sector to maintain its capacity share.

It is worth noting other international traffic from Hong Kong. Hong Kong-Bangkok traffic is almost as heavy as that with Tokyo, while there were 1.4 million passengers between Hong Kong and Taipei in 1983 in spite of travel restrictions in force in Taiwan.

Cathay Pacific's average annual growth rate, at 16.9%, is outstanding. However, the prospect of the return of Hong Kong to China in 1997 places investment risks on Cathay Pacific. It is not known whether the new Hong Kong government at that time would accept Cathay Pacific as its carrier and, if it did, what the airlines commercial prospects would be. Investment in an expanded aircraft fleet faces increasingly short amortization period before the 1997 deadline.

Table 44 provides information on the Hong Kong - North America route network.

TABLE 44

North America - Hong Kong Air Transport Route Network

City-pairs	Airlines	Flight
New York/ Hong Kong:	Northwest Orient	non-stop
Chicago/ Hong Kong:	Northwest Orient	non-stop
Los Angeles/ Hong Kong:	Northwest Orient Singapore Airlines	via Tokyo via Honolulu
Seattle/ Hong Kong:	United	non-stop
San Francisco/ Hong Kong	United Cathay Pacific	non-stop non-stop
Vancouver/ Hong Kong:	Cathay Pacific, CP Air	non-stop

6.5.3 China

Canada's bilateral agreement with China was signed in 1973 but its implementation has been unusually slow. The agreement has capacity pre-determination clauses and a provision for charter services. China can originate traffic from any point in that country to travel by way of Tokyo through one intermediate point. Passengers, mail and cargo may be carried into Vancouver and/or Ottawa with beyond rights to a third country. Canada can designate one airline to originate service from any point in Canada with a techni-

cal landing right in Alaska, proceeding then through Tokyo or another Japanese point, to Shanghai or Beijing as gateways. The Canadian carrier is granted a beyond right which allows route extensions to one point beyond China, this point to be determined later. An important feature of this agreement is the stop-over privilege granted indiscriminately to passengers at intermediate points.

Of all the agreements between Canada and other Pacific Ocean region nations, the Canada - China agreement is unique in its inclusion of a protocol relating to technical requirements and operating procedures. The protocol has specific items on air corridor and airport use, communication and navigation cooperation, air traffic control, meteorological information exchange, aircraft airworthiness standards and miscellaneous items.

China has not yet initiated carrier operation to Canada and Canadian operation of this international linkage did not begin until 1985, twelve years after the signing of the agreement. It is interesting to note that, in the light of CP Air's delay in initiating service, Air Canada requested the right to serve China in June, 1985.[71] Faced with this challenge, CP Air began service at the end of the year.

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[71] Brian Milner, "Air Canada Lacks Rights to China," The Globe and Mail, June, 1985.

Air transport service began in 1929 when Curtiss-Wright Aviation, a large American aircraft manufacturing company, set up Aviation Exploration Inc. A year later the Chinese government acquired 55% interest in the company and the China National Aviation Corporation (CNAC) was formed to provide air services in China. Through Lufthansa, Germans helped to organize the Central Air Transport Corporation in 1931 and this became China's second airline. Following the success of these two joint-ventures, the USSR began to participate in China's air transport system in 1939.

With the founding of the People's Republic of China in 1949, the Sovetsko-Kitayskoe aktsionernoe obshestvo grazhdanskoy aviatsii (Skoga) was formed one year later as a joint venture with the Soviet Union. At the same time, the Chinese government set up its own carrier, known as China Civil Aviation Corporation (CAAC). In 1952, the Bureau for Civil Aviation replaced CAAC with the Chinese People's Aviation Corporation. In October, 1954, the U.S.S.R relinquished control of their interest in Skoga and, subsequently, the airline was taken over by the Civil Aviation Administration of China (CAAC).

The General Administration of Civil Aviation of China, abbreviated as CAAC like the airline, was established in 1962 and superceded the Civil Aviation Administration of China. The General Administration of Civil Aviation of China was then placed under the direct control of the Council

of State, heading six regional civil aviation administrations.

CAAC has operated primarily domestic routes in the initial stages with the exception of service to the Soviet Union. CAAC controls all civil aviation activities in China and operates a variety of non-airline activities in connection with the national development of industry and agriculture through activities such as aerial survey, crop-spraying and aero-medical work.

At the end of 1980, CAAC operated 180 air routes totalling 190,000 kms, 16 times the 1950's figure. The 159 domestic routes totalled 110,000 kms, while the 21 international and regional routes totalled 80,000 kms.

China's international air routes now link it with over 20 cities in 18 countries. These includes Pyongyang (Korea), Tokyo, Osaka and Nagasaki (Japan), Rangoon (Burma), Moscow (USSR), Karachi (Pakistan), Paris (France), Teheran (Iran), Bucharest (Romania), Frankfurt (West Germany), Addis Ababa (Ethiopia), Belgrade (Yugoslavia), Zurich (Switzerland), Sharjah (the United Arab Emirates), Baghdad (Iraq), London, Manila, Bangkok and New York, San Francisco and Los Angeles of the United States. CAAC has signed air transport agreement with over 40 countries and established business ties with airline companies in more than 180 countries and regions.

Table 45 gives data on the international scheduled passenger traffic of CAAC. The average annual growth rate, 28.8%, is very high, but the traffic development is at an

TABLE 45

Passenger Traffic Of CAAC

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	300		0.6	0.6
1976	300	0.0	0.5	0.5
1977	350	16.7	0.5	0.6
1978	607	73.4	0.8	0.8
1979	810	33.4	0.9	0.9
1980	913	12.7	0.9	0.8
1981	1668	82.7	1.4	1.2
1982	1880	12.7	1.5	1.4
1983	2240	19.1	1.8	2.0
1984	2787	24.4	2.0	2.3
1985	3761 *	34.9	2.5	
Average Annual Growth (1975-1985): 28.8%				

Note: Estimated data are noted with *.
Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

early stage with relatively low figures.

Since 1949, the total transportation turnover of CAAC has increased by 20 per cent annually over the past 31 years. In 1980 it carried 3.43 million passengers and 3.96 billion passenger kilometers; 88,900 tons of cargo and 141 million tonne kilometers in freight.[72] Table 46 shows the North

TABLE 46

North America - China Air Transport Route Network

City-pairs	Airlines	Flight
New York - Beijing	CAAC United	non-stop via Tokyo
Los Angeles - Beijing	CAAC	non-stop
San Francisco - Beijing	CAAC	non-stop
New York - Shanghai	CAAC	non-stop
San Francisco - Shanghai	CAAC	non-stop
Vancouver - Shanghai	CP Air	non-stop

America - China route network.

In 1984, the Chinese government, after deciding to break its national carrier's monopoly power, announced a radical reorganization of its civil aviation system, aimed at eliminating its

[72] Hu Gengkang, Zhang Tingquan and Liu Bingwen, Economy--China Handbook Series, Foreign Languages Press, Beijing, 1984, pp.298-301.

notorious reputation for inefficiency, mismanagement and red tape. This involved breaking CAAC up into five independent airline companies.[73] Of these, Air China, based in Beijing flies major domestic routes, and eventually will be licensed to fly internationally. China Southern Airways will be based in Canton (Guangzhou) and will also fly major domestic routes and international routes at some stage in the future.

6.5.4 Singapore

Canada's bilateral with Singapore is relatively recent. Signed on 12 June, 1984, it provides air services between and beyond the respective territories on a transatlantic route via Europe and/or the Middle East and Asia, and a transpacific route via intermediate points in Southeast Asia and/or the Pacific. The Canada - Singapore Agreement contains clauses which provide for "change of gauge", i.e. adjustment of capacity by "downsizing aircraft" at an intermediate point. More than one airline is allowed to perform the services defined in the agreement for each nation, subject to the condition that only one airline is allowed on each designated route. Since there is only one airline in Singapore, it appears that designation for two airlines was based on a Canadian request.

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[73] "Chinese airline plans talks with Cathay", International Business--Transportation, The Globe and Mail, December 17, 1984, p.IB6.

Of relevance to traffic from Canada to Singapore are the bilaterals with the U.K. and India. The U.K. bilateral provides beyond rights from London to Bombay and Singapore while the bilateral with India provides a traffic right east beyond Bombay.

The development of a national carrier has an interesting history. Malayan Airways Limited was organized by the Straits Steamship Company, the Ocean Steamship Company and Imperial Airways in 1937. The carrier changed its name to Malaysian Airways Limited in 1963 and subsequently merged with Borneo Airways. In 1966, the Singapore government and Malaysia governments reached an agreement to operate the airlines jointly and hence Malaysia-Singapore Airlines was formed. A decision to create a separate airline for each country was made in 1971 since the Singapore government felt that the carrier should focus its future development on international traffic and the Malaysia government disagreed. On 24 January, 1972, Singapore Airlines (SIA) was created as a state-owned national carrier.

Soon after Singapore declared its independence in 1959. Prime Minister Lee Kuan Yew put an "open-skies" aviation policy into effect. He authorized more than $2 billion to fund the construction of new cargo facilities at Changi International Airport and set up a far-flung "free trade zone" at Changi, permitting shippers and forwarders to conduct business without being hampered by a costly and time-consuming customs process.

Concurrent with the construction of the new Changi International Airport, SIA was building itself impressive technical and administrative facilities. In addition to achieving self-sufficiency in airframe and engine overhaul, SIA has invested some US$25 million in data processing facilities, including a new computer centre completed at the end of 1983. Almost all of the airline functions are computer-supported and recent additions include an aircraft reliability monitoring system and a revenue accounting system. The freight operations and reservations system is available at 21 on-line stations in SIA's route network. SIA has equipment only 28 months old, on average. High flight frequencies, new aircraft, the new Changi airport, plus their world-class in-flight services, all help explain Singapore Airlines's higher than industry average passenger load factors. In fact, their load factors are the highest in the region.

Singapore's owes much of its success to its strategic location and partly to its government's commitment to promoting it. Situated at the southern tip of the Malaysian peninsula, Singapore is one of Asia's most important points. Historically the harbour has nurtured Singapore's rise as a financial and business service centre, trade hub, refining and petrochemical centre, and modern manufacturing site.

Singapore is a magnet for business as well as an attraction as an exotic tourist spot. In 1984, the newly estab-

lished Singapore International Monetary Exchange (Simex) revolutionized the world's futures markets by inaugurating a transcontinental link with the Chicago Mercantile Exchange. Skilful conduct of the air transport industry has been very supportive of Singapore's economic growth. Namely, the successful bilateral negotiation of landing rights with foreign carriers has enabled Singapore Airlines to obtain precious reciprocal landing rights for many other parts of the world. In traffic development SIA has worked closely with travel agents. The airline has remained consistently profitable during the past ten years. In 1982-83, in spite of stagnant traffic, a fall in load factor and only a slight increase in yield, it was able to report a pre-tax profit of US$23 million, more than double that of the previous year.

In 1979, Singapore International Airlines operated 197 scheduled flights on 35 routes per week compared with 142 flights on 23 routes in 1973. Its activity has made Singapore tenth in the world in terms of size within the air transport industry, as measured by scheduled tonne-kilometers carried.

Singapore Airlines now ranks with such leading world carriers as Lufthansa and Qantas Airways.[74] Singapore Airlines, for instance, doubled its traffic in four years and increased it tenfold in ten years. The economic importance of its air transport activities is very significant. Singa-

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[74] Fortune Magazine, June 1979, p.133.

pore Airlines generated 3.1 per cent of Singapore's gross national product in 1979, contributed some US$500 million a year in foreign exchange, almost one quarter of Singapore's total foreign exchange reserves, and employed approximately 1.3 per cent (almost one in every every ten) of the nation's workforce. Table 47 shows the substantial growth in international scheduled passenger traffic realized by Singapore

TABLE 47

Passenger Traffic Of Singapore Airlines

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	5104		10.0	8.8
1976	6362	24.6	10.6	9.2
1977	7863	23.6	11.7	9.9
1978	9751	24.0	12.5	9.9
1979	12049	23.6	13.2	11.9
1980	14719	22.2	14.0	12.2
1981	17281	17.4	14.6	12.9
1982	18161	5.1	14.1	12.7
1983	18498	1.9	14.1	12.7
1984	20325	9.9	14.4	13.7
1985	21741	7.0	14.4	
Average Annual Growth (1975-1985): 15.6%				

Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

Airlines. Table 48 gives the North America - Singapore route network while Table 49 shows the traffic flow between

TABLE 48

North America - Singapore Air Transport Route Network

City-pairs	Airlines	Flight
Los Angeles/ Singapore:	Singapore Airlines	via Tokyo
Los Angeles/ San Francisco/ Singapore	Singapore Airlines	via Honolulu/ Hong Kong
San Francisco/ Singapore	United	via Hong Kong
Toronto/ Singapore:	Air Canada	via London/ Bombay

North America and Singapore, both passengers and cargo.

TABLE 49

Traffic Flow between Singapore and North America

Traffic Flight Stage	Selected Year: Year	Passengers (Numbers)	Cargo (Tonnes)
Los Angeles - Singapore			
	1982	38950	2773.71
	1983	-	-
	1984	49593	4211.96
	1985	52508	4443.53
San Francisco - Singapore			
	1982	61031	3881.63
	1983	65514	4080.35
	1984	63454	4548.57
	1985	61557	5425.06

Source: ICAO, On Flight Origin and Destination, Year and Quarter Ending Ending 30 June 1985," Digest of Statistics No.324, Series OFOD No.34. 1986.
ICAO, On Flight Origin and Destination, Year and Quarter Ending Ending 30 June 1984," Digest of Statistics No.313, Series OFOD No.30. 1985.

6.6 MARKETS FOR FUTURE EXPANSION

In the light of the high growth rates in the Pacific Ocean region and recent important developments in air transport and traffic activity, it is useful to note some important new markets for Canada in that region. A bilateral agreement with Thailand and the air transport negotiation with South Korea, with which Canada has a trade volume of over one billion dollars, are noteworthy.

6.6.1 Thailand

An agreement was signed recently between Canada and Thailand. It allows the carriage of passengers and airfreight by Canadian carrier to Bangkok via both the Atlantic and Pacific routes. While Air Canada has been designated by the Canadian government to operate a route via the North Atlantic, rights through the Pacific has not yet been designated. The agreement granted Thai International Airways landing rights in Toronto and Montreal.[75]

Thai Airways International Limited (Thai International) was created through an agreement in May 1960 with Scandinavian Airlines System (SAS) to form an international airline in Thailand. Although the Thai Government took over control of the company in 1977, close links with the Scandinavian carrier are still maintained.

Thai International Airways has a fleet of aircraft of 20, half of which are the Airbus A300B-4's. The airline, in a rare combination, has a military broad of directors and a commercial management working to achieve a profit. The combination, with SAS advice, appears to work; 1981 was the carrier's 17th consecutive profitable year, with a net figure of U.S.$1.7 million.

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[75] ITA, Monthly Newsletter, No.45, December, 1986. p.9.

The airline's approach to competition differs considerably from that of Singapore Airlines. It prefers to co-operate with its pool partners, who in turn gain traffic rights at Bangkok. Although not an IATA member, the airline is not keen on fare wars, and prefers to compete on frequency and standards of service. After operating exclusively Asian routes for the first ten years, services to Australia were launched in 1971, followed by flights to Europe the following year. The airline now operates to 35 destinations in 27 countries spanning four continents.[76] Table 50 gives the international scheduled passenger traffic growth of Thai International Airlines.

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[76] P. Sricharatchanya, "Flying the ointment," Far East Economic Review, January 6, 1985. p.61.

TABLE 50

Passenger Traffic Of Thai International

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	2429		4.7	4.6
1976	3012	24.0	5.0	5.1
1977	3228	7.2	4.8	4.9
1978	3959	22.6	5.1	5.0
1979	4385	10.8	4.8	4.8
1980	5935	35.3	5.6	5.8
1981	7151	20.5	6.0	6.5
1982	8175	14.3	6.4	6.8
1983	8527	4.3	6.5	6.8
1984	8941	4.9	6.3	6.7
1985	9830 *	9.9	6.5	
Average Annual Growth (1975-1985): 15.0%				

Note: Estimated data are noted with *.
Source: ICAO, Informal Workshop Meeting On Aviation Forecasting And Economic Planning, Bangkok, Thailand, 2-6 March, 1987.

6.6.2 Korea

Korean National Airlines was formed in 1945. By 1952 the carrier offered international services to Tokyo and, in 1954, it began operations into Hong Kong. In June, 1962, the Korean government took control of the airline and desig-

nated it as the national flag carrier and also changed its name to Korean Air Lines. In 1969, The Han Jin Transport Group took over control and management of Korean Air Lines.

Korean Air Lines, although damaged by the downing of its 747 by the Soviets, turned in a splendid financial year in 1983 producing a $159 million operating profit, the fourth biggest of all airlines.

Korean Air Lines shortened its passenger trips considerably in 1983 as broadings climbed 12.8% while RPKs actually declined by a half of a percent. Korean Air Lines reported a passenger load factor for 1980 of 68 per cent, with 3,600,589 passengers carried. Table 51 shows the North America - Korea route network. Table 52 shows the international scheduled passenger traffic of Korean Airlines.

TABLE 51

North America - Korea Air Transport Route Network

City-pairs	Airlines	Flight
Seoul - Anchorage	KLM	non-stop
	Korean Air	non-stop
	Lufthansa	non-stop
	Northwest	non-stop
Seoul - Chicago	Northwest	non-stop
Seoul - Los Angeles	Korean Air	non-stop
	Northwest	non-stop
	United	via Tokyo
Seoul - New York	Korea Air	non-stop
	United	Via Tokyo
Seoul - San Francisco	United	Via Tokyo
Seoul - Seattle	Northwest	non-stop
Seoul - Honolulu	Korea Air	non-stop

TABLE 52

Passenger Traffic Of Korean Airlines

(International Scheduled RPKs in Million)

YEAR	Revenue Passenger Kilometers	Growth (%)	Regional Revenue Passenger Kilometers Share (%)	Available Seats Kilometers Share (%)
1975	3341		6.5	6.4
1976	4225	26.5	7.1	6.9
1977	5039	19.3	7.5	7.3
1978	6262	24.3	8.0	7.8
1979	8383	33.9	9.2	9.5
1980	10240	22.2	9.7	9.2
1981	10637	3.9	9.0	8.7
1982	11364	6.8	8.8	8.6
1983	11079	-2.5	8.5	8.3
1984	10400	-6.1	7.4	7.8
1985	10953	5.3	7.3	

Average Annual Growth (1975-1985): 12.6%

6.7 CONCLUSION

In this chapter the high activity hubs in the air transport system of the Pacific Ocean region were identified and data have been given which reveal the relatively long-hual linkages between city pairs in the Pacific Ocean region. Air transport relationships in this region reveal a substantial degree of nationalism which makes bilateral negotiations difficult and air transport rivalry intense. Several

of these carriers show very strong performance in terms of growth of output, productivity, unit costs and load factors.

A review of Canada's national air transport markets in the region identifies the significant characteristics of the bilateral agreements which control traffic. Important information is given on the national carriers that are based in the national markets discussed. This review shows that these national markets are varied and complex from the air transport point of view. Additional comment is provided on market development prospects subsequent to the 1970 - 1985 period.

Chapter VII

CANADIAN AIR TRAFFIC DEVELOPMENT IN THE PACIFIC OCEAN REGION

The importance of economic growth for the development of the air traffic of the Pacific Ocean region was demonstrated in Chapter V. In Chapter VI the specific characteristics of the region's air transport network were presented and examined. This chapter will describe economic and other factors basic to the development of Canadian traffic in this region. Tourism and immigration traffic will be discussed. It will also identify trading activities as an important source of traffic growth for both business passengers and cargo, especially the transport of high valued goods. In addition, the impact of the United States' deregulatory policy on the routing of Canadian traffic flow will be analyzed in a section on traffic diversion.

