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The Conference Proceedings of the 1997 Air Transport Research Group (ATRG) of the WCTR Society, Vol. 1, No. 1


Tae Hoon Oum

Brent Bowen

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THE UNO AVIATION MONOGRAPH SERIES

UNOAI Report 97-2

The Conference Proceedings of the 1997 Air
Transport Research Group (ATRG) of the
WCTR Society

Volume 1, Number 1

Editors

Tae Hoon Oum

Brent D. Bowen

1997

UNO

Aviation Institute

University of Nebraska at Omaha

The UNO Aviation Institute has published the 1997 Proceedings of the Air Transport Research Group of the World Conference on Transportation Research (WCTR) Society. Items published in this three volume, seven monograph series were presented at the triennial ATRG Conference held at the University of British Columbia, June 25-27, 1997. A wide variety of policy issues are discussed including the following: open- skies agreements, liberalization, globalization, airline competition, airport performance, pricing, hubs, and safety, among others.

ABOUT THE EDITORS

Dr. Tae H. Oum is Van Dusen Foundation Professor of Management, Faculty of Commerce and Business Administration, the University of British Columbia, Vancouver, Canada. Dr. Oum specializes in policy analysis, demand modeling, cost and productivity analysis, globalization and competitive strategies affecting the transportation and telecommunications industries. He has published and edited over 20 books and numerous papers in international journals and regularly advises Canadian and foreign government agencies, major corporations, and the World Bank on transportation and telecommunications policy and management issues. In particular, he has recently published a major book "WINNING AIRLINES: Productivity and Cost Competitiveness of the World's Major Airlines" (Kluwer Academic Publishers, 1997). Dr. Oum is the President of the Air Transport Research Group (ATRG) and Chair of the Publication Committee of the World Conference on Transport Research (WCTR) Society. He also serves on the editorial boards of the Journal of Transport Economics and Policy, Transport Policy, Journal of Air Transport Management, Transportation Research Series E, and Journal of Air Transportation World Wide. Dr. Oum is the Canadian Advisor for the Transportation Task Force of the Pacific Economic Cooperation Council (PECC).

Dr. Brent D. Bowen is Director and Professor, Aviation Institute, University of Nebraska at Omaha. He has been appointed as a Graduate Faculty Fellow of the University of Nebraska System-wide Graduate College. Bowen attained his Doctorate in Higher Education and Aviation from Oklahoma State University and a Master of Business Administration degree from Oklahoma City University. His Federal Aviation Administration certifications include Airline Transport Pilot, Certified Flight Instructor, Advanced-Instrument Ground Instructor, Aviation Safety Counselor, and Aerospace Education Counselor. Dr. Bowen's research on the development of the national Airline Quality Rating is regularly featured on *ABC's Good Morning America*, *The Cable News Network*, *USA Today*, *The Today Show*, *The Associated Press*, the network evening news shows, and in numerous other national and international media, as well as refereed academic publications. Dr. Bowen has in excess of 200 publications, papers, and program appearances to his credit. His research interests focus on aviation applications of public productivity enhancement and marketing in the areas of service quality evaluation, forecasting, and student recruitment in collegiate aviation programs. He is also well published in areas related to effective teaching. His professional affiliations include the University Aviation Association, Council on Aviation Accreditation, World Aerospace Education Association, Alpha Eta Rho International Aviation Fraternity, and the Nebraska Academy of Sciences. Additionally, Dr. Bowen has authored /co-authored numerous successful funding proposals totaling in awards exceeding nine million dollars. He also serves as program director of the National Aeronautics and Space Administration funded Nebraska Space Grant Consortium.