7.1 CHARACTERISTICS OF PASSENGER TRAFFIC

There are two major types of passenger markets; first, there is the leisure market which is discretionary and price sensitive and, second, the business market, where demand is a function of economic development.

Basic data available from Statistics Canada show trends in the travel characteristics of passengers in the seventies and eighties and give some indication of the potential travel between Canada and the Pacific region. In Table 53, the percentage share of overseas travellers coming to Canada for visiting friends and relatives fluctuated from a low of 30% in 1975 to an all time high of 46.4% in 1977. There was even greater fluctuation for the pleasure, recreation and holiday category, where the percentage share was 19.5% in 1977, the lowest percentage share recorded since 1972 and a substantial decrease from the 31.1% recorded in 1976. Among the four main reasons for travellers coming to Canada, these two categories together represent roughly 65 percent of the total. Since leisure travellers have higher fare elasticities than business travellers it is logical for airlines to develop marketing strategies around the price variable so as to attract more total revenue. The other reasons for travel to Canada, business, convention or employment, and other, are given in Table 54. The rise in the first of these two categories in the decade from 1976 to 1985 is interesting. The relative position of business travel in the traffic to Canada is also shown in Table 54.

Table 55 provides an overview of the regional distribution of Canadian visitors travelling to overseas destinations. While the United Kingdom and Europe show a declining trend in receiving Canadian visitors, most other areas have

TABLE 53

Percentage of Visitors Coming To Canada For Pleasure and Visiting Friends

Year	Pleasure, Recreation and Holiday			Visiting Friends and Relatives		
	Asia	Oceania	Total over-seas	Asia	Oceania	Total over-seas
1972	36.2	N.A.	25.4	17.5	N.A.	33.9
1973	38.5	34.5	27.4	20.1	19.9	33.4
1974	42.0	40.8	28.8	19.7	24.5	32.3
1975	43.6	42.3	30.5	20.4	25.8	30.0
1976	41.9	48.8	31.1	28.8	22.1	33.4
1977	33.0	38.9	19.5	24.5	30.9	46.4
1978	32.5	38.3	21.6	28.5	31.4	45.3
1979	34.8	39.9	23.8	25.4	31.9	43.2
1980	35.6	42.4	26.0	30.2	32.7	42.7
1981	37.8	39.3	27.1	27.1	36.2	42.2
1982	31.6	36.3	24.9	33.4	38.3	44.5
1983	38.5	36.2	25.7	28.8	36.7	43.5
1984	35.0	34.7	24.6	30.0	36.8	43.1
1985	36.5	36.7	24.8	26.7	37.6	41.7

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-201.

either maintained their percentage share or showed an increase in their share. Although most other areas show a growing trend, their results are not as significant as those observed for Asia where the percentage of person-trips increased by a factor of three.

Various reasons were given for travel overseas by Canadian residents. Table 56 shows the distribution of the four most commonly cited reasons for travel to the Asia Pacific

TABLE 54

Percentage of Visitors Coming To Canada For Business and Other Reasons

Year	Business, Convention or Employment Reasons			Other Reasons		
	Asia	Oceania	Total over-seas	Asia	Oceania	Total over-seas
1972	25.8	N.A.	16.5	20.5	N.A.	24.2
1973	18.6	20.6	13.5	22.8	25.0	25.7
1974	20.1	18.9	15.6	18.2	15.8	23.3
1975	19.0	12.8	15.5	17.0	19.1	24.0
1976	12.7	9.1	10.8	16.6	20.0	24.7
1977	21.1	13.1	15.0	21.4	17.1	19.1
1978	19.6	13.8	14.2	19.4	16.5	18.9
1979	22.7	12.6	14.3	17.1	15.6	18.7
1980	19.4	12.2	12.9	14.8	12.7	18.4
1981	19.6	11.7	13.9	15.5	12.8	16.8
1982	20.1	11.1	13.9	14.9	14.3	16.7
1983	19.2	13.2	15.1	13.5	13.9	15.7
1984	19.1	13.1	15.9	15.9	15.4	16.4
1985	22.6	12.1	17.9	14.2	13.6	15.6

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-201.

and, also, for total overseas travel as a whole. It is interesting to note that a high proportion of Canadians travelling for business-related activity in the Asian region. In general, percentage of travel to Asia surpassed other region by at least a margin of 10 percentage points between 1972 and 1985.

Table 57 shows the results of the traffic flow from Canada during the past decade. The destination of the highest

TABLE 55

Overseas Destinations For Canadian Visitors By Region 1972 - 1985

(Percentage of person-trips)

Year	U.K.	Europe	Bermuda and Carribea	Mexico Oceania and Other(2)	Asia	Africa	South/ Central America	Other (3)
1972	22.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1973	20.8	43.2	20.7	7.7	1.7	1.7	1.0	3.2
1974	20.4	42.3	21.1	8.1	2.5	1.7	1.5	2.4
1975	18.7	41.3	24.3	7.8	2.8	1.8	1.5	1.8
1976	19.7	38.4	22.2	8.5	4.2	1.6	1.9	3.5
1977	21.0	39.1	19.7	8.2	5.1	1.5	2.1	3.3
1978	19.3	36.7	22.8	9.0	4.7	1.6	2.8	3.1
1979	19.6	33.6	25.8	9.9	3.8	1.3	2.1	3.9
1980	17.4	32.3	27.1	11.3	4.4	1.6	2.0	3.9
1981	17.0	33.3	27.2	9.4	4.9	1.6	2.0	4.6
1982	16.5	34.6	25.2	9.5	5.2	1.8	2.0	5.2
1983	16.7	34.3	20.3	16.4	5.3	1.2	1.8	4.0
1984	16.7	35.9	18.2	16.1	5.0	1.6	2.2	4.3
1985	15.9	37.8	20.6	11.1	5.3	1.6	3.0	4.7

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-201.

number of arrivals was recorded in Hong Kong, followed by Japan. As can be seen from Table 57, the number of Canadian arrivals in Hong Kong was 482,767, and 324,301 in the case of Japan from 1975 to 1984. These results are consistent with earlier observations that both Hong Kong and Japan were significant areas for air traffic growth. Other areas where Canadian arrivals were high are listed in descending order of traffic volume as follows: Australia (250,388), India (1955,484), Singapore (182,441), Thailand (168,101), New

TABLE 56

Characteristics of Canadian Residents Travel To Asia And Other Overseas Countries -- By Purpose of Visit

Year	Business, Convention Employment		Visiting & Friends & Relatives		Pleasure Recreation & Holiday		Other		Person Trips	
	(In Percentage)								('000)	
	Asia	Total over-seas	Asia	Total over-seas	Asia	Total	Asia	Total	Asia	Total
1973	27.6	10.3	31.8	24.6	40.1	64.1	0.5	1.0	22	1360
1974	21.1	11.0	29.9	24.8	47.0	63.2	1.9	1.0	32	1434
1975	41.9	31.1	28.8	24.3	37.5	63.0	5.7	2.1	39	1554
1976	28.9	12.3	32.3	26.4	36.8	58.1	2.0	3.2	65	1582
1977	27.3	10.9	31.1	27.0	36.5	59.2	5.1	2.9	91	1776
1978	25.3	11.3	33.4	26.4	36.2	59.4	5.1	2.9	84	1808
1979	21.2	11.4	41.4	30.4	23.1	47.2	5.7	2.8	67	1757
1980	29.0	13.6	40.0	29.9	18.1	46.6	5.1	2.7	70	1585
1981	24.7	13.4	40.5	32.2	22.1	45.7	2.5	1.8	73	1478
1982	27.1	13.6	37.1	29.7	23.0	47.9	3.6	2.2	78	1489
1983	30.6	12.1	35.7	28.9	21.9	50.0	2.9	1.8	92	1752
1984	28.7	11.7	34.7	28.4	25.7	50.4	4.0	2.0	101	2012

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-201.

Zealand (160,946), Philippines (134,744), Fiji (127107) and China (126426). The number of travellers to China can be expected to increase as tourism is more fully developed.

TABLE 57

Canadian Arrivals At Pacific Ocean Destinations By Countries
1975 - 1984

COUNTRIES	1975	1980	1983	1984	75-84
AMERICAN SAMOA	===	2412	335	199	7854
AUSTRALIA	12500	28229	33000	37000	250388
CHINA, REP OF	6531	13890	15146	16773	126426
COOK ISLANDS	===	814	2480	3191	9550
FIJI	10685	13301	12921	16462	127107
GUAM	===	490	226	340	2017
HONG KONG	22219	48704	63637	79118	482767
INDONESIA	6810	8272	10623	10514	84103
JAPAN	98500	40562	53618	52989	324301
KOREA	2239	8282	11690	12690	74169
MALAYSIA	5240	4833	5783	8500	60301
MICRONESIA	===	===	100	163	1417
NEPAL	1431	1959	2171	2142	21045
NEW CALEDONIA	136	===	487	493	2926
NEW ZEALAND	11548	18368	20204	22952	160946
PAPUA NEW GUINEA	533	449	392	646	4572
PHILIPPINES	4876	19109	15757	16781	134744
SINGAPORE	12178	18282	24060	23380	182441
TAHITI	11632	4273	6093	5510	64708
THAILAND	9861	16121	21564	25760	168101
TONGA	260	302	216	214	3390
VANUATU	===	92	236	239	862
WESTERN SAMOA	735	963	246	246	6853

Source: Pacific Area Travel Association.
Annual Statistical Report,
1984,1983 figures are from 1984. p.72.
1982 figures are from 1983. p.71.
1981 figures are from 1982. p.70.
1980 figures are from 1981. p.75.

7.2 TOURISM TRAFFIC

Table 59 shows the distribution of overseas visitors entering Canada from the Canadian Pacific Ocean region by their country of residence in 1985. Although there are far more Japanese travelling to Canada than Canadian travelling

TABLE 58

Canadian Visitors As Percentage Of Total Tourists Received In Selected Pacific Ocean Region Countries -- 1980

COUNTRIES	Percentage
AUSTRALIA	3.15
HONG KONG	2.45
INDONESIA	1.53
JAPAN	3.12
KOREA	1.03
MALAYSIA	1.20
NEW ZEALAND	3.77
PHILIPPINES	0.19
SINGAPORE	0.81
THAILAND	0.96

Source: World Tourism Organization, World Tourism In Figures 1979 - 1981, Madrid, 1982, p.22.

to Japan, this is where the differences end. In fact, a surprisingly similar distribution of traffic between this region's visitors entering Canada and the distribution of Canadians travelling to these states is evident. For all the states in the region selected in our review, there was a total of 297,115 entries recorded by Statistics Canada. Of these, traffic from Japan constituted over half of all entries. Traffic from Hong Kong represented 14.6% of the total, followed by Taiwan with 15,903 entries recorded, about 5.4%.

In 1982, the number of trips by Canadian residents to the Asia Pacific region was 255,036, as shown in Table 60. The

TABLE 59

Distribution of Visitors Entering Canada From Asia - Pacific Region by Country of Residence, 1985

Country	Total	Percentage
China	11134	3.8
Hong Kong	43272	14.6
Japan	174503	58.7
South Korea	14860	5.0
Malaysia	13994	4.7
Philippines	13281	4.5
Singapore	10168	3.4
Taiwan	15903	5.4
Total	297115	100.0

Source: Calculated from Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-001.! 1986.

percentage distribution of arrivals of Canadian residents is also presented in the table. It shows that Hong Kong has been the most favoured place for Canadians to visit with approximately twenty-four percent of the region's total arrivals accounted for by this destination.

Detailed travel characteristics of Canadian residents visiting countries in the Pacific Ocean region by individual country are not generally available. However, the Australian Bureau of Statistics provides some relevant data. Table 61 summarizes Canadian travel to Australia and indicates the percentage of these travellers who were taking holidays in Australia.

TABLE 60

Canadian Visitors Main Destinations In Pacific Ocean Region -- 1982

Country	Total	Percentage
Australia	32447	12.7
Hong Kong	61413	24.1
Indonesia	8657	3.4
Japan	48288	18.9
South Korea	10355	4.1
Malaysia	11940	4.7
New Zealand	18008	7.1
Philippines	16922	6.6
Singapore	24948	9.8
Thailand	22058	8.6
Total	255036	100.0

Note: (1) Excluding the United States
Source: Calculated from World Tourism Organization, Tourist Departures And Main Destinations 1981 - 1982, Madrid, 1983, pp.1-23.

TABLE 61

Arrival Of Canadian Visitors In Australia

Year	Total Arrivals	Holiday Arrivals	Holiday Arrivals As Percentage of Total
1974	17,116	7,648	44.7
1975	15,353	6,603	43.0
1976	17,402	8,292	47.6
1977	18,017	8,236	45.7
1978	19,009	8,678	45.7
1979	23,238	10,495	45.2
1980	28,485	13,217	46.4
1981	30,948	14,713	47.5
1982	32,447	16,164	49.8
1983	33,014	16,517	50.0
1984	34,522	17,948	52.0
1985	40,936	21,247	51.9

Source: Australian Bureau of Statistics, October, 1986. Taken from: Rowe, John S. "Pacific Asia Tourism -- The Future," International Civil Aviation Conference #8, San Francisco, October 20-21, 1986. Lloyd's of London Press Inc.

7.3 THE CHANGING PATTERN OF IMMIGRATION TRAFFIC

Population movements have also had direct and indirect effects on air transport in the region. Increasing immigration to North America from from countries across the Pacific Ocean has shifted the traditional focus from Europe, resulting in an increase in air transport demand by these migrants. Indirectly the new settlement pattern produces trans-Pacific population affinity which is the basis for subsequent travel.

In the past decade, Canada has admitted a total of 1.2 million immigrants to Canada, about 122,000 entries annually. Historically, there has been a large influx of immigrants from the United States and Europe as shown in Table 62. These two regional groupings produced 79.5% of total immigrantion to Canada in 1968. This trend continued until the mid-seventies. Then, the pattern has gradually changed and a new structure of immigration appeared. By 1980 there were 71,602 immigrants from the Asia region, surpassing the number from Europe. In 1984 47.5% of the total immigrants coming into Canada were from Asia, compared with 23.7 percent of European and 18.8 percent of American origin. These increases in immigration from the Asia/Pacific region has had an important effect on the demand for international air transport.

TABLE 62

Canadian Immigration Statistics by Region of Immigrant's Country of Last Permanent Residence

Year	Asia	Europe	Australasia	American	All other Countries	Total
1968	23,775	118,842	4,145	27,386	9,877	183,974
1970	23,682	75,006	3,462	35,956	9,607	147,713
1978	24,007	30,075	1,233	18,176	12,822	86,313
1979	50,540	32,858	1,395	15,879	11,424	112,096
1980	71,602	41,168	1,555	17,180	11,612	143,117
1981	50,759	44,784	1,020	18,980	13,039	128,582
1982	43,863	44,356	758	18,747	13,423	121,147
1983	36,911	24,319	478	18,254	9,215	89,177
1984	41,896	20,901	535	16,630	8,277	88,239

Source: 1978-1980 data are from Statistics Canada, International and interprovincial migration in Canada, Catalogue 91-208. Annual. 1986, 1970, 1981-1982 are from Statistics Canada, Current Demographic Analysis -- Report on the Demographic Situation in Canada -- 1983. Catalogue 91-209E Annual, 1984. p.115. 1983-1984 data are from Employment and Immigration Canada, Immigration Statistics--1984, Cat. No. MP 22-1/1984. WH-5-075/86, 1986.

7.4 CANADIAN TRADE EXPANSION

The development of international air transport is closely related to the general economic and social development of the region, as has been pointed out in earlier chapters. Continued growth in trading activities has been an important element in affecting air transport demand, contributing not only to greater passenger traffic growth for business related travel, but also to significant increases in cargo traffic activity in the region.

In the past decade, East and South-East Asia as a whole has achieved the most rapid industrial growth in production activities of all the developing regions: 12.3% per year on average between 1965 and 1973, compared with 6.9% in the market-economy developing countries as a whole, and 4.9% in the non- socialist industrialized countries.[77] Even more remarkable is the proportion of their industrial production which is exported: 30 percent as opposed to 10 percent for the market-economy developing countries collectively and 12% for the world economy. Almost half of all Third World exports in 1975 came from the four industrialized countries in this area: Hong Kong (16.8%), Taiwan(13%), South Korea (12.5%) and Singapore (6.5%). It was during this period that countries in this region began their upward trend of economic growth which consequently affected the growth patterns of their air transport activities.

Although importing less than 10 percent of the total value of Canadian exports in 1985, countries in the Pacific region have attracted a disproportionate amount of attention in recent years. Former Canadian External Affairs Minister Mark MacGuigan told the Pacific Rim opportunities Conference on November 19, 1980, that Canadian ties to Europe and the United States have long diverted attention from the Pacific area which may be the "engine of growth in the world econo-

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[77] See, United Nations, Department of International Economic and Social Affairs, World Economic Survey -- Current Trends and Policies in the World Economy, New York. Various issues.

my" by the end of the century.[78] Six years later, External Affairs Minister Joe Clark told the delegates of the fifth Pacific Economic Co-operation Conference that:

> Canada's stake is clear. Two years ago (1984), our Pacific trade surpassed our trade across the Atlantic. Japan, China, Korea and Australia are all among our top 10 customers. Our trade with the members of the Association of South East Asian Nations has tripled over the last decades.[79]

Canada has gradually come to realize the significance of this region and this change in attitude appears to be appropriate in the light of trading facts. Trading between Canada and the Pacific Ocean region has experienced significant growth during the past five years. The trading patterns for the region throw some light on the potential traffic generating activities. When the value of the United States's share of trade is taken out, the Asia/Pacific region represents 42.2% of Canadian exports and 38.7% of Canadian imports (Table 63).

The proliferation of trading activities and efforts by Canadian business to increase their involvement in the Pacific Rim countries will certainly strengthen the role played by international air transport. This suggests that the potential for air service linkages between countries in the Pacific Ocean region and Canada will become stronger and the network will need expansion. The Canadian government's effort in promoting international trade will encourage even

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[78] Winnipeg Free Press, Thursday, November 20, 1980. p.40.

[79] "Trade benefits touted for Pacific Rim", Winnipeg Free Press, Monday, November 17, 1986.

TABLE 63

A Review Of Canadian International Trade Statistics, 1970, 1980 - 1985

(Millions of dollars)

Exports

Year	World	U.S.	World Except U.S.	Asia	Oceania	Asia Oceania As a % of Non-U.S. World
	(1)	(2)	(3)	(4)	(5)	(4+5)/(3)
1970	4246.7	2711.4	1535.3	292.4	64.0	23.2%
1980	74446.0	46940.8	27505.2	7428.5	792.5	29.9%
1981	81203.3	53790.8	27412.5	7459.6	940.4	30.6%
1982	81713.4	55703.0	26010.4	8069.7	839.0	34.3%
1983	88154.6	64206.3	23948.3	8618.6	575.6	38.4%
1984	109436.6	82667.9	26768.7	9750.0	814.8	39.5%
1985	115911.6	90377.4	25534.2	9996.1	820.0	42.4%

Imports

Year	World	U.S.	World Except U.S.	Asia	Oceania	Asia Oceania As a % of Non-U.S. World
	(1)	(2)	(3)	(4)	(5)	(4+5)/(3)
1970	3370.6	2291.4	1079.2	241.3	47.6	26.8%
1980	69273.8	48615.8	20658.0	5030.5	698.7	27.7%
1981	79129.4	54351.0	24778.4	6880.8	661.3	30.4%
1982	67629.7	47641.8	19987.9	6181.7	589.3	33.9%
1983	75520.0	53991.9	21528.1	7831.6	522.1	38.8%
1984	95459.0	68168.2	27290.8	10331.7	514.3	39.7%
1985	104914.0	74380.5	30533.5	11217.5	603.8	38.7%

Source: Statistics Canada, Imports by Countries, Catalogue No. 65-001.

TABLE 64

Canadian Exports to Countries in the Pacific Ocean Region

(Millions of Canadian Dollars)

Country	1970	1980	1981	1982	1983	1984	1985
Japan	188.5	4356.5	4497.7	4571.2	4721.7	5640.8	5745.3
South Korea	5.1	505.8	444.8	487.8	555.4	720.0	775.6
Hong Kong	5.5	193.0	184.1	242.6	221.2	218.8	322.8
China	15.5	871.1	1004.8	1229.5	1606.7	1236.5	1259.3
Taiwan	2.5	252.2	232.8	292.1	341.0	423.2	429.6
Singapore	2.9	198.1	145.7	154.2	126.7	143.0	106.4
Malaysia	2.9	93.1	125.7	121.5	114.0	179.7	204.3
Philippines	5.8	83.1	83.1	102.5	76.8	56.8	45.8
Total	228.7	6552.9	6718.7	7201.4	7763.5	8618.8	8889.1

Source: Statistics Canada, Imports by Countries, Catalogue No. 65-001.

more extensive and frequent air services within this region.

Trade between Japan and Canada amounted to over $11.8 billion in 1985 whereas, in 1970, only $351.4 million was recorded. South Korea's trade with Canada climbed from $8 million in 1970 to almost $2.4 billion in 1985. For the region as a whole, foreign trade between Asia/Pacific Countries and Canada increased from $444 million in 1970 to $22.6 billion in 1985.

In 1970 4.3% of Canadian exports to the Asia Pacific were destined for China; this number has since increased to become 11.6% in 1985. Similarly, Canadian imports from China also experienced an increase, though not as significant as its export trade; they rose from 1.2% in 1970 to 3.4% in

1985. Trading with Korea has experienced a significant increase as well. 2.5% of Canada's total trade with the Pacific Ocean region was with Korea in 1970. By 1985, trade with Korea had increased to 20.8% of Canadian trade with the

TABLE 65

Canadian Imports From Pacific Ocean Region Countries

(Millions of Canadian Dollars)

Country	1970	1980	1981	1982	1983	1984	1985
Japan	162.9	2795.8	4038.4	3527.1	4412.9	5711.5	6113.4
South Korea	3.3	414.4	608.2	586.3	791.4	1152.3	1607.0
Hong Kong	19.2	574.4	674.5	668.8	820.4	966.2	886.8
China	3.6	155.1	220.0	203.7	245.8	333.5	403.5
Taiwan	14.1	557.6	729.2	661.2	925.5	1223.8	1286.1
Singapore	0.5	149.7	174.6	163.6	168.5	214.6	210.5
Malaysia	10.6	83.5	100.0	89.2	115.6	168.0	145.1
Philippines	1.6	101.5	108.7	82.2	88.3	117.3	109.1
Total	215.8	4832.0	6653.6	5982.1	7568.4	9887.2	10761.5

Source: Statistics Canada, Imports by Countries, Catalogue No. 65-001.

region.

Significant traffic growth can also be expected from China as trading activities further develop. In 1983 the level of trade between Canada and China reached a record high of $1.85 billion, almost ten times that achieved in 1970 when diplomatic relations began to normalize. As a result, China has become Canada's fifth largest overseas market and, coincidentally, Canada was fifth among China's trading partners

as well.[80]

Countries in the Pacific Ocean region now account for about a third of the world's exports and imports. They are second only to the European Common Market. This reflects the strong growth of economic activity in the region which has had an outstanding rate of acceleration in the period under review. The expansion of air transport activity has been equally striking.

Two important points need to be made about the implications of Canada's trade with Asian nations for Canadian air traffic development in the Pacific Ocean region. First, the character of Canada's exports is generally less well suited to air shipment than in the case of imports. Because of this imbalance in the directional flow of air cargo, capture of the traffic is somewhat more difficult for a Canadian carrier than it is for a home-based Asian carrier. Second, the trade expansion, regardless of the composition of exports and imports, is supportive of business passenger traffic for all carriers in the region.

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[80] "Ottawa displays just how crucial trade in China is", Calgary Herald, Tuesday, Jan 22, 1985.

7.5 CARGO TRAFFIC IN THE PACIFIC OCEAN REGION

Air cargo has played a relatively bigger international role in the Pacific Ocean region than in Europe. Unlike Europe, where a dozen nations share common borders with linkage through European Common Market high-speed ground transport, these nations are primarily separate "islands" with economies that rely more on scheduled air cargo services. Their regional cargo operations increased substantially in the period reviewed; in certain cases freight became more important in revenue-earning terms than passengers.

Cargo traffic development was particularly strong for the international sector with three annual increases exceeding 25 per cent (34.3 per cent in 1966, 30% in 1967 and 25.8% in 1968). Growth of international air crago movement has resulted from both the stimulation of demand arising from economic development and increases in the efficiency of operations. There are two components to this latter variable, better management with better ground handling automated systems and reductions in cargo rates. Data provide evidence of the relative shift towards Asian/Pacific airlines in cargo handling. While worldwide industry volume has tripled since 1970, volume in the Asian market has grown by five times. For example, scheduled international freight tonne-kilometres performed by world's international scheduled carriers increased from 11,167 million in 1974 to 28,905 million in 1984. In contrast, international sched-

uled carriers in the Asia/Pacific region performed 1,667 million tonne-kilometres in 1974 rising to 8,226 millions tonne-kilometres performed in 1984.[81]

There is every reason to believe that the strong performance will continue through the next decade as countries develop stronger trade ties China and other nations in the region. With cargo demand in the Pacific Ocean region on the rise, many carriers have increased the frequency of their transpacific flights and have taken delivery of a number of new passenger/cargo combination aircraft.

A comparison with the more "mature" transatlantic routes provides some revealing contrasts. From 1970 to 1983 these routes, measured in revenue ton-kilometers, grew only by 126% while transpacific traffic increased by 447%. The major gain, 519%, was recorded on European-Asian routes.

The growth of the Asian marketplace is due in part to a directional imbalance with eastbound traffic--Asia to the U.S.-- dominating the westbound flow. The low volume, high-value exports which continue to pour out of Asia, combined with a strong U.S. dollar, which curtailed U.S. exports, has put all carriers serving Asia in the position of having near-capacity eastbound loads but near-empty westbound loads.

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[81] See ICAO, ICAO Bulletin, July 1986, p.26.

Air cargo services have experienced an increasing rate of growth for Canada in the Pacific Ocean region although, during 1970, transpacific cargo services represented only 8.7% of the total air transport activities for Canada. They have increased to 96.1 million tonne-kms performed in 1984, five times the volume carried in 1970. Table 66 provides data

TABLE 66

Distribution of Cargo Traffic Carried by Canadian Carriers

	Cargo Traffic Performed By			
	Non-Scheduled Carriers		Scheduled Carriers	
	Cargo Tonne-km (mil.)			
YEAR	Pacific	Total	Pacific	Total
1970	0.2	12.9	19.3	221.7
1971	0.8	14.2	21.5	252.7
1972	4.0	35.0	26.6	292.9
1973	7.8	54.9	30.7	316.5
1974	1.0	53.4	40.6	343.1
1975	0.6	68.3	48.1	331.9
1976	0.6	33.8	54.5	362.2
1977	0.0	32.8	49.5	358.8
1978	0.0	21.1	54.5	401.7
1979	0.0	23.2	56.7	447.3
1980	0.0	26.3	71.1	464.8
1981	0.0	0.0	82.7	503.8
1982	0.0	0.0	93.2	523.0
1983	0.0	0.0	97.9	582.9
1984	0.0	0.0	96.1	690.8

Source: Statistics Canada, Air Carrier Operation in Canada, Catalogue 51-002.

for cargo traffic for Canadian carriers.

In 1982, only 27.9% of total Canadian cargo charter operations were performed in the Canadian transpacific market. There was no charter service offered from the Asian Pacific countries to Canada. In 1983, as shown in Table 67, 2365.3 metric tonnes of entity cargo originated from Canada destined for South Korea and Japan. This represents 33.7% of total Canadian entity charter traffic. On the other hand, 494 metric tonnes of entity charter were shipped to Canada from the Pacific region; this represented 26.4% of the total

TABLE 67

Entity Cargo Charter Operations

(In metric Tonnes)

	Canadian Origin		Foreign Origin		Total Asia	Asia As a % of Total
	Asia	World Total	Asia	World Total		
1982						
1st Qt.	490.5	2708.5	0.0	314.9	490.5	16.2%
2nd Qt.	870.6	1880.8	0.0	447.4	870.6	37.4%
3rd Qt.	158.6	1327.1	0.0	286.0	158.6	9.8%
4th Qt.	1205.6	3837.2	0.0	374.2	1205.6	28.6%
	2725.3	9753.6	0.0	1422.5	2725.3	24.4%
1983						
1st Qt.	249.1	2400.8		613.7	249.1	8.3%
2nd Qt.	1399.9	2615.6		26.5	1399.9	53.0%
3rd Qt.	467.4	797.9		234.6	467.4	45.3%
4th Qt.	248.9	808.2	494.0	994.1	742.9	41.2%
	2365.3	6622.5	494.0	1868.9	2859.3	33.7%

Source: Statistics Canada, International air charter statistics. Catalogue 51-003. Quarterly.

entity charter destined for Canada.

7.6 CANADIAN TRAFFIC DIVERSION THROUGH THE UNITED STATES

Canada's competitive position with respect to air traffic in the Pacific Ocean region is strongly conditioned by its proximity to the United States with its large population, well-developed economy, and strategic position for routes between North America and origins and destinations in the region. These circumstances create a strong pull towards traffic diversion through the United States. These basic conditions were exacerbated by the introduction of deregulation of the U.S. air transport system which gave carriers an unconstrained opportunity to capture traffic through competitive price tactics. The implications of these competitive conditions becomes clear when it is realized that a major U.S. gateway, Seattle, is only a four-hour drive from Vancouver. Flights originating from Seattle, such as those of Singapore Airlines and United Airlines, pose a major threat to the Canadian air transport operations.

U.S. traffic hubs are a basis for operations by a large number of airlines serving the Pacific Ocean region. For example, transport between the Pacific Ocean region and the United States has been provided by Singapore Airlines, Air India, Thai International, Philippine Air Lines, China Air Lines, Korean Air Lines, Japan Air Lines, Cathay Pacific, Qantas, Varig Air Lines (of Brazil), United Airlines,[82] Pan

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[82] Expansion of major routes has provided a more competitive environment for the air transport operations in the North American - Pacific Ocean region. In April, 1983, United Airlies launched a Chicago-West Coast-Tokyo services with

American, Northwest Orient, and (until October 1980) Braniff International.[83] However, there are only three carriers operating from Canada to the region by way of the Pacific and two by way of the North Atlantic. They are Canadian Pacific, Japan Air Lines, Cathay Pacific by way of the Pacific and Air Canada and Air India by the Atlantic route. Therefore, the North American-Pacific market on the whole is much more active and competitive than the Canadian-Pacific market alone and impacts strongly on the latter.

As a result of deregulation and the general expansion of air transport activity in the Pacific Ocean region, Canadian carriers have been faced with the problem of an increased number of United States gateways as well as an increasing number of carriers participating within the Pacific Ocean region. Their competitive response has been complicated by limitations on their ability to schedule flight frequencies in competition with rival carriers. Fare differentials as well as more direct route services have resulted in traffic diversion to the United States.

An example of international rivalry involves Continental Airlines of the United States. In 1980, Continental Airlines of the United States successfully lobbied the U.S.

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flights six days a week through Seattle, and one day a week through Portland. In May, it started a daily service from Kennedy Airport in New York, through Seattle to Hong Kong. See Jim Lyon, "Airlines fight for passengers across Pacific," The Financial Post, May 21, 1983, p.14.

[83] Paul Wilson, "A Glut In The Pacific Skies," Far East Economic Review, October 10, 1980. p.75.

government to pressure Canada for indirect access to the Canadian-Australian market. It was not until 1983, when the United States threatened to disapprove the discount fare program offered to the U.S. market by Air Canada, that the Canadian authority finally gave the green light to Continental. This enabled Continental to offer Canadian-based passengers the choice of flying with Continental via Los Angeles under the condition that the fare offered by them was not less than what CP Air was offering.[84]

The impact of the United States policy with respect to gateways and carrier competitive flexibility and the growing strength of trans-Pacific carriers posed serious problems for Canadian air transport operations in the later half of the period under review. Carriers such as Korean Airlines and Singapore Airlines, plus the many established U.S. carriers operating from major U.S. gateways, diverted a portion of Canadian customers.[85] This competition, combined with the inauguration of services by Cathay Pacific, represented an increase in competition for market share on the Canada-Hong Kong market in particular, and intensified the competitive pressure in the North American - Pacific Ocean region in general.

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[84] See Goldenberg, S. Canadian Pacific -- A Portrait of Power," Canada: Methuen Publications, Canada, 1983, p.144.

[85] These Canadian customers are price conscious and are willing to accept less convenient travel arrangements in exchange for a lower fare.

To provide a perspective on the Canada - United States relationship in air transport, some data on transborder traffic are useful. In the past, Canadian carriers have enjoyed an extremely high market share in the provision of Canadian charter services for all domestic, transborder and international air transport activities. This remarkable success has not been duplicated to the same extent in the scheduled market. In the transborder market the success of Canadian carriers with respect to charter services has been encouraging, but scheduled transborder operations have experienced some the period of U.S. deregulation. Table 68

TABLE 68

Transborder Charter and Scheduled Market Share

	1979	1980	1981
Charter			
U.S. carriers	7.4	4.1	4.0
Canadian carriers	92.6	95.9	96.0
Scheduled			
U.S. carriers	59.9	60.9	63.4
Canadian carriers	40.1	39.1	36.6

Source: Civil Aeronautics Board, Reports to Congress -- Fiscal year 1984 and 1st Quarter Fiscal year 1985, p.73.

provides data on the Canada - U.S. rivalry.

From these Civil Aeronautics Board statistics, it is evident that since 1979 Canadian carriers have experienced a decline in their share of the scheduled market. This may be

a direct result of the fewer available flight frequencies or the relatively higher capacity provided in these sectors by the United States carriers. Or it may be that the greater flexibility given U.S. carriers by the policy of deregulation has enabled them to exploit the population imbalance to a greater degree.

Further economic insight into the Canadian international air traffic situation is provided in a review of some financial facts. Table 69 provides information on average fare

TABLE 69

Average Fares Paid By Canadian Visitors For Travel To Overseas Countries

	(All modes)
1972	296.10
1973	301.90
1974	354.40
1975	399.30
1976	436.50
1977	455.80
1978	484.80
1979	519.60
1980	677.00
1981	780.10
1982	846.60
1983	820.80

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-201.

Note: Separation of airfares from other transportation modes is not available but airfares make up the bulk of the fare payments as over 90% of the overseas travel is by air.

payments by Canadian visitors to overseas countries.

Canada's travel account in the balance of payments provides illumination of the revenue aspects of air travel. Table 70 gives the payments on air travel account while Table 71 gives the receipts. Table 72 provides the balance of payments for this account. The general character of the account is negative for Canada and the overall net figures

TABLE 70

Components of Payments on Air Travel Account

(In millions of Canadian dollars)

Year	Spending By Canadian In			Fares Payable To Carriers			Crew Spending In		
	U.S.	Other	Total	U.S.	Other	Total	U.S.	Other	Total
1976	1700	839	2539	246	322	568	10	4	14
1977	1978	1015	2993	291	367	658	11	4	15
1978	2235	1134	3369	306	393	699	12	4	16
1979	2059	1132	3191	384	362	746	14	4	18
1980	2439	1192	3631	466	461	927	15	4	19
1981	2657	1161	3818	536	503	1039	15	4	19
1982	2686	1246	3932	533	524	1057	15	4	19
1983	3311	1513	4824	574	624	1198	18	5	23
1984	3353	1796	5149	618	751	1369	20	4	24
1985	3482	2152	5634	652	794	1446	24	6	30
AVG.	2590	1318	3908	461	510	971	15	4	20

Source: Statistics Canada, Travel between Canada and other countries -- 1985, Catalogue 66-201 Annual, 1986. p.3.

are given in Table 73.

Since 1976, travel and passenger fare payments have increased by over 127 percent to $7.11 billion, while receipts has also increased by a similar magnitude--159 per-

TABLE 71

Components of Receipts on Air Travel Account

(In millions of Canadian dollars)

Year	Spending In Canada By			Fares Receipt For Canadian Carriers From			Crew Spending By		
	U.S.	Other	Total	U.S.	Other	Total	U.S.	Other	Total
1976	1210	390	1600	123	189	312	13	5	18
1977	1360	340	1700	150	156	306	15	4	19
1978	1485	459	1944	150	264	414	15	5	20
1979	1699	633	2332	165	369	534	17	4	21
1980	1905	745	2650	200	479	679	16	4	20
1981	2218	820	3038	254	446	700	19	3	22
1982	2169	830	2999	215	489	704	18	3	21
1983	2441	741	3182	203	433	636	20	3	23
1984	2880	825	3705	245	441	686	21	4	25
1985	3391	845	4236	261	483	744	22	4	26
AVG.	2075	663	2739	197	375	572	18	4	22

Source: Statistics Canada, Travel between Canada and other countries -- 1985, Catalogue No. 66-201 Annual, 1986. p.3.

TABLE 72

Balance of Payments on Air Travel Account Between Canada and Other Countries

(In millions of Canadian dollars)

Year	Net Payments By Canadian In		Net Fares Payable To Carriers		Net Crew Spending Payable To	
	U.S.	Other	U.S.	Other	U.S.	Other
1976	-490	-449	-123	-133	3	1
1977	-618	-675	-141	-211	4	0
1978	-750	-675	-156	-129	3	1
1979	-360	-499	-219	7	3	0
1980	-534	-447	-266	18	1	0
1981	-439	-341	-282	-57	4	-1
1982	-517	-416	-318	-35	3	-1
1983	-870	-772	-371	-191	2	-2
1984	-473	-971	-373	-310	1	0
1985	-91	-1307	-391	-311	-2	-2
AVG.	-514	-655	-264	-135	2.2	-0.4

Source: Calculated from Tables 71 and 70.

TABLE 73

Net Balance on Travel Account Between Canada and Other Countries

(In millions of Canadian dollars)

Year	Total Net Payments By Canadian In U.S. and Other Countries	Total Net Fares Payable to U.S. and Other Carriers	Total Net Crew Spending Payable To U.S. and Other Countries	Overall Balance
1976	-939	-256	4	-1191
1977	-1293	-352	4	-1641
1978	-1425	-285	4	-1706
1979	-859	-212	3	-1068
1980	-981	-248	1	-1228
1981	-780	-339	3	-1116
1982	-933	-353	2	-1284
1983	-1642	-562	0	-2204
1984	-1444	-683	1	-2126
1985	-1307	-311	-4	-2104
AVG.	-1169	-399	1.8	-1567

Source: Calculated from Table 72.

cent. These figures indicate that travel between Canada and other countries over the past ten years has increased quite dramatically but at a constant pace.

The composition of Canadian travel receipts has remained fairly stable over the past decade. On average, expenditures of U.S. visitors account for seventy-six percent of total receipts in visitor spending in Canada. The remaining twenty-four percent of travel receipts are represented by expenditures from overseas visitors.

For the purpose of this study, the most important aspect of the travel account statistics is the information provided on the distribution of fare payments to and from U.S. carriers and other foreign carriers. In examining the travel account, fare payments to U.S. and other foreign carriers as a whole have always exceeded receipts, resulting in an account deficit situation over the last decade. This implies that Canadian carriers had a relatively smaller share of the total Canadian international air transport market. Despite the fact that the non-scheduled carriers were doing very well in terms of maintaining their market share, this has not helped to produce a travel account surplus because non-scheduled operations comparatively are substantially smaller in comparison with scheduled operations.