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AIR CANADA

AIR CANADA AND THE CANADA-U.S. OPEN SKIES

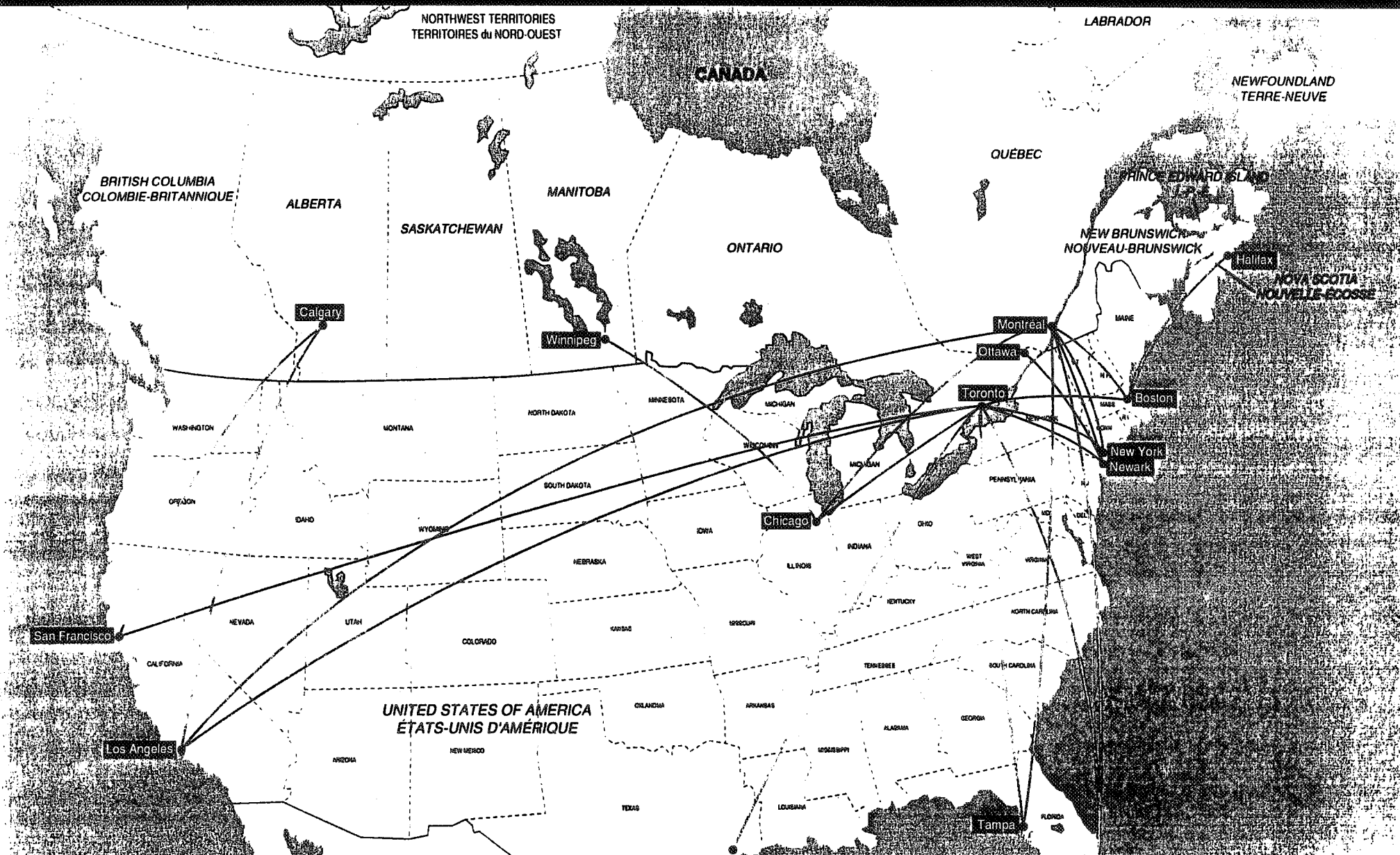
AGREEMENT OF FEBRUARY 24, 1995:

A GOOD STORY

**The Air Transport Research Group (ATRG) Conference
25-27 June 1997, Vancouver**

P12
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AIR CANADA ROUTES PRIOR TO OPEN SKIES LIGNES D'AIR CANADA AVANT LIBÉRALISATION



AIR CANADA TRANSBORDER NETWORK PRIOR TO U.S. OPEN SKIES (FEB. '95)

- o **9 SCHEDULED DESTINATIONS**
 - Boston, Chicago, Houston, Los Angeles, Miami, Newark, New York, San Francisco, Tampa
 - All around the edges of the U.S. - nothing in the "heartland".