Statistics on travel by Canadian to all overseas countries is provided in Table 74. An increase in the diversion of traffic through the United States is apparent. Unfortunately, a statistical disaggregation of diversion of travel by Canadian visitors by region is not available.

Traffic generated by overseas visitors to the United States is provided in Table 75. Here the U.S. traffic diversion is much more marked and, again, some increase in the diversion is revealed.

Table 76 shows that, in 1985, only 33% of all overseas visitors entering Canada directly from Asia. For the South

TABLE 74

Canadian Visitors To Overseas Countries

Year	Direct	Direct and Via The United States: Via United States	Total	As A Percentage Of The Total: Direct	Via U.S.
1972	979	115	1094	89.5	10.5
1973	1156	136	1292	89.5	10.5
1974	1141	171	1312	87.0	13.0
1975	1267	153	1420	89.2	10.8
1976	1413	169	1582	89.3	10.7
1977	1580	197	1777	88.9	11.1
1978	1603	206	1809	88.6	11.4
1979	1548	209	1757	88.1	11.9
1980	1357	228	1585	85.6	14.4
1981	1246	232	1478	84.3	15.7
1982	1263	226	1489	84.8	15.2
1983	1492	260	1752	85.2	14.8
1984	1703	309	2012	84.6	15.4
1985	1999	301	2300	86.9	13.1

Source: Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-001.

Pacific region, the results are even more marked, with 81% of all travellers entering Canada by way of United States. This situation is in sharp contrast with the flow of traffic originated from Canada. As is shown in Table 74, approximately 85% of all Canadian visitors travelled directly to overseas countries without first stopping at any one the United States' cities. This pattern of travel has been consistently observed since 1972.

International air transport activity in the Pacific Ocean region has been focussed on two cities, Hong Kong and Tokyo, in the North Pacific and two cities, Auckland and Sydney, in

TABLE 75

Traffic Diversion -- Passenger Traffic

Total Overseas Visitors To Canada:
Direct and via the United States

	CANADA			VIA UNITED STATES			GRAND TOTAL
YEAR	BY AIR	TOTAL DIRECT	% OF GRAND TOTAL	BY AIR	TOTAL VIA U.S.	% OF GRAND TOTAL	
1972	446	452	50.1	133	450	49.6	902
1973	566	573	51.9	165	532	48.1	1105
1974	637	644	52.8	213	575	47.2	1219
1975	684	689	51.9	229	639	48.1	1328
1976	772	777	49.3	277	800	50.7	1577
1977	718	722	50.7	263	703	49.3	1425
1978	794	798	47.7	303	876	52.3	1674
1979	931	936	46.5	359	1075	53.5	2011
1980	952	957	44.2	411	1206	55.8	2163
1981	989	994	46.2	402	1151	53.7	2145
1982	920	923	46.7	382	1052	53.3	1975
1983	844	849	47.8	366	927	52.2	1776
1984	876	880	46.6	394	1006	53.3	1887
1985	870	874	48.3	379	933	51.6	1808

Source: Statistics Canada, Travel between Canada and other countries, various issues. Cat. No. 66-201. Statistics Canada, Travel, Tourism and Outdoor Recreation, Catalogues No. 87-401.

the South Pacific. Significant increases in air traffic has occurred within these regions for the past several years. This is especially evident subsequent to the passage of the United States deregulatory policy in 1978. Nevertheless, the impact and economic effects of the United States air transport policy on the Pacific Ocean region's air transport have received surprisingly little attention. This lack of research is unfortunate in view of the important implications for public policy issues.

TABLE 76

Overseas Visitors Entering Canada by Country of Residence

Direct and Via The United States -- 1985

	Canada Direct	Total Via U.S.	Via United States (Air only)	Grand Total	Percentage Of Grand Total		
					Direct	Via U.S.	
						Total	Air Only
Asia							
Hong Kong	19285	23987	14967	43272	44.6	55.4	34.6
Japan	61136	113367	40597	174503	35.0	65.0	23.3
Taiwan	4164	11739	3231	15903	26.2	73.8	20.3
Other	54404	132911	49176	187315	28.0	72.0	23.9
Total	138989	281603	107971	420592	33.0	67.0	25.7
Oceania							
Australia	15225	61221	37528	76446	19.9	80.1	49.1
New Zealand	1851	13839	8579	15690	11.8	88.2	54.7
Other	1284	3346	2662	4630	27.7	72.3	57.5
Total	18360	78406	48769	96766	19.0	81.0	50.4
World Total	874387	933651	379611	1808038	48.4	51.6	21.0

Source: Calculated from Statistics Canada, Travel Between Canada and Other Countries, Catalogue No. 66-001, 1986.

In order to demonstrate the effects and magnitude of United States's deregulatory policy on the Pacific Ocean region's air transport, Tables 77 to 79 show a selected sample of route networks linking the North American continent and the Pacific Ocean region. A general observation can be made regarding these samples is that the share of Canadian gateway traffic have experienced declines in all the selected route groups since 1978.

TABLE 77

Traffic between Hong Kong and Selected North America Gateways

Selected Years

Traffic Flight Sector	Year	Passengers (Numbers)	Cargo (Tonnes)
Vancouver - Hong Kong and Hong Kong - Vancouver	1978	21216	743.79
	1979	N.A.	N.A.
	1982	N.A.	N.A.
	1983	79157	1894.26
	1984	95510	2266.41
	1985	116690	3386.07
Los Angeles - Hong Kong and Hong Kong - Los Angeles	1978	3210	1604.31
	1979	40752	159.95
	1982	34522	1787.01
	1983	34732	3800.18
	1984	50988	3922.90
	1985	50979	3772.23
San Francisco - Hong Kong and Hong Kong - San Francisco	1978	-	-
	1979	69393	5483.40
	1982	171554	3356.52
	1983	179832	3551.34
	1984	179480	4031.01
	1985	193301	5365.14
Selected Gateways Total	1978	24426	2348.10
	1979	110145	5643.35
	1982	206076	5143.53
	1983	293721	9245.78
	1984	325978	10220.32
	1985	360970	12523.44
Canadian Gateway Share	1978	86.8%	31.7%
	1979	-	-
	1982	-	-
	1983	26.9%	20.5%
	1984	29.3%	22.2%
	1985	32.3%	27.0%

Source: Calculated from ICAO, On Flight Origin and Destination, 30 June 1985, Digest of Statistics No.324, Series OFOD No.34. 1986. ICAO, On Flight Origin and Destination, Year and Quarter Ending 30 June 1984, Digest of Statistics No.313, Series OFOD No.30. 1985.

The most significant decline in share occured in the Hong Kong and North America sector, whereas 86.8% of all traffic were Canadian in 1978, their share has droped to the low of 16.9% in 1983, and regain somewhat by 1985 where the share of traffic recorded was 32.3%. Freight traffic on this sector experienced a decline as well, though were not as dramatic as those observed in the passenger market. It should be noted that, while freight traffic experienced a six-fold increases, passenger traffic recorded a fifteen-fold increase from 1978 within this sector.

As can be seen in Table 77, the Vancouver - Hong Kong route has experienced steady growth and, since 1978, has recorded a five-fold growth in passenger traffic. It can be noted from the table that traffic between Los Angeles and Hong Kong was 3,210 passengers in 1978; this traffic subsequently increased to 50,979 passengers in 1985. Similarly, traffic between San Francisco and Hong Kong increased from 69,393 in 1979 to 193,301 in 1985.

Table 78 shows that in 1978 Canadian passenger traffic represented 24% of the total traffic for the selected gateways. Its share has since declined almost by half to 14.1%, despite a significant gain in traffic volume. This indicates that, even though there was an observed increase in the number of passengers travelling through Canadian gateway, the growth was not as significant as that of Canada's United States counterpart in this market. This may be due to the

smaller number of carriers using the Canadian gateway or because of a lower frequency of services being provided by carrier(s) operating from Canadian gateway. Of all the selected gateways examined, only in this sector was freight traffic found to show an increase from the 1978 to 1985 period. The unusually high volumes of freight carried through the Canadian gateway in 1985 has accounted for most of the differences, since freight traffic from the United States gateways has only grown marginally.

One of the busiest North Pacific traffic sectors was the route linking Tokyo and the North America. Table 79 shows that new traffic began in 1982 on the Seattle - Tokyo route and its growth has almost doubled in four years. The significant growth of Canadian gateway traffic had allowed its share to be maintained at around its 1978 level, although it has droped from 15.9% to 12.9% during the period under review. The Canadian carrier operating on this route, CP Air, increased its scheduled services to six flights per week and this may explain the strong performance of the Canadian gateway traffic in this sector.

Although this analysis is based on selective samples, they illustrate the point that implementation of the United States deregulatory policy, and Asian carrier development, have had a serious negative impact on the Canada's traffic position in the Pacific Ocean region.

TABLE 78

Traffic between Australia and Selected North America Gateways

Traffic Flight Sector	Selected Year Year	Passengers (Numbers)	Cargo (Tonnes)
Vancouver - Sydney and Sydney - Vancouver	1978	17049	402.84
	1979	19242	433.98
	1982	N.A.	N.A.
	1983	26992	521.44
	1984	29484	532.98
	1985	32876	1238.73
Los Angeles - Sydney and Sydney - Los Angeles	1978	-	-
	1979	-	-
	1982	97377	8760.83
	1983	110239	8749.38
	1984	124040	8568.30
	1985	131653	8661.08
San Francisco - Sydney and Sydney - San Francisco	1978	53892	6336.21
	1979	-	-
	1982	-	-
	1983	51788	3454.81
	1984	57224	3593.35
	1985	68926	3923.35
Selected Gateways Total	1978	70941	6739.05
	1979	-	-
	1983	189019	12725.63
	1984	210748	12694.63
	1985	233455	13823.16
Canadian Gateway Share	1978	24.0%	5.9%
	1983	14.3%	4.0%
	1984	13.9%	4.1%
	1985	14.1%	9.0%

Source: Calculated from ICAO, On Flight Origin and Destination, 30 June 1985, Digest of Statistics No.324, Series OFOD No.34. 1986. ICAO, On Flight Origin and Destination, Year and Quarter Ending 30 June 1984, Digest of Statistics No.313, Series OFOD No.30. 1985.

TABLE 79

Traffic between Japan and Selected North America Gateways

Selected Years

Traffic Flight Sector	Year	Passengers (Numbers)	Cargo (Tonnes)
Vancouver - Tokyo and Tokyo - Vancouver	1978	116343	3653.13
	1979	159102	4531.68
	1982	N.A.	N.A.
	1983	206093	6813.94
	1984	210528	7166.35
	1985	216605	5744.03
Seattle - Tokyo and Tokyo - Seattle	1978	-	-
	1979	-	-
	1982	164306	3032.29
	1983	215655	4455.21
	1984	240069	5011.11
	1985	291499	4919.54
Los Angeles - Tokyo and Tokyo - Los Angeles	1978	306678	23963.70
	1979	404694	30698.90
	1982	605328	41143.99
	1983	660885	50973.59
	1984	679863	55542.70
	1985	703434	56044.40
San Francisco - Tokyo and Tokyo - San Francisco	1978	308121	31072.00
	1979	354996	30518.60
	1982	318385	32565.33
	1983	331201	42032.44
	1984	377443	49075.10
	1985	457212	53245.60
Selected Gateways Total	1978	731142	58688.83
	1979	918792	65749.18
	1982	1088019	76741.61
	1983	1413834	104275.18
	1984	1507903	116795.26
	1985	1668750	119953.57
Canadian Gateway Share	1978	15.9%	6.2%
	1979	17.3%	6.8%
	1982	-	-
	1983	14.6%	6.5%
	1984	13.9%	6.1%
	1985	12.9%	4.8%

Source: See Table 77.

To counter this, Canada needs to ensure that it has the strongest possible carrier presence in the Pacific Ocean market and that its airport infrastructure is well adapted to competitive conditions for passenger and cargo traffic in this region.

7.7 CONCLUSION

This chapter has identified several important components of Canadian air traffic development in the Pacific Ocean region. Passenger traffic, based on both economic and personal discretionary reasons, has experienced strong growth. More specifically, business traffic, linked with industrial and trading activity, and personal travel for immigration, visits, and vacations, have contributed to a strong and diversified development of Canadian traffic. A further dimension of this traffic development is found in cargo activity. This important component of traffic development is marked by traffic flow directional imbalance.

Special attention has been directed to the problem of diversion of Canadian traffic through United States gateways. This problem has been exacerbated by large scale promotional activity by U.S. carriers, the development of multiple United States gateways with new routes, and Pacific Ocean region carrier activity.

Chapter VIII

CANADIAN AIR TRANSPORT PERFORMANCE IN THE PACIFIC OCEAN REGION

As has already been described in earlier chapters, the international air transport industry is subject not only to national government regulation but also to international controls. There are various rationales for government intervention at the national level. In Canada, regulation has been an instrument for government to apply its "public interest" principles.

This chapter presents an analysis of the performance of Canadian carriers in the Pacific Ocean region. This performance has been affected both by Canadian public policy with respect to the carriers and the discipline imposed by bilateral air transport relationships. Within these constraints air transport performance is, of course, determined by air carrier conduct and the conditions of air transport market rivalry.

8.1 CANADIAN CARRIER PARTICIPATION IN THE PACIFIC OCEAN REGION

For the period under review, Canada's scheduled international air transport service in the Pacific Ocean region was performed by two airlines, namely Air Canada and Canadian Pacific Airlines.[86] While Air Canada is the larger airline, both in Canadian international and domestic service, Canadian Pacific has been the principal operator in this region. Wardair, a major non-scheduled airline has not been very active in this region. Both Canadian Pacific Airlines and Air Canada have participated in non-scheduled traffic and cargo operations.

Originally, Air Canada, a crown corporation, was chosen by the Canadian government as the primary instrument for the development of the nation's commercial air transport system, both domestically and internationally. Canadian Pacific Airlines, part of the substantial Canadian Pacific conglomerate, has been granted increasing status within the total Canadian air transport system. With the initiation of air transport operations in the Pacific Ocean region, CP Air was given strong government support for its system development in the region.

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[86] On April 26, 1987, with the merger of CP Air and Pacific Western Airlines, the carrier's name was changed to Canadian Airlines International.

Canadian carrier traffic in the Pacific Ocean region has experienced a rate of growth that is far stronger than the growth of the total scheduled international passenger market. This growth is shown in Table 80, which is based on data from a number of Statistics Canada reports. While Canadian international scheduled air passenger traffic as a whole grew by a factor of 1.77 from 1970 to 1984, the rate of growth for the Pacific Ocean region was much more impressive. For the same period it achieved a growth factor of 4.69.

TABLE 80

Distribution of Total and Pacific Area International Scheduled Scheduled Passenger Traffic For Canada

Year	Scheduled Passenger Number		Pacific Area As A Percentage of Total Passenger Traffic
	Pacific	Total	(%)
1970	63961	2718714	2.35
1971	62137	2872672	2.16
1972	64418	3141256	2.05
1973	72119	3415256	2.11
1974	97220	3879270	2.50
1975	91444	3909427	2.34
1976	119389	4116454	2.90
1977	138694	4345645	3.19
1978	163094	4554084	3.58
1979	182838	5392797	3.39
1980	203103	5457432	3.72
1981	240327	5001727	4.80
1982	254369	4470693	5.68
1983	258056	4304959	5.99
1984	300219	4824175	6.22

Source: Statistics Canada, Air Carrier Operations in Canada, Catalogue 51-002, various issues.

The Canadian air transport network in the Pacific Ocean region is based on two major traffic routes flown by CP Air. One other route has been developed by Air Canada via London, England, and India. One of the two routes flown by CP Air is over the North Pacific and links Vancouver, by way of Anchorage, to Tokyo and Hong Kong. The other main route extends to the South Pacific. It provides traffic between Vancouver, Honolulu, Nandi and Sydney. In 1985, the conclusion of a new bilateral agreement with New Zealand reestab-

lished the extension of traffic from Nandi to Auckland. The route developed and operated by Air Canada is Toronto-London-Bombay-Singapore.

The development of markets in these areas has followed the general pattern of air transport evolution. Initially, flight duration was relatively short, due primarily to the technical limitations of the aircraft. This shorter flight duration was often associated with a number of intermediate stops. With the advance of aircraft technology, carriers were able to operate more non-stop services with a longer flight duration. Elimination of some of the intermediate stops reduced unproductive non-flying time. This has been beneficial both to passengers in time-saving and to the airlines which have been able to improve their economics by better annual utilization of their aircraft.

The development of the Canadian traffic system in the Pacific Ocean region can be traced as far back as 1949 when Canadian Pacific Airlines inaugurated its first international flight to Australia and its first Orient route over the North Pacific from Vancouver to Tokyo and Hong Kong. Through the "division of the world policy" instituted in 1964 by the Canadian government, Canadian Pacific was selected as Canada's chosen instrument for the Pacific Ocean region. In the 1973 revision of this policy, only small modifications were made with respect to the Pacific Ocean region. Air Canada was granted permission to serve China if

two carriers were to be designated by Canada and Southeast Asia was left for future consideration.

For CP Air, approximately 30 percent of its business has been derived from international operations,[87] a significant amount of which is attributed to traffic across the Pacific.[88] Table 81 shows the international and total scheduled passenger traffic for CP Air. It should be noted that, over the past sixteen years, total passenger traffic for CP Air has increased by a factor of 2.59 while its international operations also experienced an increase of a similar magnitude, by a factor of 2.16. It is also interesting to note that, in 1974, international traffic for CP Air experienced an increase of almost thirty percent. This may have been due to the expansion of the carrier's international network.[89]

Air Canada's operations in the Pacific Ocean region for most of the 1970 - 1985 period have been confined to the provision of traffic on a non-scheduled basis. Recent bilateral air transport agreements concluded between Canada and the United Kingdom and India opened the Pacific Ocean region market to the Canadian crown carrier. These bilaterals have resulted in Air Canada's route network being

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[87] See Table 81 and Goldenberg, S. Canadian Pacific: a Portrait of Power (Toronto: Methuen, 1983), p.146. Goldenberg's figures are even higher, estimated at 40 percent.

[88] Doug Jansen, "CP Air gearing up to challenge Air Canada's domination," The Globe and Mail, December 2, 1985, p.B17.

[89] In 1974 CP Air added Milan to their international route network.

TABLE 81

Distribution of Total and International Scheduled Passenger Traffic for CP Air

Year	Passengers Carried		Percentage changes		Percentage Share of Internation Operation
	Total	International	Total	International	
	(in thousands)		(In Percent)		
1970	1378.0	536.9			
1971	1459.8	560.8	5.9	4.50	39.9%
1972	1622.5	604.5	11.1	7.80	38.4%
1973	1700.8	622.4	4.8	3.00	37.3%
1974	2259.1	808.6	32.8	29.90	36.6%
1975	2495.3	908.5	10.5	12.40	35.8%
1976	2328.3	886.2	-6.6	-2.40	38.1%
1977	2445.8	878.1	5.0	-0.90	35.9%
1978	2756.6	925.6	12.7	5.41	33.5%
1979	3019.0	946.7	9.5	2.27	31.3%
1980	3336.6	942.3	10.5	-0.40	26.1%
1981	3527.4	921.3	5.7	-2.20	26.2%
1982	3290.1	865.2	-6.7	-6.09	26.3%
1983	3256.0	934.9	-1.0	8.00	28.7%
1984	3494.2	1122.5	7.3	20.00	32.1%
1985	3570.0	1158.3	2.2	3.2	32.4%

Source: 1970-1974 data are from ICAO, Airline Traffic Volume 1. 1970-1974, Digest of Statistics No. 199-A, Series T-No.34, 1975.
1975-1976 data are from ICAO, Traffic--Commercial Air Carriers 1973-1977, Digest of Statistics No.228, Series T-No.37, 1978.
1977-1978 data are from ICAO, Civil Aviation Statistics of the World 1978, Doc 9180/4.
1979-1980 data are from ICAO, Traffic--Commercial Air Carriers 1979-1983, Digest of Statistics No.303, Series T-No.43, 1981.
1981-1985 data are from ICAO, Traffic--Commercial Air Carriers 1981-1985, Digest of Statistics No.326, Series T-No.45, 1986.

extended through London to Singapore. This allowed Air Canada to operate scheduled services into the Pacific Ocean region.