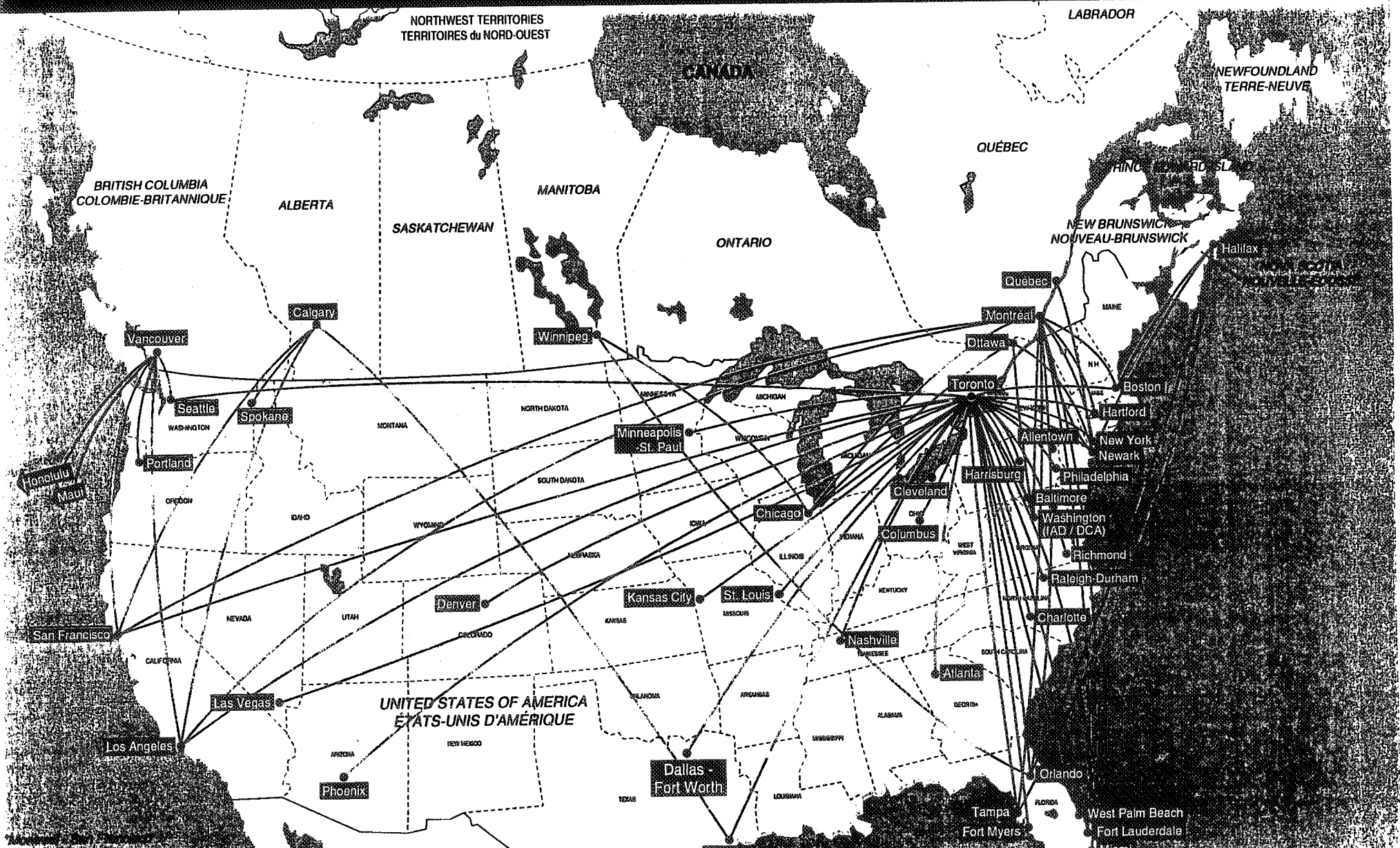
- o **5 ADDITIONAL SCHEDULED DESTINATIONS SERVED BY AIR CANADA'S WHOLLY-OWNED REGIONAL AIRLINES**
 - Baltimore, Cleveland, Hartford, Portland (OR), Seattle