The evolution and development of Air Canada's operations into the Canadian Pacific region through the North Atlantic began with the conclusion of a 1982 India - Canada agreement which gave Air India access into Mirabel airport from New Delhi and Bombay twice weekly. In exchange, Air Canada was given rights to serve Bombay via London from any point in Canada. On January 15, 1985, Air Canada began operating into Singapore through London via Bombay. The service was initially provided thrice weekly, but in 1986, an additional flight was added.

The United Kingdom - Canada bilateral agreement was a problematic one because of the fact that Air Canada has secured fifth freedoms traffic rights from London through the bilateral agreement. On the other hand, three of the four traffic rights extended to British Airways for operation into Western Canada were subsequently suspended due to the economic recession and the collapse of world oil prices.

8.2 CRITERIA FOR CARRIER PERFORMANCE EVALUATION

The ability of an airline to sustain a reasonable level of profit is fundamental to successful performance as it is for firms in other industries. However, it is recognized in the air transport industry that profit figures are unreliable as performance indicators. Not only are these profit figures subject to the normal differences between accounting an economic measures of profit but, in the air transport industry, profit figures are seriously affected by the variation in the use and depreciation of purchased aircraft and the complexity of arrangements for leased aircraft. Annual depreciation figures tend to be very unrealistic in economic terms because of wide variations between the expected and actual operating life and annual use of aircraft. Aircraft leases can be of several types and, further, show little relationship in annual cost to the depreciation estimates used for owned aircraft. Further, in the case of international air transport many carriers are government owned and, although profitability may be one objective, it is not necessarily the foremost airline priority. Also, from an institutional point of view the presence of some conglomerate enterprises in the industry , CP Air for example, raises questions about profit figures because of uncertainty about internal policies used in accounting for assets such as aircraft. It is interesting to note that the financial statistics for Air New Zealand included operating statistics of

the government-owned national railway until 1979. Finally, this study is concerned with air transport performance in a market that is regional in Canadian terms. Regional profit figures are not available from airlines and, even if they were, they would be subject to the limitations of arbitrary accounting practices in the assignment of costs and other items on a regional basis.

In view of these limitations it is fortunate that alternative measures for determining airlines success are available. Among these alternatives, market share and load factor analysis appear to be useful indicators of airline success. Market share is frequently cited in the literature as the single most important attribute by which performance can be evaluated. The concept has strong theoretical underpinning. For example, Shepherd states that:

> Market share was the basis of the firm's market position in the neoclassical literature, and it is well established in business practice as a focus for company motivation. There is 'eternal struggle for market shares' in markets, and successes are often reported in terms of market shares as well as in profits and stock prices. Market share's role is, like any other element, mainly as a source of profits to the firm.[90]

Load factor analysis is a useful addition to market share analysis inasmuch as it shows how much capacity is being offered in order to capture passenger traffic. An airline might be successful in capturing market share but be extravagant in the provision of aircraft capacity as shown by low

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[90] See William G. Shepherd, The Economics Of Industrial Organization, Prentice-Hall, Inc. 1985. pp.50-51.

load factors. Conversely, an airline might have a somewhat restrictive policy towards the provision of aircraft capacity in order to improve immediate profitability. Such a policy might lead to less successful load factor performance and, ultimately, to diminished profitability.

8.3 CANADIAN CARRIER MARKET SHARE PERFORMANCE: SCHEDULED PASSENGER TRAFFIC

In this, and in subsequent sections of this chapter, a market share analysis of air traffic in the Pacific Ocean region will be made. This performance test is useful for firms operating in oligopolistic markets. The results are especially useful when the technique is applied over a sufficiently long time period and to markets with regulated access; both of these conditions are present in the following analysis.

In approaching the study of market share of the air transport operation in the Canadian Pacific Ocean region, time series data were obtained from the International Civil Aviation Organization for traffic carried by major airlines in the Canadian Pacific Ocean region, including CP Air.

To get a better understanding of the dynamics and the competitive condition of the Canadian Pacific markets, Table 82 summarizes market share statistics for major route sectors operated by CP Air and its major competitor. Market share results for the period under review are summarized

TABLE 82

Canadian Market Share For Scheduled Passenger Traffic In The Pacific Ocean Region

TRAFFIC SECTORS	Market Share Period 1 1970-74	Period 2 1975-79	Period 3 1980-84
Anchorage/Vancouver			
CP Air share	54.2%		
Major Competitor	45.8%		
Anchorage/Tokyo			
CP Air share	3.3%	0.3%	0.0%
Major Competitor	34.5%	33.9%	31.4%
Other carriers	62.2%	65.8%	68.6%
Tokyo/Hong Kong			
CP Air share	4.0%	6.2%	2.2%
Major Competitor	27.2%	32.5%	35.2%
Other carriers	68.8%	61.3%	62.6%
Tokyo/Vancouver			
CP Air share	75.4%	50.4%	33.7%
Major Competitor	24.6%	49.6%	66.3%
Vancouver/Honolulu			
CP Air share	98.3%	75.7%	66.6%
Major Competitor	1.7%	24.3%	33.4%
Sydney/Honolulu			
CP Air share			1.4%
Major Competitor			75.0%
Honolulu/Nandi			
CP Air share	6.8%	10.6%	18.0%
Major Competitor	43.3%	47.9%	40.7%
Other carriers	49.9%	41.5%	41.3%
Sydney/Nandi			
CP Air share	4.0%	8.3%	12.6%
Major Competitor	54.5%	70.9%	63.9%
Other carriers	41.5%	20.8%	23.5%

Source: Figures are estimated from ICAO, Traffic By Flight Stage, various issues.

TABLE 83

Traffic Growth Rate For CP Air and Its Major Competitor

TRAFFIC SECTORS	Growth Rate From 1970-74 To 1975-79	1970-74 1980-84	1975-79 1980-84
Anchorage/Tokyo			
CP Air Share	0.18	0.02	0.14
Major Competitor	1.65	5.80	3.51
Total Market	1.52	5.29	3.47
Tokyo/Hong Kong			
CP Air Share	1.12	1.72	1.53
Major Competitor	0.86	4.09	4.77
Total Market	0.89	3.79	4.26
Tokyo-Vancouver			
CP Air Share	2.16	4.27	1.98
Major Competitor	6.52	25.81	3.96
Vancouver/Honolulu			
CP Air Share	1.29	1.60	1.24
Major Competitor	23.58	45.66	1.94
Honolulu/Nandi			
CP Air Share	1.65	4.44	2.69
Major Competitor	1.18	1.58	1.35
Total Market	1.24	1.97	1.59
Sydney/Nandi			
CP Air share	2.28	5.09	2.23
Major Competitor	1.41	1.87	1.33
Total Market	1.47	2.09	1.42

Source: Figures are estimated from ICAO, Traffic By Flight Stage, various issues.

according to three different periods. Period 1 covers the years 1970 to 1974, period 2 includes 1975 up to 1979 and period 3 the years 1980 to 1984. For some city pairs the traffic operated under duopolistic conditions while in oth-

ers, oligopolistic rivalry prevailed. Table 83 summarizes the growth rate for traffic sectors operated by CP Air in the three periods reviewed.

The statistics reflect the fact that CP Air withdrew from the Anchorage - Vancouver and Anchorage - Tokyo sectors because the carrier no longer needed to make technical stops in Anchorage. In 1970, flights operated by CP Air represented 57.9 percent of the total traffic capacity on the Anchorage - Vancouver sector. This figure dropped to a low of 25.9 percent in 1972 but picked up some momentum in 1973 to reach 37.9 percent of the total capacity. Throughout this period, the actual share of the traffic that CP Air carried always exceeded its capacity share. However, in 1974, not only did both capacity and actual share of the market decline to its lowest level but, for the first time, CP's share of traffic actually fell below its share of capacity offered. This gradual decline in market share resulted in the complete withdrawal of CP Air from this market in 1975. Similar reasons led to the eventual withdrawal of CP air from the Tokyo - Anchorage market in 1977. After that, even though CP Air occasionally operated flights in this sector, its share of the traffic was very small. Table 82 shows that, from 1970 to 1974, CP Air and its major competitor JAL together carried 37.8% of the total traffic in this sector. JAL had a 91.2% share of the combined traffic. Detailed statistics for other important sectors are provided

in Tables 82 and 83. Some of the data have been summarized in Table 84.

As can be seen in Table 84, scheduled Canadian carrier traffic operated through the North Pacific is solely the result of CP Air's operation. Total passengers carried by CP Air on the Orient route destined for and originated from Hong Kong exceeded 70,000 in 1980 and 1981. A significant increase of 11.8% was recorded in 1982 when traffic rose to 82,219 passengers. In 1983, Cathay Pacific began its North America operation flying directly from Hong Kong to Vancouver in competition with CP Air. Since then, traffic for CP Air's Orient operation has experienced a decline. With a total of only 58,673 passengers traffic recorded in 1984, CP Air has suffered a significant loss of passenger traffic by 28.6% compared to its 1982 figure. Although operating conditions have improved somewhat since then, its 1986 performance of 60,431 passengers on the route still represented 26.5% decrease from traffic recorded in 1982.

During 1980-1981, although CP Air's total international traffic experienced a decrease of more than two percent, its Orient operation shows an increase of 2.4% in passengers carried. Similarly, its total international traffic during 1981-82 decreased by over six percent, three times as much in percentage terms as was recorded in previous year, while the number of passengers carried on the Orient routes increased by a record high of 11.8%. These results indicate

TABLE 84

Scheduled Passenger Traffic By CP Air Related to Hong Kong

	From	Embarked	Disembarked	Total	Total Orient*
1979-80					
	Tokyo	7516	4973	12489	
	Vancouver	32139	27134	59273	71762
1980-81					
	Tokyo	6992	6248	13240	
	Vancouver	35377	24900	60277	73517
1981-82					
	Tokyo	10013	10616	20629	
	Vancouver	36193	25397	61590	82219
1982-83					
	Tokyo	8075	9258	17333	
	Vancouver	32581	24270	56851	74184
1983-84					
	Tokyo	9142	11404	20546	
	Vancouver	23297	14830	38127	58673
1984-85					
	Tokyo	9418	11743	21161	
	Vancouver	24000	16949	40949	62110
1985-86					
	Tokyo	6736	6526	13262	
	Vancouver	28429	18740	47169	60431

Note: Excluding traffic from Vancouver to Tokyo.

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

that up until 1982, the Orient operation had been a major contributing factor towards the traffic growth of CP Air.

In an address to the Canadian Transportation Research Forum, President & Chief Executive Officer of Canadian

Pacific Air Lines Donald J. Carty also noted the significance of the Pacific market:

> (CP Air's) strategy was the restructuring of our international route system. Most of our future international growth lies across the Pacific and in Southeast Asia, and we have recently reallocated the freed-up domestic wide-body capacity, as well as some other less profitable international flying, to increase both our frequency and our capacity in the Japan and Hong Kong markets, the two international markets that represent the bulk of our international profits over the years.[91]

TABLE 85

Percentage change in CP Air's Scheduled Traffic on Orient and International routes

Year	Total		Percentage change On	
	Orient* Route	International Route	Orient Route	International Route
1980	71762	942300		
1981	73517	921500	2.4%	-2.2%
1982	82219	865200	11.8%	-6.1%
1983	74184	934900	-9.8%	8.1%
1984	58673	1122500	-20.9%	20.1%
1985	62110	1158300	5.8%	3.2%

Note: * excluding traffic from Vancouver to Tokyo.

Source: Calculated from Tables 81 and 84.

[91] Donald J. Carty, "Feeder Air Services And Your Community", President & Chief Executive Officer of Canadian Pacific Air Lines, Address to Canadian Transportation Research Forum, April 16, 1986.

8.3.1 The North-Pacific Ocean Region Market

As shown in Table 86, passenger traffic in the Vancouver - Hong Kong market was mainly the result of CP Air's operation up until 1983 when Cathay Pacific began its non-stop operation. During the first full year of operation, Cathay Pacific achieved significant traffic results. In fact, their traffic was fifty-four percent higher than their competitor, CP Air (Table 86). The following year saw CP Air's traffic share decline from the 39.3% held in 1984 to 33% in 1985 and, when CP Air responded with a three times a week non-stop service in 1985, it was only able to restore its lost market share by a small margin to 35.1% of the total market. Table 87 summarizes the percentage share of CP Air scheduled passenger traffic between Vancouver and Hong Kong. It should be noted that beginning April 2nd, 1985, Cathay Pacific expanded its operations from Vancouver to Hong Kong by increasing its frequency to three flights weekly.

The routing that links Canada and Japan is the direct Vancouver-Tokyo service provided by both Japan Air Lines and CP Air. Of particular interest is the fact that, under the Canada-Japan bilateral agreement, Canada has a fifth freedom traffic right beyond Japan into Hong Kong. CP Air is, therefore, able to utilize this Canada-Japan bilateral to its fullest extent. Because of the bilateral arrangement, CP Air's Vancouver-Hong Kong route was operated by two traffic flight stages until 1986.

TABLE 86

Scheduled Passenger Traffic between Vancouver and Hong Kong
1980 - 1986

	CP Air			Cathay Pacific		
	HK-VAN	VAN-HK	Total	HK-VAN	VAN-HK	Total
1980	32139	27134	59273			
1981	35377	24900	60277			
1982	36193	25397	61590			
1983	32581	24270	56851			
1984	23297	14830	38127	31448	27424	58872
1985	24000	16949	40949	45280	37731	83011
1986	28429	18740	47169	46844	40371	87215

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

TABLE 87

CP Air Scheduled Passenger Traffic As Percentage of Total Traffic Between Vancouver and Hong Kong

Year	Total	Percent
1984	96999	39.3
1985	123960	33.0
1986	134384	35.1

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

As can be seen from Table 82, CP Air's share of the Tokyo-Hong Kong market fluctuated from 12.7 to 16 percent of the combined market while its major competitor, Japan Air Lines, recorded around 84 percent for the first two periods under review. During the third period (i.e. 1980 - 84) CP Air

accounted for only 5.8% of the combined market share. However, this may not necessarily represent the true magnitude of the competitive status of CP Air in this market. On the Tokyo-Vancouver flight stage, CP Air had a higher market share. The reason for the extremely small overall percentage share is due to the fact that the Tokyo-Hong Kong route is one of the world's busiest, and hence, most of the major international carriers compete in this market. The relatively limited capacity provided by CP Air is reflected in this statistic. It should also be noted that CP Air's involvement in the Tokyo-Hong Kong route was principally to provide flight connections from Vancouver to Hong Kong. Therefore, the Tokyo-Hong Kong route provides secondary flight stage traffic which is traditionally dependent upon the volume of primary flight stage traffic. With this in mind, the smaller percentage share in a total market share context is not surprising. The reduction of flights that require a stop in Tokyo may also be responsible for this decline in share.

In the Hong Kong - Tokyo market, despite an average growth of 5.1% traffic for CP Air, the Canadian carrier was unable to hold onto its share of traffic in this expanding market. As shown in Table 88, traffic for the three selected carriers increased more than twenty times. In 1980, 44,417 passengers were recorded in this sector; the number in 1986 increased to 957,873. However, the highest traffic

TABLE 88

Canadian Carrier's Share of Scheduled Passenger Traffic Between Tokyo and Hong Kong

	CP Air			Cathay Pacific Total	Japan Air Lines Total
	HK-TKY	TKY-HK	Total		
1980	7516	4973	12489	150388	281540
1981	6992	6248	13240	188311	305396
1982	10013	10616	20629	293893	631878
1983	8075	9258	17333	316602	434815
1984	9142	11404	20546	287960	451179
1985	9418	11743	21161	354518	509417
1986	6736	6526	13262	430574	514037

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

TABLE 89

Percentage Share of Scheduled Passenger Traffic Between Tokyo and Hong Kong

Year	Total Traffic	CP Air Share	Cathay Pacific Share	Japan Air Lines Share
1980	444417	2.8%	33.8%	63.4%
1981	506947	2.6%	37.1%	60.2%
1902	946400	2.1%	31.1%	66.8%
1983	768750	2.3%	41.2%	56.6%
1984	759685	2.7%	37.9%	59.4%
1985	885096	2.3%	40.1%	57.6%
1986	957873	1.4%	44.9%	53.7%

Source: Calculated from Table 88.

volume that CP Air carried was recorded in 1985 with 21,161 passengers. This represented only 2.3% of the total passengers carried by the three carriers. Table 89 shows the per-

centage share of traffic between Hong Kong and Tokyo for CP Air and its two major competitors. It indicates that traffic share for CP Air has experienced a decline from the high of 2.8% in 1980 to the most recent 1.4% as measured against the performance of these two major competitors.

8.3.2 The South-Pacific Ocean Region Market

Table 82 shows that in the Honolulu-Vancouver market, CP Air had a majority share of this traffic during the early part of the seventies. Until 1976 CP Air was able to maintain a minimum of 74.8 percent of the passenger traffic. Subsequent to this period, other carriers entered this market to provide at least 40 percent of this sector's capacity. It is interesting to note, however, that the most recent statistics indicate that CP Air has regained its dominant position and gained 86.5 percent of the market in 1984. However, the Vancouver-Honolulu market follows the general trend. The years 1977-1981 saw CP Air's share of the market substantially reduced because of effective competition from other carriers. However, market share statistics in Table 92 shows that CP Air was able to maintain a 75.2% of the total traffic in 1985.

The Honolulu-Nandi market is completely different in terms of its market share trends. CP Air has never been a strong competitor in this market. Qantas controlled a minimum of 39 percent of the market until 1977. In 1983, Air

TABLE 90

Carrier Share of Scheduled Passenger Traffic Between Canada and Honolulu

Flight Stage / Airlines	1982	1983	1984	1985
Vancouver - Honolulu				
CP Air	N.A.	N.A.	162649	134213
Continental	0	0	0	6402
Qantas	0	237	25455	32892
Western	26760	0	0	0
Total	26760	237	188104	178280
Toronto - Honolulu				
CP Air	N.A.	N.A.	25738	35154
Edmonton - Honolulu				
Air Canada	35101	38211	39204	37843
British Airways	20542	0	0	0
Total	55643	38211	39204	37843

Source: Calculated from ICAO, Traffic By Flight Stage, various issues.

New Zealand took over the majority share position. In 1984, CP Air share of the market improved to 39.1% but dropped to 27.9% in 1985.

Table 92 shows that CP Air has been very aggressive in the Nandi - Sydney sector. From the 33% share of market in 1984, CP Air has been able to increase its share to 48.5% in 1985. Although traffic share for Continental also experienced an increase, its magnitude was not as significant as that achieved by CP Air.

TABLE 91

Carrier Share of Scheduled Passenger Traffic Between Honolulu, Nandi, Australia and New Zealand

Flight Stage / Airlines	1982	1983	1984	1985
Honolulu - Nandi				
CP Air	N.A.	N.A.	65953	64077
Continental	29560	29481	35416	38018
Air New Zealand	50691	62526	67329	70188
Qantas	3020	0	0	57067
Total	84948	92007	168720	229350
Nandi - Sydney				
CP Air	N.A.	N.A.	52419	54087
Continental	27039	24213	28735	26986
Qantas	93186	70752	74788	28059
Total	121443	94965	158618	111596
Honolulu - Sydney				
CP Air	N.A.	N.A.	760	1567
Continental	13728	15900	29806	32381
Qantas	141495	128886	138468	152544
Total	227637	173683	184304	195546
Honolulu - Auckland				
CP Air	N.A.	N.A.	N.A.	4371
Continental	49009	49509	53079	87160
Air New Zealand	134346	129591	142433	158334
Pan Am	79834	82479	67751	73480
Total	263189	261579	263263	323345

Source: Calculated from ICAO, Traffic By Flight Stage, various issues.

TABLE 92

Percentage Share of Scheduled Carrier's Passenger Traffic Between Canada, Honolulu, Nandi, Australia and New Zealand

Flight Stage / Airlines	1982	1983	1984	1985
Vancouver - Honolulu				
CP Air (%)	0	0	86.5	75.2
Continental (%)	0	0	0	3.5
Qantas (%)	0	100.0	13.5	18.4
Western (%)	100.0	0	0	0
Toronto - Honolulu				
CP Air (%)	N.A.	N.A.	100	100
Honolulu - Nandi				
CP Air (%)	N.A.	N.A.	39.1	27.9
Continental (%)	34.8	32.0	20.9	16.6
Air New Zealand (%)	59.7	68.0	39.9	30.6
Qantas (%)	3.8	0	0	24.8
Nandi - Sydney				
CP Air (%)	N.A.	N.A.	33.0	48.5
Continental (%)	22.3	25.5	18.1	24.2
Qantas (%)	76.7	74.5	47.2	25.1
Honolulu - Sydney				
CP Air (%)	N.A.	N.A.	0.4	0.8
Continental (%)	6.0	9.1	16.2	16.5
Qantas (%)	62.2	74.2	75.1	78.0
Honolulu - Auckland				
CP Air (%)	N.A.	N.A.	N.A.	1.3
Continental (%)	18.6	18.9	20.2	27.0
Air New Zealand (%)	51.0	49.5	54.1	48.9
Pan Am (%)	30.0	31.5	25.7	22.7

Source: Calculated from Tables 90 and 91.

For the Honolulu - Sydney and Honolulu - Auckland sectors, traffic for CP Air has not been significant. For the Honolulu - Auckland market, because of the fact that CP Air was re-entering this market after a long absence, CP Air had difficulties in establishing and developing its position.

8.4 CANADIAN CARRIER LOAD FACTOR PERFORMANCE: SCHEDULED PASSENGER TRAFFIC

Passenger load factor has important implications for airline operating cost[92] and consequently, will affect its profitability. Passenger load factors are a critical element in airline pricing decisions. For each type of aircraft there is a break-even load factor which airline management observe. The break-even load factor reflects the number of passengers that the aircraft must carried in a market so that the airline will not operate at a loss position. In general, it can be said that the airline is making a profit if the load factor is above its break-even levels.

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[92] For example, a study conducted by ICAO indicates that passenger operating costs in the Asia/Pacific region was 7.2 U.S. cents per passenger-kilometre and 5.6 U.S. cents per passenger-kilometre in the North/Mid Pacific region, which was lower than the world average of 7.5 U.S. cents per passenger-kilometre. But the important point is that for both of these route groups, higher passenger load factor has been realized and the effect of a higher load factor has contributed to a reduction of 0.2 U.S. cents per passenger-kilometre on both route groups. See ICAO, Regional Differences In Fares, Rates And Costs For International Air Transport, 1983, ICAO Circular 193-AT/75, 1984, p.24.

TABLE 93

Analysis of CP Air and Its Competitor's Load Factor

TRAFFIC SECTORS	LOAD FACTOR Period 1 1970-74	Period 2 1975-79	Period 3 1980-84
Anchorage/Vancouver			
CP Air	63%		
Major Competitor	51%		
Market Average	56%		
Anchorage/Tokyo			
CP Air	46%	78%	76%
Major Competitor	42%	60%	66%
Market Average	40%	57%	65%
Tokyo/Hong Kong			
CP Air	42%	44%	62%
Major Competitor	48%	59%	69%
Market Average	41%	52%	66%
Tokyo/Vancouver			
CP Air	53%	69%	72%
Major Competitor	61%	62%	69%
Market Average	48%	65%	69%
Vancouver/Honolulu			
CP Air	68%	67%	77%
Major Competitor	69%	55%	63%
Market Average	61%	63%	74%
Sydney/Honolulu			
CP Air			52%
Major Competitor			55%
Market Average			52%
Honolulu/Nandi			
CP Air	48%	58%	71%
Major Competitor	50%	63%	62%
Market Average	49%	61%	66%
Sydney/Nandi			
CP Air	46%	56%	70%
Major Competitor	56%	64%	65%
Market Average	54%	63%	63%

Source: ICAO, Traffic By Flight Stage, various issues.

Market share and load factor statistics reflect the ability of an airline to capture or attract customers in a particular market. The higher the market share and load factor for an airline in a specific market, the higher the profitability the airline realized.

Of all the market sectors under examination, only two sectors where positive growth in both market share and load factor can be observed for CP Air. These are Honolulu and Nandi, and Sydney and Nandi. The success that CP Air has achieved in these markets cannot be disputed. In other market sectors, while failing to achieve a strong market share performance, CP Air has been successful in improving its load factors. In many instances, they are well above the market average. For example, during the period under review the average load factor for the Tokyo and Vancouver sector was 48%, 65% and 69% for periods 1, 2 and 3 respectively. However, CP Air's load factors during these periods were 53%, 69% and 72% respectively, despite the fact that its share of market had been declining from 75.4% in period 1 to 33.7% in period 3.

8.5 CANADIAN CARRIER PERFORMANCE: NON-SCHEDULED MARKETS

Non-scheduled international passenger traffic represented 30.9% of the total international passenger traffic performed in 1972. This share of traffic has since faced a steady decline for the ten years that followed. Despite the fact

that there were traffic gains during 1982 to 1984, non-scheduled traffic remained unimpressive with only 16.6% share of the total international passenger traffic in 1985. In addition, it should be noted that during 1985, there was a 3.5% growth of the world total international traffic.[93] These statistics reveal that the scheduled market grew at a much faster rate than the non-scheduled segment. The slower non-scheduled growth may be due to increasingly lower real fares charged by scheduled carriers which have gradually closed the gap charged by these two types of carrier and made non-scheduled traffic less attractive.

A special characteristic of the non-scheduled market is the fact that market share performed by specialized charter operators have always been greater than those performed by scheduled carriers. During the past decade, non-scheduled carriers have been successful in maintaining their share with a margin of at least 58 percent, while scheduled carriers had roughly 35 to 45 percent share of the charter market.[94]

For the Pacific Ocean region, however, international non-scheduled air transportation services have never been as important as in other parts of the world. This is especially evident in the North Atlantic region where this type of

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[93] ICAO, A Review of the Economic Situation of Air Transport, 1972 -1982," Circular 177-AT/67, 1983, p.17.

[94] ICAO, The Economic Situation of Air Transport, Review and Outlook, 1986, Circular 200-AT/78, 1986, p.20.

service has been an important source of passenger traffic. The primary reason is that traffic flows within the Pacific Ocean region were not as heavy as on the North Atlantic during the sixties and charter traffic requires a high proportion of the available seats to be occupied. Another explanation is that fares offered by the scheduled carriers were already at a relatively lower level within this region and that this has affected the growth of the non-scheduled market. The fact that most carriers operating on these routes are not members to the International Air Transport Association, which sets minimum fares level, would tend to support this argument.

One of the world's leading non-scheduled carriers is Canada's Wardair. In 1978, Wardair ranked sixth among the world's biggest non-scheduled carriers measured in terms of size, with an impressive performance of almost 3.8 billion passenger-kilometers. The airline's 5.4 billion passenger-kilometers performed in 1981 helped Wardair became the second largest non-scheduled carrier, ranked only behind the Britain's Britannia. Wardair was able to establish a strong position as a non-scheduled carrier and has remained one of the leading operators since. In 1984, about 13% of the world's total non-scheduled traffic (5.8 billion passenger-kilometers) were performed by Wardair.[95]

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[95] Calculated from ICAO, The Economic Situation Of Air Transport, Review and Outlook, 1986, Circular 200-AT/78, 1986, p.23.

TABLE 94

Canadian Non-scheduled Traffic Performance

Year	Code	CANADIAN ORIGIN	FOREIGN ORIGIN	TOTAL CHARTER	TOTAL SEATS AVAIL.	LOAD FACTOR	REVENUE ($'000)
1976							
	AC	173817	45641	219458	251198	87	23776
	CP	64526	47031	111557	139307	80	13658
	WARD	482965	62293	545258	699025	78	80966
	CDN	1444786	165903	1610689	1970389	81	173690
1980							
	AC	127356	19036	146392	175499	82	24788
	CP	166766	117125	283891	348905	80	55316
	WARD	933371	270954	1204325	1451392	83	218410
	CDN	1963474	451632	2415106	2881676	83	373260
1982							
	AC	413975	2464	416439	542455	74	53518
	CP	286867	126622	413489	502717	83	83626
	WARD	870078	287527	1157605	1535594	75	246627
	CDN	2314293	445268	2759561	3474147	79	485453
1983							
	AC	289363	1490	290853	399849	72	40398
	CP	331476	90862	422338	493015	85	73982
	WARD	973113	196302	1169415	1400821	84	220467
	CDN	2481604	292050	2773654	3337115	83	453489

Source: Statistics Canada, International Air Charter Statistics, Catalogue 51-003, Quarterly, various issues.

However, Canadian non-scheduled operations on the Pacific Ocean Area were minimal. In 1979-80, only 471 passengers were carried on a non-scheduled basis by Wardair. Another carrier that had a charter operation on the Orient route connecting Canada and Hong Kong was Air Canada. The airline picked up 248 passengers from Hong Kong destined for Montreal in 1980-1981, while Wardair picked up 499 passengers des-

TABLE 95

Percentage Share Distribution of Canadian Non-scheduled Traffic

Performed By Foreign and Canadian Carriers

	AS PERCENTAGE OF TOTAL		AS PERCENTAGE OF CANADIAN	
	REVENUE SHARE	PASSENGER SHARE	REVENUE SHARE	PASSENGER SHARE
1976				
AC	9.4	10.2	13.7	13.6
CP	5.4	5.2	7.9	6.9
WARDAIR	32.0	25.2	46.6	33.9
1980				
AC	6.1	5.7	6.6	6.1
CP AIR	13.6	11.1	14.8	11.8
WARDAIR	53.6	47.1	58.5	49.9
1982				
AC	10.6	14.5	11.0	15.1
CP AIR	16.5	14.4	17.2	15.0
WARDAIR	48.8	40.3	50.8	41.9
1983				
AC	7.8	9.4	8.9	10.5
CP AIR	14.2	13.7	16.3	15.2
WARDAIR	42.4	37.9	48.6	42.2

Source: Calculated from Table 94.

tined for Montreal and 476 passengers destined for Toronto. In 1980, 32 special charter flights were performed by CP Air which carried almost ten thousand new Canadians under the Canadian refugee charter program from Asia[96]

During 1981, a total traffic of 2,270 passengers was recorded[97] in charter operations for Air Canada from the

[96] See CP Annual Report, 1980, p.5.

[97] This included 908 passengers from Hong Kong, 454 passen-

Pacific Ocean region. Meanwhile, total foreign origin traffic chartered into Canada totalled 4,857 passengers. Therefore, Air Canada's charters from the Pacific Ocean region represented 46.7% of total Canadian charters from the region. There was no charter traffic by a Canadian carrier reported for the year 1981-1982.

From 1976 to 1983, total Canadian non-scheduled passenger traffic increased by fifty per cent (See Table 94). The growth rate of the Canadian international non-scheduled air travel market as a whole has been fairly steady, while growth on the Canadian Pacific Ocean region has experienced substantial fluctuations and the overall results are not all that impressive. Traffic only grew from 6,278 passengers in 1970 to 37,848 in 1981, that is, by a factor of 6.02.

In terms of Canadian carriers performance, Wardair has consistently provided roughly fifty percent of Canadian international air charter services. During the four years under review, the largest market share that Wardair enjoyed was in 1980 when 58.8% of revenues generated from the total Canadian share went to them. This represented 49.9% of the total passenger market share by Canadian carriers. Air Canada's share of the market has contracted somewhat since the high of 13.7% recorded in 1976 in revenue terms and its 1983

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gers from Malaysia, 227 from Singapore and 681 passengers from Taiwan resulted in a total of 2,270 charter passengers from the Pacific Ocean region. Source: Statistics Canada, International Air Charter Statistics, 1981. Catalogue 51-003. p.13.

revenue share was only 8.9% of the total Canadian market share. On the other hand, CP Air increased its share to more than double its 1976 share as measured in both terms, an increase from 7.9% to 16.3% in revenue terms and 6.9% to 15.2% in passenger seats available. The strength of Canadian performance in the overall non-scheduled market puts the Pacific Ocean region performance in striking perspective.

8.6 CANADIAN CARRIER PERFORMANCE: CARGO MARKETS

International cargo traffic has experienced significant growth during the past decade. Between 1976 and 1981, an average annual rate of growth of 8.1% in international cargo traffic were recorded for IATA members. For the same period, the average growth for the North Pacific was 4.2%, while 16.6% has been observed for the South Pacific market. Directional imbalances in international cargo traffic led IATA to release figures according to directional flow and marked differences in the average annual rate of growth can be noted. For example, eastbound North Pacific traffic shows 0.1% rate of growth while westbound North Pacific traffic indicates 10.2% growth. Similarly, in the South Pacific, a 10.4% growth rate was recorded for eastbound traffic and 19.4% for the westbound.[98]

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[98] IATA, Passenger & Freight Traffic, Estimates/Forecasts 1982 & 1983 Economics And Industry Finance Division, September, 1982, Table 3.

The Pacific Ocean region accounted for more than one-quarter of the world's international scheduled freight tonne-km in 1984. A 17.3 percent average annual growth was recorded for this region. About 30% of the 2 million tonnes of freight performed was traffic between North America and the region.[99]

Cargo traffic performed by Canadian carriers in this region was mainly the result of combined scheduled passenger/cargo operations. All freight scheduled services have not been introduced in this market mainly because CP Air has no freighter aircraft. Although Air Canada maintains a fleet of freighter aircraft and has expressed an interest in operating in this region, it was prevented from doing so due to a lack of traffic rights.[100] Fearing that Air Canada might manage to get into this market, CP Air was quick to arrange an agreement with the United States based Flying Tiger Airlines to provide such services. However, upon objections raised by Air Canada, CP Air was unable to implement the agreement effectively.[101] As a result, freight traffic performed by Canadian carriers in the Pacific Ocean region was mainly the result of CP Air's belly cargo. Table 96 summarizes the market share of CP Air's cargo traffic in this region.

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[99] ICAO, ICAO Bulletin, July, 1986, p.26.

[100] The Globe And Mail, 8 August, 1986, p.B2.

[101] The Globe And Mail, 29, October, 1986, p.B5.

Table 97 shows the scheduled cargo traffic between Hong Kong and Vancouver for the period 1980 to 1986. A similar trend emerged when Cathay Pacific began its operations within this sector. Since 1984, CP Air has suffered a continuous decline in cargo traffic and by 1986, CP Air only performed 23.2% of the total traffic for this sector.

Table 98 shows the market share distribution of the selected carriers operated on the Hong Kong and Tokyo sector. It shows that market share for CP Air cargo services has been declining from 15% in 1980 to only 1% in 1986.

TABLE 96

Canadian Market Share For Scheduled Freight Traffic In The Pacific Ocean Region

TRAFFIC SECTORS	Market Share Period 1 1970-74	Period 2 1975-79	Period 3 1980-84
Tokyo/Vancouver			
CP Air share	57,8%	61.9%	0.8%
Major Competitor	42.2%	38.1%	0.2%
Vancouver/Tokyo			
CP Air share	100.0%	51.7%	50.7%
Major Competitor	0.0%	48.3%	49.3%
Vancouver/Honolulu			
CP Air share	98.8%	86.8%	32.9%*
Major Competitor	2.9%	17.7%	25.0%
Honolulu/Vancouver			
CP Air share	94.9%	65.3%	64.1%
Major Competitor	6.3%	46.3%	35.8%
Sydney/Honolulu			
CP Air share	N.A.	N.A.	7.0%
Major Competitor	N.A.	N.A.	65.6%
Honolulu/Nandi			
CP Air share	1.8%	4.1%	14.1%
Major Competitor	49.0%	44.5%	29.2%
Nandi/Honolulu			
CP Air share	9.2%	18.3%	28.6%
Major Competitor	31.6%	42.6%	38.6%
Sydney/Nandi			
CP Air share	5.2%	9.6%	30.8%
Major Competitor	52.1%	74.2%	55.4%
Nandi/Sydney			
CP Air share	1.5%	4.0%	22.5%
Major Competitor	44.9%	57.2%	28.8%

Source: Figures are estimated from ICAO, Traffic By Flight Stage, various issues.

* Note: In 1984, freight traffic share for CP Air was 93.7%.

TABLE 97

Scheduled Freight Traffic Between Hong Kong and Vancouver, 1980-1986

Year	CP Air		Cathay Pacific		Total
	Freight	(%)	Freight	(%)	
1980	1113422				
1981	1206315				
1982	1391280				
1983	1210857				
1984	809010	43.7	1041699	56.3	1850709
1985	751892	37.5	1252026	62.5	2003928
1986	575287	23.2	1907000	76.8	2482287

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

TABLE 98

Percentage Distribution of Scheduled Freight Traffic Between Hong Kong and Tokyo, 1980-1986

Year	Total Freight	CP Air	Cathay Pacific	Japan Airlines
1980	30983813	5%	50%	45%
1981	33454725	4%	42%	54%
1982	35041944	5%	33%	62%
1983	36718399	4%	30%	66%
1984	41844208	4%	33%	63%
1985	46918822	4%	32%	64%
1986	64411894	1%	45%	54%

Note: Total freight traffic reflects only total volume carried by the three carriers under review. Traffic operated by other carriers on the route is not included in the total.

Source: Calculated from "Report On Civil Aviation -- Hong Kong," Annual Review of Civil Aviation In Hong Kong, 1979-1987 issues.

8.6.1 The Pacific Ocean Region Market Via Europe And South Asia

Market share performance of various airlines operating to the Pacific Ocean region via Europe and South Asia are sum-

TABLE 99

Carrier's Share of Scheduled Passenger Traffic Between Britain, India and Singapore

Flight Stage / Airlines	1982	1983	1984	1985
London - Bombay				
Air Canada	0	0	0	35141
British Airways	154168	140095	146485	188615
Air India	N.A.	13006	N.A.	N.A.
Singapore Airlines	0	53601	72042	15556
Total	154168	212702	218527	266143
Bombay - Singapore				
Air Canada	0	0	0	38245
Air India	N.A.	52127	N.A.	31774
Qantas	0	81592	107100	105057
Singapore	71031	73098	76275	73806
Total	176772	375838	292895	310668

Source: Calculated from ICAO, Traffic By Flight Stage, various issues.

marizes in Table 99. It shows the Canadian traffic share for points operated between London and Singapore via Bombay. With respect to the initial flight stage from Canada, Air Canada operated from Calgary, Edmonton, Vancouver, Toronto and Montreal. It achieved a monopoly on the Calgary - Lon-

don and Edmonton - London routes when British Airways suspended its services in 1983 on these routes. For the Vancouver - London route, Air Canada has performed relatively well and its market share has typically been around 63% to 75%. British Airways has been very aggressive in the Toronto - London sector; from the 41.4% share of market performed in 1982, British Airways was able to increase its share to 50.6% in 1985. In the Montreal - London sector, market share for British Airways has always exceeded it competitor, Air Canada. Gradually, however, Air Canada has regained its relative importance in this sector. In 1982, Air Canada had 34.0% share of the traffic while British Airways obtained 66.0% and, in 1985, their share was 42.2% and 55.5% respectively.