- o **32 SCHEDULED ROUTES (CITY-PAIRS) OPERATED BY AIR CANADA AND ITS REGIONALS FOR A TOTAL OF 650 WEEKLY FLIGHTS EACH WAY**

- o **7 CHARTER DESTINATIONS ALSO SERVED BY AIR CANADA ON A SEASONAL BASIS**
 - Fort Lauderdale, Fort Myers, Honolulu, Las Vegas, Maui, Orlando, West Palm Beach

AIR CANADA TRANSBORDER ROUTES LIGNES TRANSFRONTALIÈRES D'AIR CANADA

AIR CANADA



NEW AIR CANADA TRANSBORDER ROUTES PURSUANT TO OPEN SKIES

- o **24 NEW DESTINATIONS (CITIES) SERVED WITH "OWN AIRCRAFT"**
 - **7 of which are conversion of charter into scheduled destinations**
 - **5 destinations were introduced by Air Canada's Regional Airlines**

- o **TRANSLATE INTO 39 NEW ROUTES (CITY-PAIRS) OPERATED WITH "OWN AIRCRAFT"**
 - **11 routes converted from charter into scheduled services**
 - **6 were introduced by Air Canada's Regional Airlines**

- o **OVER 1,200 WEEKLY TRANSBORDER FLIGHTS EACH WAY OPERATED BY AIR CANADA AND ITS REGIONALS**

24 NEW CITIES SERVED WITH AC «OWN AIRCRAFT»

19 BY AIR CANADA

7 DESTINATIONS CONVERTED FROM CHARTER TO SCHEDULED

Fort Lauderdale (95)

Fort Myers (95)

Honolulu (95)

Las Vegas (95)

Maul (95)

Orlando (95)

West Palm Beach (95)

12 NEW DESTINATIONS

Atlanta (95)

Charlotte (97)

Dallas/Ft. Worth (97)

Denver (95)

Kansas City (96)

Minneapolis-St. Paul (95)

Nashville (96)

Philadelphia (96)

Phoenix (97)

Raleigh/Durham (96)

St. Louis (95)

Washington (DCA/IAD) (95)

5 BY AC REGIONALS ONLY

Allentown, PA (96)

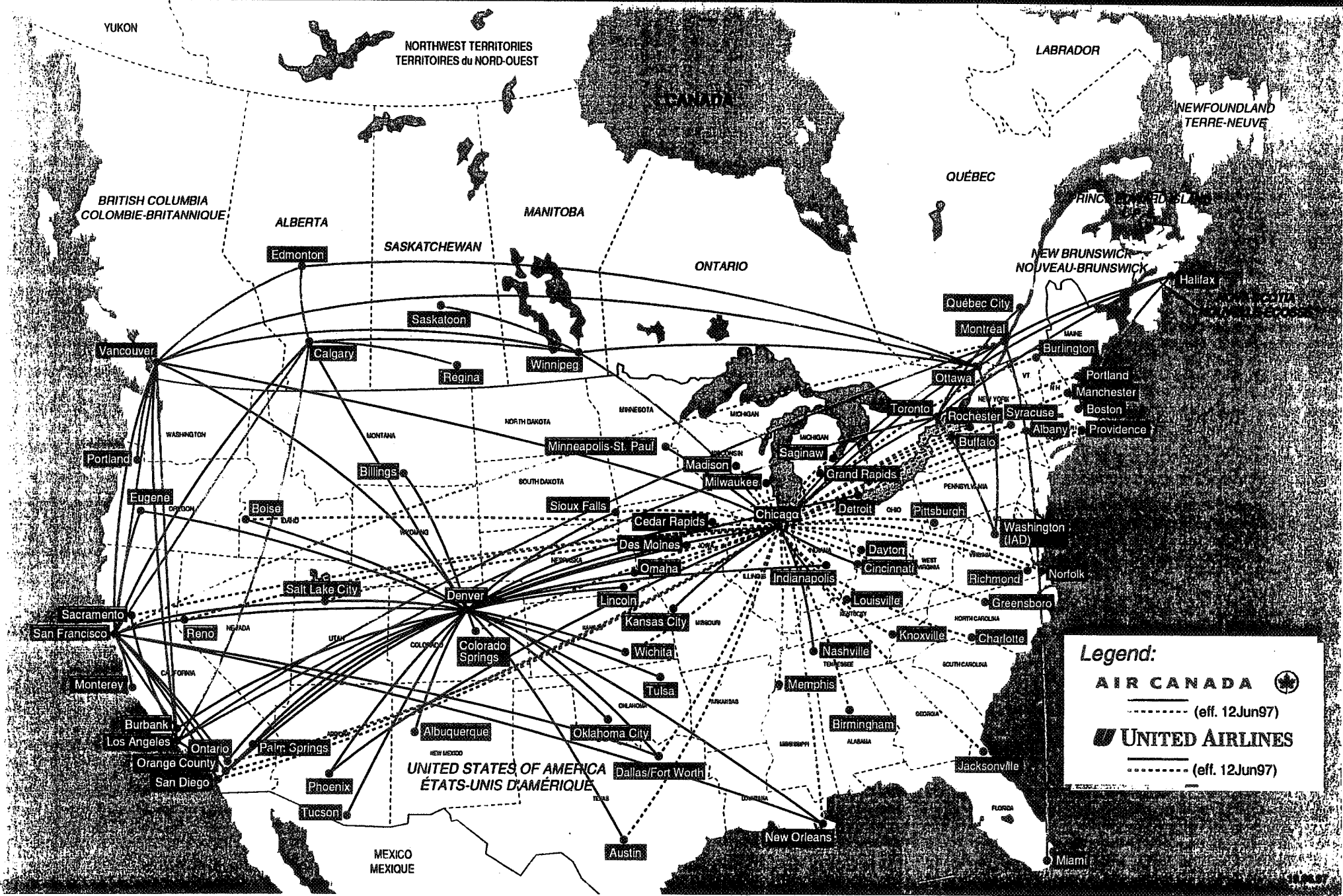
Columbus, OH (95)

Harrisburg, PA (96)


Richmond, VA (Jul. 97)

Spokane, WA (96)


Air Canada and United Airlines' Codeshare Routes



Legend:

AIR CANADA 

— (eff. 12Jun97)

UNITED AIRLINES 

- - - (eff. 12Jun97)

ALLIANCE WITH UNITED FURTHER EXPANDS AIR CANADA'S ACCESS TO THE U.S.

- o **50 NEW DESTINATIONS (CITIES) ADDED TO AIR CANADA U.S. NETWORK THROUGH CODE-SHARING WITH UNITED AIRLINES**
 - **in addition to 38 cities served with Air Canada "own aircraft"**
- o **CODE-SHARE WITH UNITED AIRLINES ON 84 CITY-PAIRS WITHIN THE U.S. FOR OVER 1200 FLIGHTS/WEEK**