The traffic from London to Bombay were performed on the basis of fifth freedoms obtained from the British. From Table 100, it can be noted that Air Canada had a 13.2% share of market from London to Bombay. Although this number was significantly below that performed by British Airways, the airline has been able to carry over twice as much traffic as Singapore airlines, another fifth freedom carrier operating on the same route. It is interesting to note also that Singapore Airlines has traditionally been known as an aggressive carrier. The fact that Air Canada has out-performed Singapore Airlines on the same footing clearly demonstrates Air Canada's strength as an airline. Similarly, in the Bom-

TABLE 100

Percentage Share of Scheduled Carrier's Passenger Traffic Between London, Bombay and Singapore

Flight Stage / Airlines	1982	1983	1984	1985
London - Bombay				
Air Canada (%)	0	0	0	13.2
British Airways (%)	100.0	68.7	67.0	70.9
Air India (%)	N.A.	16.3	N.A.	N.A.
Singapore Airlines (%)	0	25.2	33.0	5.8
Bombay - Singapore				
Air Canada (%)	0	0	0	12.3
Air India (%)	N.A.	13.9	N.A.	10.2
Qantas (%)	0	21.7	36.6	33.8
Singapore Airlines (%)	40.2	19.4	26.0	23.8

Source: Calculated from Table 99.

bay - Singapore market, Air Canada performed 12.3% of the total traffic during its first year of operation in 1985. Although the traffic performed was about 20% below that of Qantas and 10% below that of Singapore Airlines, Air Canada's performance was 2.1% above that of Air India, a host country carrier from India which was well established in this market. Therefore, Air Canada's operation into the Pacific via the Atlantic can be viewed as successful.

In addition, it should be noted that although Air Canada operated in the Frankfurt - Delhi sector, the airline did not have traffic rights to either India or Singapore from Frankfurt. Therefore, Air India was the only airline that offered scheduled passenger services from Canada to Singapore Via Delhi.

8.7 CONCLUSION

Three major market types have been identified in the international air transportation industry: (1) scheduled passenger market, (2) non-scheduled passenger market and (3) cargo market. Of these three major market types, scheduled passenger market has been the most important type of all for Canadian carriers operated in the Pacific Ocean region.

This carrier performance analysis is done both by market share and load factor. Market share performance is of strategic importance to the development of firms in oligopolistic markets. It also has public interest implications in the field of international air transport because a national carrier's traffic strengthens a nation's balance of payments problem. It is possible, of course, that market share is increased unduly at the cost of load factors (and profitability). Ideally, both aspects of performance should be positive. When market share performance is weak, strength in load factor performance may act to support carrier profitability. Such profitability, or loss minimization, may not have long-run viability and may reflect defensive and restrictive carrier conduct.

Performance of the scheduled passenger market has been analysed according to two major geographical regions; namely, the North Pacific Ocean region and South Pacific Ocean region. Established route sectors for each region is fur-

ther identified and analysed. The data reveal a weak market share performance by CP Air in the North Pacific, characterized by a continuous decline in share for all sectors. The only exception to this is the Tokyo - Hong Kong sector where share of CP Air's market has increased somewhat during the 1975-1979 period but experienced a rather sharp decline during the later period under review. Comparatively speaking, market share results for all market sectors were well below that of its major competitor with the exception of Tokyo - Vancouver where CP Air has a significantly larger share than the major competitor up until 1980. The South Pacific region shows a gradual improvement in market share performance despite the fact that these are relatively small market share in comparison with CP Air's major competitor. This is not without exception, however. In fact, quite opposite to the general performance observed in other sectors, CP Air's market share in the Vancouver - Honolulu sector has been significantly higher than its major competitor but was experiencing decline over the period under review.

Growth trends for CP Air in the North Pacific have been mixed. Early in the period under review up until 1980, positive growth can be observed in both Tokyo - Hong Kong and Tokyo - Vancouver sectors, while declining growth was being observed in Anchorage - Tokyo sector. Subsequent to 1980, all sector experienced decline in traffic growth. In addition, all growth were significantly lower than its major

competitor. As for the South Pacific, positive growth was recorded in the earlier period with a decline after 1980 for all sectors. With the exception of the Vancouver - Honolulu market, all sectors have a higher growth rate.

For both North and South Pacific regions, performance of CP Air's load factor has been impressive. In fact, not only has the trend of load factor been steadily improving, it has always exceeded the market average with the exception of the Tokyo - Hong Kong sector. However, CP Air also experienced load factors that were below its competitor's level in Vancouver - Honolulu sector before 1975, and before 1980, its load factors for both Honolulu - Nandi and Sydney - Nandi sectors were well below market average.

Based on this analysis, the conclusion can be reached that traffic growth in South Pacific region has enabled CP Air to improve its passenger load factors while expanding its share of the total market, making these sectors more profitable during the later period under review. For the North Pacific region, however, even though CP Air has not shown aggressiveness in capturing a bigger share of the market, higher load factors is indicates success in improving profitability. It is therefore, not surprising that CP Air has recently announced to increase its efforts and market presence in this region.

As far as non-scheduled services are concerned, it has been noted that no major efforts has been made by CP Air in the Pacific Ocean region. Limited non-scheduled passengers services were offered by Wardair, but the number has not been impressive.

Cargo operation in the Pacific Ocean region has been limited to belly space transport. Scheduled all cargo freight transport has not been operated by either Canadian carriers, but limited non-scheduled cargo has been performed by Air Canada to China.

Finally, the respectable 12.3 percent market share with an average load factor of 60 percent achieved by Air Canada during the first year of operation into the Pacific Ocean region via the North Atlantic completed the current analysis. In sum, this analysis of Canadian carrier performance in the Pacific Ocean region has shown that:

1. Scheduled traffic performance by CP Air, according to market share analysis, showed some strength but deteriorated under competitive pressure later in the 1970-1985 in important markets.
2. CP Air's load factor performance was better than its market share performance but this may, in part, reflect restrictive provision of capacity.
3. It was left to Air Canada to put pressure on CP Air to activate the bilateral with China.

4. Air Canada showed considerable initiative in reaching Singapore in the Pacific Ocean region but its route was lengthy and indirect.
5. Performance of Canadian air cargo carriers in the region was relatively weak.
6. Non-scheduled traffic performance of Canadian carriers was also disappointing.

Chapter IX

CANADIAN AIR TRANSPORT PERFORMANCE IN PERSPECTIVE

While it is not a primary objective of this thesis, it is illuminating to identify the factors that are of strategic importance in explaining why Canadian air transport performance, while not without merit, fell somewhat short of what might have been expected. A review of these factors is the purpose of this chapter. This analysis will have two somewhat interrelated components. The first will discuss the conduct of the carriers and the second, the role of the Canadian government.

9.1 THE CONDUCT OF THE CARRIERS

Chapter VIII provided a detailed analysis and evaluation of Canadian carrier performance in the Pacific Ocean region. In this discussion of the conduct of the Canadian carriers, four distinct, though interrelated, elements emerge. First, there is the management of carrier operations. Second, there is aircraft fleet planning and development. The third element is the adequacy of carrier resources related to system responsibilities. Finally, strategic considerations that are largely, or entirely, beyond a carrier's control should be noted. In this section, primary attention will, of course be devoted to CP Air.

Operating cost control in airline operation requires precision and attention to detail. Certain carriers operating in the Pacific Ocean region, such as Japan Air Lines and Singapore Airlines, are outstanding in their cost control. Some questions can be raised about CP Air's conduct with respect to costs. In the context of more general critical comment by Goldenberg on this aspect of CP Air's economic, the following point was made:

> CP Air's use of orange paint on its planes not only adds to its maintainance bills, but also increases fuel consumption by 0.5 percent. This ... amounts to about 750,000 gallons costing $1 million at 1981 prices. Eastern Airlines, for example, shaved its annual fuel and maintainance bills by $2.5 million as a result of stripping the paint off its planes and polishing the silver metal instead.[102]

At the end of the period under review, the president of CP Air, Donald Carty introduced a major strategy to improve aircraft utilization, improve the efficiency of flight training, reduce inventories, lower the cost of engineering, maintenance and handling, and offer more non-stop service.

With respect to product differentiation by special service to promote business class travel, CP Air's activity appears to have been more defensive than aggressive. For example, CP Air's Empress class service was introduced to rival Cathay Pacific's Marco Polo Class of service. Also, CP Air introduced a new business class of service on the route between Canada and Japan in 1983 with the support of

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[102] Susan Goldenberg, "Canadian Pacific -- A Portrait of Power", Methuen, Toronto, 1983. p.146.

considerable promotion, but this move should be placed in the context of a traffic decline in the preceding three years. It did, however, have a favourable impact on traffic at the time of introduction.

In another area of competition, flight frequencies, CP Air's conduct appears to have been perverse. In response to the entry of Cathay Pacific on the Hong Kong - Canada route, CP Air reduced its flight frequency from three to two per day.

CP Air did make a serious effort in the charter market. It entered the charter market during the 1970s. In 1973, Transpacific Tours Limited (TPT) was established in partnership with a Japanese firm to package tours and handle traffic primarily traffic originating in the Orient destinated for Canada. In 1976, CP Air formed a separate charter division as passenger charter demand expanded. A year later, CP Air acquired total ownership of TPT and, in 1979, established CP Air Holidays for operation of its own charters. In 1984 CP Air Holidays launched a joint venture with Viva Holidays of Australia to promote and sell Viva's vacation programs in the Canadian market. However, as has been seen in Chapter VIII, these efforts met with limited success and CP Air withdrew from charter activity in this region in 1984.

Cargo operation never seems to have been a high priority matter for CP Air in the Pacific Ocean region, even though it had long held rights for cargo as well as passenger operations. Industrialization in the region would appear to have presented opportunities but traffic promotion either by price or non-price methods has not been apparent nor was any action taken to use a specialized aircraft.

It is interesting to note that Air Canada, in addition to its aggressive development of its round-about route to Singapore, conducted two charter flights from Hong Kong late in 1985. These flights resulted from the need of a Hong Kong freight forwarder to make Christmas-season clothing shipments to Texas. Air Canada provided a freighter aircraft from its specialized fleet for this purpose. Subsequently, Flying Tiger Lines of the U.S., an all-freight airline, protested and Air Canada's routing was restricted by the inclusion of Toronto.

Finally, it should be noted that partial productivity measures for 1983 and 1984, given in Chapter VI, showed that Japan Airlines, Qantas, Singapore Airlines, Cathay Pacific, Northwest Orient, and Pan Am, were well ahead of CP Air and Air Canada according to data based on international operations. Partial productivity measures must be treated with care but the figures are, nevertheless, an important operating indicator.

CP Air's long-range jet aircraft fleet development, which is fundamental to international traffic, began late in 1959 with an order for six standard Douglas DC-8 aircraft. Five DC-8-63s, an aircraft type specially designed for long range expanded passenger and cargo capacity, were acquired about a decade later. All DC-8s were retired in 1981 and 1983. The airline's wide-body fleet began with Boeing 747s. Of the first two acquired in 1973, one was used on Pacific service. Two more were added to CP Air's fleet in 1974. In 1979, two DC-10-30s were purchased and several more were added subsequently.

Against the background of strong international traffic growth during the mid-seventies, the airline planned for a major and ambitious fleet expansion program aiming at capturing its traffic and enlarging its market share. However, a variety of circumstances, both internal and external, led to disappointments. Air transport expansion was harassed by high fuel costs and then by high interest rates. CP Air's problems with market share expansion led eventually to fleet rationalization by the end of the period under review. In 1985, CP Air sold its complete fleet of Boeing 747s to Pakistan and brought four more DC-10's. The sale of Boeing 747 parts and maintenance equipment brought in millions of dollars in cash for CP Air.

CP Air's eventual reliance on DC-10s for wide-body service did rationalize and simplify its fleet. The DC-10,

which is smaller than the 747, offered the potential of increased flight frequencies. However, it is inferior in range and in other economic characteristic such as break-even load factor. For long-range use, the DC-10-30 required extended-range fuel tanks in an attempt to provide non-stop service. Such a device is unfavorable to the payload - overall weight ratio and, in CP Air's case even the extra tanks could not always deliver the sought-after non-stop service.

The next element in strategic airline conduct to be considered is the adequacy of carrier resources related to system responsibilities. Throughout its history, CP Air has aggressively sought system extension in order to achieve major airline status in a Canadian system, which began with an Air Canada (TCA) monopoly. This led CP Air to grasp the chance to serve the Australia route in order to get a major international link. It was fully recognized that this entry into the Pacific Ocean region would put pressure for many years on the airline's resources because of the low-traffic, long-range character of the routes. By 1970, CP Air had been able to extend its international network to Europe, Lain America and additional routes in the Pacific Ocean region. Statistics provided in table 80 in Chapter VIII puts CP Air's international traffic in perspective.

Meanwhile, in Canada, CP Air had gained recognition as alternative airline to Air Canada in Canada's domestic sys-

tem. The transcontinental system had initially been an Air Canada monopoly. However, government policy was modified and CP Air entered the system and eventually became a full participant through a series of phased increasing market-share limits. The seventies were an important period of progress when CP Air was allowed to improve its position successively in 1970, 1974, 1977 and 1979.

These system expansions put heavy demands on CP Air. The Canadian Pacific conglomerate, of which CP Air was a part, was bound to react with caution to the financing of the expansion of CP Air, especially for Pacific Ocean region purposes, when it had had to absorb losses for many years. Also, market share expansion by CP Air encountered heavy costs of rivalry. In particular, Air Canada countered CP Air's efforts in Canada by strong price competition. To sustain its development in the Pacific Ocean region, it is not surprising that CP Air appears to have found itself faced with financial problems.

The magnitude of CP Air's talk of system expansion can be seen from the fact that CP Air ranked 20th among major international scheduled airlines in terms of tonne-kilometers performed in 1969 but ranked 30th in 1979. Air Canada ranked 12th in 1969 and 13th in 1979. By 1985 Air Canada ranked 14th, with Japan Air Lines and U.S. carriers, including United, Pan Am and Northwest Orient, in the top ten. Singapore Airlines had risen to 15th and Qantas ranked

20th. The Pacific Ocean region was clearly much too competitive for CP Air to cope with.

Strategic circumstances which were largely, but not entirely beyond airline control, form the fourth component of the explanation of CP Air's conduct in the Pacific Ocean region. The directional nature of traffic flow, dictated by relative population size, relative economic expansion, and the priority of the region in national economics, has created fundamental problems for CP Air. It is well recognized in international air transport that carriers of the country of origin for traffic have an advantage in capturing this traffic. This problem has been especially acute in cargo traffic but also affects other airline traffic. Remedies are more difficult to achieve than, for example, in the U.K. where there are deep-seated economic and social links of long-standing.

Second, it should be noted that the labour costs of Asian and Australasian carriers form a lower proportion of total operating costs than they do for North American carriers. Doganis, for 1982, shows the first group at an average of 16 percent while the North American group is at 35 percent. More specifically, the percentage for Qantas is 27 percent and for Japan Air Lines, 24 percent while Air Canada's percentage is given at 36 percent.[103] A separate estimation for

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[103] Rigas Doganis, Flying Off Course -- The Economics of International Airlines, George Allen & Unwin, London, 1985. p.90.

CP Air, on the basis of its Annual Report, gives a percentage of 32 percent. While productivity differences explain some of the discrepancies, differing national wage rates probably contribute to this competitive problem for North American carriers.

9.2 THE ROLE OF THE GOVERNMENT

The central question to be addressed in explaining the role of the Canadian government's air transport policy in the Pacific Ocean region in the 1970 - 1985 period is the way in which it worked to promote air transport system development in support of Canada's economic interests and its strategy in support of Canadian air transport industry development. The two aspects of this question direct this discussion towards government bilateral agreements and government policy on carrier choice. These two issues are inter-related.

Important conclusions about air transport in the Pacific Ocean region include the following:

1. The basic determinants of air transport activity have been highly supportive to expansion in the period under review. They include industrial and trade development and the rise of tourism backed by strong population growth.

2. Economic nationalism in a variety of forms has promoted strong air transport rivalry in the region.
3. Air transport development by a variety of national airlines, in Asia, Australia, and the United States, has been aggressive and competitive. The airlines vary considerably in character of operation.
4. United States development of multiple gateways and carrier designations has been competitive for Canadian based air traffic.

In general, the Pacific Ocean region has seen a relatively rapid evolution into a major world regional air transport theatre of operation. It has considerable variety and complexity in its passenger and cargo markets and very competitive conditions for air transport operations.

Canada has extended the scope of its system of bilaterals in the period under review. Of major importance has been the Canadian government's work to establish links with the Asian mainland in the Pacific Ocean region and to provide for penetration of the Southeast Asia sector of this region. More specifically, the bilateral with China, and the work towards the bilateral with Korea should be noted. In Southeast Asia the new U.K. bilateral linked with the bilateral with India provided a system for Air Canada to reach Singapore, albeit by a roundabout route. Subsequently a bilater-

al was concluded with Singapore to provide a better link. Also, the U.K. bilateral provided "beyond" freedom links to Bangkok, Jakarta and Manila; these were, however, rather limited in their provisions. Also, in the South Pacific sector, the New Zealand bilateral was activated. These were important strategic moves to provide a more substantial Canadian traffic system in the Pacific Ocean region.

The Canadian government chose to continue its "division of the world" policy in the period under review. Carrier selection is a government responsibility in any event in the bilateral system of international air transport. Further, the "division of the world" system would appear to make basic sense in terms of the effective use of Canadian air transport resources. Bilateral routes involve small number rivalry with foreign carriers and, since Canada's air transport system is very widespread, economy of resource use is very important. Market specialization by the "division of the world" policy for carrier system development makes general sense. The main question about the role of the Canadian government in carrier choice is concerned with the application of the "division of the world" approach.

In the evolution and application of its "division of the world" policy, the Canadian government has had alternatives. At the time of the policy's establishment, Canada had two international carriers in operation, Air Canada and CP Air. In the major Canadian overseas market, both carriers were

operating to Europe while CP Air had all the Pacific Ocean traffic. One alternative would have been to confine Canadian participation in Europe to Air Canada, leaving the Pacific Ocean markets in the hands of CP Air. This would have simplified Canada's European system for scheduled traffic development but would also have conserved CP Air's resources for its Pacific Ocean region, as well as a domestic, system development. It also would carry the risk of a loss of initiatives by Canadian carriers if the European traffic were left to one carrier.

A second alternative would have used Air Canada directly in the Pacific Ocean region along with CP Air while the European two-carrier policy was continued. Based on the "division of the world" principle, the two carriers would have different systems in the Pacific Ocean region, analogous to the pattern established in Europe. This pattern would have provided a maximum range of carrier system initiatives for Canada based on international rivalry while minimizing internal Canadian rivalry, as intended in the "division of the world" policy. It would also have lessened the demands placed on CP Air resources in the Pacific Ocean region.

A third alternative would required the use of a two-carrier policy for Europe and, essentially, a single carrier policy for the Pacific Ocean region. The continuation of CP Air's virtual monopoly of Canadian carrier operation in this

region appears to have limited Canadian carrier system development. It has confined carrier initiatives to one carrier, the smaller of the two.

The third alternative was the one used in the period under review. In terms of a balance of advantages, considered against the backdrop of the dramatic changes in the Pacific Ocean market in this period, the second alternative would appears to have the most merit. It was, in fact, chosen subsequently. Government policy in carrier selection does not appear to have fundamentally wrong. Rather, the adjustment of this type of policy application was too slow.

Chapter X

CONCLUSION

This economic analysis of Canadian airline development and air transport public policy in the Pacific Ocean region in the 1970 - 1985 has four main components. Following an introductory statement, Chapter II and Chapter III respectively present general airline economics and the institutional framework for international air transport in order to provide some basic knowledge for this study. The second component, Chapter IV, Chapter V, Chapter VI and Chapter VII, present material which is specific to the Pacific Ocean region. Canada's bilateral air agreements and public policy on carrier designation are given in Chapter IV. Chapter V analyses the demand, supply, price and output conditions operating in the region. In Chapter VI, a systematic review is conducted of the climate of air transport rivalry and relationships which have developed in the region. Included in this chapter is a review, by nation; of bilateral agreements and the international carriers operating in Pacific Ocean markets. Chapter VII gives information on the character and development of Canadian traffic in the Pacific Ocean region. It includes a discussion of traffic diversion via the United States. Chapter VIII and Chapter IX make up the third component. In Chapter VIII a systematic analysis is

conducted of Canadian air carrier performance in the Pacific Ocean region. This includes market share analysis done by markets and by traffic type, i.e., scheduled, non-scheduled, and cargo. A load factor analysis of Canadian carrier performance for the important scheduled market classification is also included on a sector by sector basis. These components are then brought to a focus in Chapter IX where carrier conduct and the role of the Canadian government are discussed. Finally, the results of the thesis are reviewed and comments are offered on their implications.

Three principal questions have been addressed in this thesis which covered all of the important aspects of Canadian commercial air transport operations in the Pacific Ocean region from the period 1970 to 1985.

First, with respect to the nature and the evolution of Canadian commercial air transport participation in airline traffic in the Pacific Ocean region, this study revealed that:

1. Canada has been an important participant in international commercial air transport throughout the period under review. Almost half of all the Canadian scheduled traffic was performed on an international basis. The Pacific Ocean region share of this Canadian international scheduled traffic rose from 2.35 percent in 1970 to 6.22 percent in 1984.

2. The Pacific Ocean region is an important and increasingly significant region for airline activity, as traffic growth in this region has shown by far the greatest percentage increase among the top regional markets. In 1970, only 7.8 percent of the world's airline traffic were accounted for by the Asia/Pacific region, by 1985, this number has increased to represent a share of 17.7% percent of the world's scheduled traffic. It is noteworthy that this percentage share has risen from just under 9 percent of that of the largest market region to almost 50 percent.
3. The conduct of air transport operations has been conditioned by national considerations and by the diverse character of the carriers serving the region. This study revealed that countries in the Pacific Ocean region have experienced significant economic growth, in addition, favourable trends that are important elements in promoting air transport growth including increases in population, rising real income per capita and strong growth of industrial output have also been observed in this region. Initiatives provided by the region's national governments has helped to create many strong carriers in the region.
4. During the period under review, carriers in the Pacific Ocean region has shown significant traffic growth and impressive performance results. Many carriers from this region have developed to become top

carriers of the world with the help of long-range jet aircraft and innovative marketing strategies.

5. The proliferation of trading activities had resulted not only in an increase of passenger traffic, but also in a dramatic increase in cargo traffic.
6. U.S. deregulation has, through additional gateways and its stimulus to the traffic promotional efforts of U.S. carriers has resulted in the the diversion of a significant volume of Canadian traffic to the U.S.

Second, the performance analysis of the Canadian government in the development of air transport was done in Chapter IV. It revealed that:

1. the Canadian government had been effective in extending and improving Canada's Pacific Ocean region network for air transport through new, and major revisions of existing, bilaterals. The bilateral network for Canadian carriers was substantially extended in the period under review.
2. With respect to the government's ability to repair flaws in the existing bilateral agreements, problems with the Japanese and New Zealand agreements suggested that Canada has not been as successful as one might have hoped.
3. The Canadian government "division of the world" policy, while not challenged as a suitable policy, has had disappointing results in its application. Net-

work development has not been fully exploited by the assigned carrier, CP Air, and CP Air's performance on existing routes has not been fully satisfactory.

Third, Canadian carrier performance has been reviewed in terms of market share and load factors. This performance analysis revealed that:

1. The market share performance in scheduled passenger traffic has been generally inferior to its major competitors and has suffered further decline except in isolated cases.
2. Charter activity by CP Air was sustained through most of the period but, after very limited success, was terminated.
3. CP Air's cargo traffic performance has been weak.
4. Load factor analysis of CP Air's performance gave more encouraging results. However, while load factor performance is supportive of airline profitability, it does not offset the long-run implications of loss of market share.
5. CP Air has not been aggressive in exploiting new bilateral opportunities.
6. Air Canada did succeed in building a multiple-bilateral linkage with Singapore and in attracting interest from Hong Kong in cargo shipment as a result of Air Canada's reputation in air freighter fleet operation.

This thesis has certain implications for Canadian air transport development in the Pacific Ocean region. They involve both public policy and carrier operations.

First, while the "division of the world" policy is useful in the environment of international air transport, its application needs attention. Government allocation of routes to carriers is fundamental to the economics of resource allocation in international air transport. For successful dynamics, the application of this policy needs to be both realistic in terms of regional route assignments and responsive to changing conditions. The Pacific Ocean region is very complex and is an area of strong growth and substantial growth potential. The policy of single-carrier use, and the smaller carrier at that, has been unrealistic. Given the significant change in competitive conditions and the performance problems of CP Air in the period under review, it is clear that adjustment in the application of the policy was too slow. Subsequent to 1985, a change to a two-carrier policy was made and this seems to be appropriate in the light of the analysis in this thesis. For proper policy application, continuing monitoring of carrier performance and competitive conditions is needed and, when appropriate, political action needs to be taken.

Continuing efforts are needed to ensure that Canadian bilaterals have sufficient flexibility in terms of Canadian needs. It is very important that bilaterals, once negotiat-

ed become fully effective in terms of traffic. The bilateral with China is an example of difficult development. Here, special attention might be given to governmental interdepartmental cooperation to facilitate trade, travel, and transport activity.

The field of cargo operation is difficult. In addition to the opening of the region to Air Canada air freighter operation, it would seem that gateway airports should be evaluated and improved, if necessary, for effective and efficient cargo handling links with freight forwarders should be explored and cooperation between airline and government trade personnel could be beneficial.

Passenger charter traffic development possibilities need evaluation. It might be that charter activity is somewhat obsolescent because of scheduled passenger seat-sale techniques. However, such a conclusion is probably too hasty, Wardair, a very successful Canadian international charter specialist, might be encouraged to explore the Pacific Ocean region with care. Also, institutional linkages with travel organizations and airports in the region might also be facilitated by government-airline cooperation in this field of transport.

Appendix A

IATA REGIONAL DEFINITION

Southeast Asia

Brunei, Darussalam, Burma, Indonesia, Kampuchea (Democratic), Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand, Viet Nam.

Northeast Asia

China, Hong Kong, Japan, Korea (Democratic People's Republic of), Korea (Republic of), Macau, Mongolia, Taiwan (Province of China), USSR (East of Urals).

Southwest Pacific

Australia, New Zealand, Papua New Guinea and all other islands of the South Pacific including American Samoa, Caroline Islands, Christmas Islands, Cocos (Keeling) Islands, Cook Islands, Fiji, French Polynesia, Guam, Johnston Island, Kiribati, Mariana Islands, Marshall Islands, Midway Islands, Nauru, New Caledonia, Niue, Norfolk Island, Pitcairn, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wake Island and Wallis and Futuna Islands.

Appendix B

POLICY STATEMENTS BY CANADIAN GOVERNMENT

1. House Of Commons Debates, Statement by the Hon. J.W. Pickersgill, Minister of Transport, on Civil Aviation Policy. April 24, 1964.
2. Statement Designating Canadian Airlines To Operate New International Routes. March 29, 1966.
3. The Honourable Otto Lang, Minister of Transport, International Air Charter Policy. September 5, 1978.
4. The Honourable Jean Marchand, Minister of Transportation, Canada And U.S.A. Agree On New Air Routes And Pre-Clearance. September 11, 1973.
5. The Honourable John C. Crosbie, Minister of Transportation, Statement on the "Allocation of International Routes Between Air Canada and Canadian Airlines International". October 5, 1987.

Appendix C

EXCERPT FROM THE STATEMENT BY TRANSPORT MINISTER J.W. PICKERSGILL ON INTERNATIONAL AVIATION POLICY, 1964

[Since] April 24th, 1964, ... the main attention of the Government has been concentrated on working out the international aspect of civil aviation policy. ... in the international field, air services provided by Canadian airlines should serve the Canadian interest as a whole; that these services should not be competitive or conflicting, but should represent a single integrated plan, which could be achieved by amalgamation, by partnership or by a clear division of fields of operations.

In applying [the] principle, the Government decided to ask Air Canada and Canadian Pacific Airlines to see whether they could agree themselves after consultation upon a basis for its application. The two airlines have agreed that the most effective way to carry out this policy would be by a clear division of their fields of operations so that outside Canada neither airline would serve any point served by the other. After considering many possible divisions of the world between the two airlines it was finally concluded that the simplest approach would be to agree that each line should continue to serve all the points now served by it and that the geographical areas now served by each should be

defined and extended so that practically the whole world would be open to service by one airline or the other.

As a result, it has now been decided that Canadian Pacific Airlines will serve the whole Pacific area, the whole continent of Asia, Australia and New Zealand, Southern and South Eastern Europe and Latin America. Air Canada will serve the United Kingdom, Western, Northern and Eastern Europe, and the Caribbean. The only exception to this clear-cut division is that Canadian Pacific Airlines will continue to serve the Netherlands. This division accounts for the whole of the world except Africa and the United States. For the time being, neither airline is contemplating service to any part of Africa and the question of service to Africa will be left aside until some practical question arises. In the case of the United States, we continue to hope that negotiations for a new bilateral agreement will soon be completed. Once they have been completed a decision will be made as to which of the new points is to be served by each of our national airlines.

Appendix D

POLICIES AND PRINCIPLES GOVERNING INTERNATIONAL CIVIL AVIATION BY TRANSPORT MINISTER JEAN MARCHAND, MARCH 23, 1973

The government has agreed upon the following set of policies and principles.

1. The economic viability of proposed routes to serve the travelling public and to meet the growing requirements for air freight, should continue to be a major consideration and it should be Canadian policy to avoid direct subsidization of international scheduled air services, and to refrain from establishing such services for the sole purpose of national prestige.
2. The government should refrain, as it has for several years, from granting or seeking temporary authorizations to inaugurate international scheduled air services pending the negotiation of bilateral air agreements.
3. The Minister of Transport and the Canadian airline designated to serve a particular foreign country should arrive at an understanding with regard to the carrier's intentions and plans pertaining either to future service or modifications of existing service.

4. The gateways offered to foreign countries will depend on an assessment as to which will best serve the Canadian travelling public, the value to Canada of the rights accorded in exchange for these facilities and the best interests of Canada as a whole.
5. The Minister of Transport will encourage more commercial co-operation between CP Air and Air Canada in the context of benefits to Canada and will use the authority granted to him under Section 22 of the National Transportation Act to require the Canadian Transport Commission to report to him on the degree of co-operation which is being achieved. The degree of co-operation which is achieved within the flexibility afforded by the division of the world outlined in this statement and would influence the timing of any review of this division.
6. Wherever possible the Canadian carrier or carriers for the route or routes concerned will be identified prior to negotiation of a bilateral agreement.
7. Air Canada and CP Air are advised that in order to provide them with a broad basis for long-range planning to promote the orderly growth of their international passenger and cargo services and to maintain the pre-eminent position of Air Canada, the government has approved the following division of the world consistent with the above principles. The division of the world outlined below will be reviewed at the

end of seven years to determine the effect of intervening market and traffic changes on the relative position of the airlines. This review will take into account the need to maintain the orderly growth of both Canadian airlines in terms of their international passenger and cargo services. Should it be found necessary to make some adjustments, these changes will be made in the first instance by the introduction of double designations to major cities, and only in exceptional circumstances by the transfer of routes from one carrier to the other.

The new plan is as follows:

Europe. Air Canada for northern Europe except the Netherlands, central Europe and eastern Europe (Warsaw Pact countries). CP Air for southern Europe, southeast Europe plus the Netherlands.

The Caribbean, Central and South America. Air Canada for the Caribbean countries and bordering South American countries of Colombia, Venezuela and the three former Guianas. CP Air for the balance of Central and South America. Either Air Canada or CP Air or both may be assigned to serve Brazil.

Australia, New Zealand and the Pacific Island countries for CP Air.

Africa. Air Canada for all of Africa except for Morocco, Algeria and Tunisia, and for either Egypt or Sudan if selected as a route pursuant to Canada's agreement with Italy.

Asia. Air Canada for Lebanon, India and Pakistan, and for China if the right to designate two Canadian airlines is obtained. CP Air for most of the balance of Asia including Israel, Iran, China and Japan. The question of Canadian airline designation for certain Southeast Asian countries will be determined on the basis of rights available from these and third countries and the prospects for viable round-the-world air routes for one or both airlines.

8. The government decided that the status quo on designation which presently exists should be maintained and that Air Canada should be designated to serve Yugoslavia and CP Air to serve Milan.

Appendix E

STATEMENT BY THE TRANSPORT MINISTER JOHN C. CROSBIE ON THE ALLOCATION OF INTERNATIONAL ROUTES, 1987

Europe

Air Canada is assigned to serve Europe except for The Netherlands, Denmark, Sweden, and Norway, Italy, the U.S.S.R., and routes linking western Canada and Frankfurt, and to Munich.

Asia

Canadian Airlines International is assigned to serve Asia east of Burma except Singapore, Malaysia, Korea and the Philippines, which are assigned to Air Canada.

Air Canada is assigned to serve Asia west of and including Burma excluding across-the-Pacific services to Delhi or Calcutta, India, assigned to Canadian Airlines International.

Middle East

For Air Canada.

Africa

For Air Canada.

Australia, New Zealand and the Pacific island countries

For Canadian Airlines International.

The Caribbean, Mexico, Central and South America

Canadian Airlines International for Mexico, Central and South America except for Venezuele which is assigned to Air Canada. Air Canada for the Caribbean.

Source: Transport Canada Information, No. 248/87. Press Release, October 5, 1987.

Appendix F

PACIFIC AREA SCHEDULED INTERNATIONAL AIRLINES

Airline	Base	Date founded
Air New Zealand	Auckland	1939
All Nippon	Osaka	1957
Cathay Pacific Airways	Hong Kong	1946
China Airlines	Taiwan	1953
Civil Aviation Administration of China	Beijing	1929
Japan Airlines	Tokyo	1953
Korean Airlines	Seoul	1962
Malaysian Airline System	Kuala Lumpur	1971
Philippine Airlines	Manila	1941
Qantas Airways	Sydney	1920
Singapore Airlines	Singapore	1972
Thai Airways International	Bangkok	1959

Appendix G

GLOSSARY

Organizations:

AEA Association of European Airlines

ASC Aviation Statistics Center
a statistical compilation agency operates as a part of the Transportation Division of Statistics Canada.

ATB Air Transport Board
This Board was superseded in 1967 by the Air Transport Committee of the Canadian Commission.

ATC Air Transport Committee
a member committee of the Canadian Transport Commission and is responsible for regulating air transportation in Canada.

CAA Civil Aviation Authority
a regulatory body for the UK air transport industry.

CAB Civil Aeronautics Board
a regulatory body for the US air transport industry deals mainly with economic regulation, this regulatory agency no longer exist.

ECAC European Civil Aviation Conference
a group of 22 western European countries

FAA Federal Aviation Authority
a regulatory body for the US air transport industry primarily concern with safety and air traffic control.

IACA International Air Carrier Association
founded by a group of European non-scheduled carriers and members of the National Air Carrier Association (USA). Aims to promote a climate in which charters can freely operate worldwide.

IAPA International Airline Passenger Association
a commercial organization selling specialist travel insurance, discounts, etc. for the business market. Also represents its clients in the national and international arena.

IATA International Air Transport Association
a trade association of most, but not all, international scheduled and non-scheduled airlines that provides a forum for securing inter-airline agreements on routes, tariffs, etc.

ICAA International Civil Airports Association
Trade association of (international) civil airports, with UN consultative status. Produces statistics on airports.

ICAO International Civil Aviation Organization
an international government organization, a specialized organization under United Nations, deals exclusively on matters related to civil air transport.

OAA Orient Airlines Association
an organization of international airlines whose members includes scheduled flag carriers such as Cathay Pacific Airways, China Airlines, Japan Air Lines, Korean Air, Malaysian Airline System, Philippine Airlines, Qantas Airways, Royal Brunei Airlines, Singapore Airlines and Thai Airways International.

OARB Orient Airlines Research Bureau
an airlines organization based in the Orient formed in 1966. Its name changed to OAA in early 1970.

Terms

Available seat-miles (ASMs)
The aircraft-miles flown on each flight stage (or "leg" or "sector") multiplied by the number of seats available for revenue use (that is, excluding seats occupied by non-paying passengers) on that stage.

Bucket shop
A shop selling scheduled airline tickets at a discount.

Cabotage
The reservation to the home country of all air traffic operations within its territory.

Capacity
Number of seats and cargo space that an airline is permitted provide on a particular route.

Combi-aircraft
An aircraft that is designed in such a way that it is capable of simultaneously carrying a combination of aircraft unit load devies (U.L.D.'s) and passengers on the main deck.

City-pairs

The origin and destination of an air trip.

Fares

ABC	- Advanced booking charter
AGC	- Affinity group charter
APEX	- Advanced purchase excursion
C	- Club class
EX	- Excursion ticket
F	- First class
FCU	- Fare construction unit
IPEX	- Instant Purchase Excursion
IT	- Inclusive Tour
ITC	- Inclusive tour charter
M	- Tourist class
OP	- Off-peak
OTC	- One stop tour charter
OW	- One way
PEX	- Excursion
RT	- Return
SGIT	- Special group inclusive tour
Super APEX	- Cheaper, more restrictive APEX
TGC	- Travel group charter
Y	- Economy class
YE	- Economy class excursion
YN	- Economy class night flight
YSB	- Standby
YSSB	- Shuttle standby

Hague Protocol

The Hague Protocol modified the Warsaw Convention by increasing the liability limits.

Hub and spoke system

networks with routes - or spokes - into the hub airport airport which will carry passengers going to many different final destinations via connection through the hub.

Interlining passenger

a passenger who arrives at a particular airport just to change planes and airlines. Sometimes used to include a passenger changing planes but not airlines, but these are strictly speaking "intralining passengers". Interline tickets enable a passenger to cover several stages of a journey on different airlines with a single ticket paid for in a single currency.

Joint fare

a fare for an inter-line journey (that involves two airlines) which is set by agreement by the pair of airlines (or by IATA). The agreement also covers the division of the revenue from the fare. (See "Pro-rated")

Load factor
proportion of total available capacity (seats or cargo space) actually sold or used, expressed as a percentage.

Networking
routing of air services. Can be direct (from A to B) or indirect via an intermediate airport.

Pooling agreement
agreement between two airlines operating the same route to develop their traffic as profitably as possible. All revenue on the routes covered by the agreement by both airlines is put into a common pool and shared out again between the two airlines.

Predatory fare
A below-cost fare price set by an airline; intended to force competitors out of the market.

Pro-rated (fares)
the fare that an airline receives for carrying an inter-line passenger on one stage of the total journey. Usually less, and sometimes much less, than the normal fare for that stage.

Revenue passenger-miles (RPMs)
a measure of airline output, computed by multiplying the number of aircraft miles flown by the number of paying passengers for each stage.

Seating density
Standard of seating on an aircraft. Normally measured by distance between rows of seats, and number and size of seats in a row.

Seat factor
The percentage of the total number of seats on an aircraft occupied by paying passengers. The average seat factor is calculated by dividing the total RPM by the total ASM.

Warsaw Convention
A Convention held at Warsaw on October 12, 1929 for the Verification of Certain Rules Relating to the International Carriage by Air. It provide rules and establishes the monetary limits relating to such matter as liability for damage, death or injury to passengers, destruction, loss, or damage to baggage or goods, and loss resulting from delay. The Convention also establishes the

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