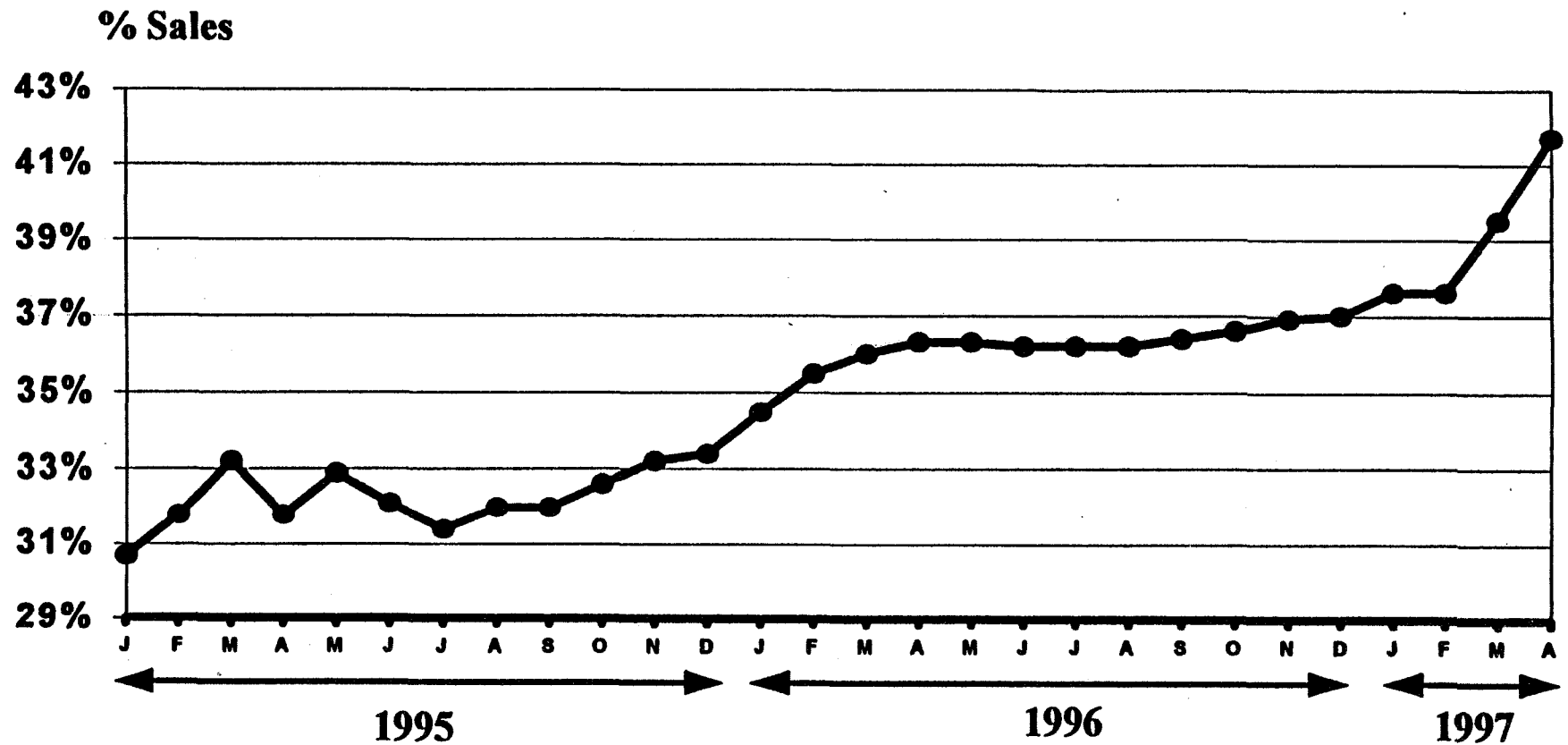
AIR CANADA TRANSBORDER NETWORK (JULY '97)

- o **88 DESTINATIONS IN THE U.S.**
 - **38 served with "own aircraft"**
 - **50 served through code-sharing with United Airlines**
 - * **Pre-Open Skies destinations = 14 scheduled + 7 charter**

- o **67 TRANSBORDER ROUTES (CITY-PAIRS) SERVED WITH "OWN AIRCRAFT" - SUPPLEMENTED BY:**
 - **Code-share on 6 transborder routes operated by United Airlines**
 - **Code-share on 84 city-pairs within the U.S. served by UA**
 - * **Pre-Open Skies routes = 32**

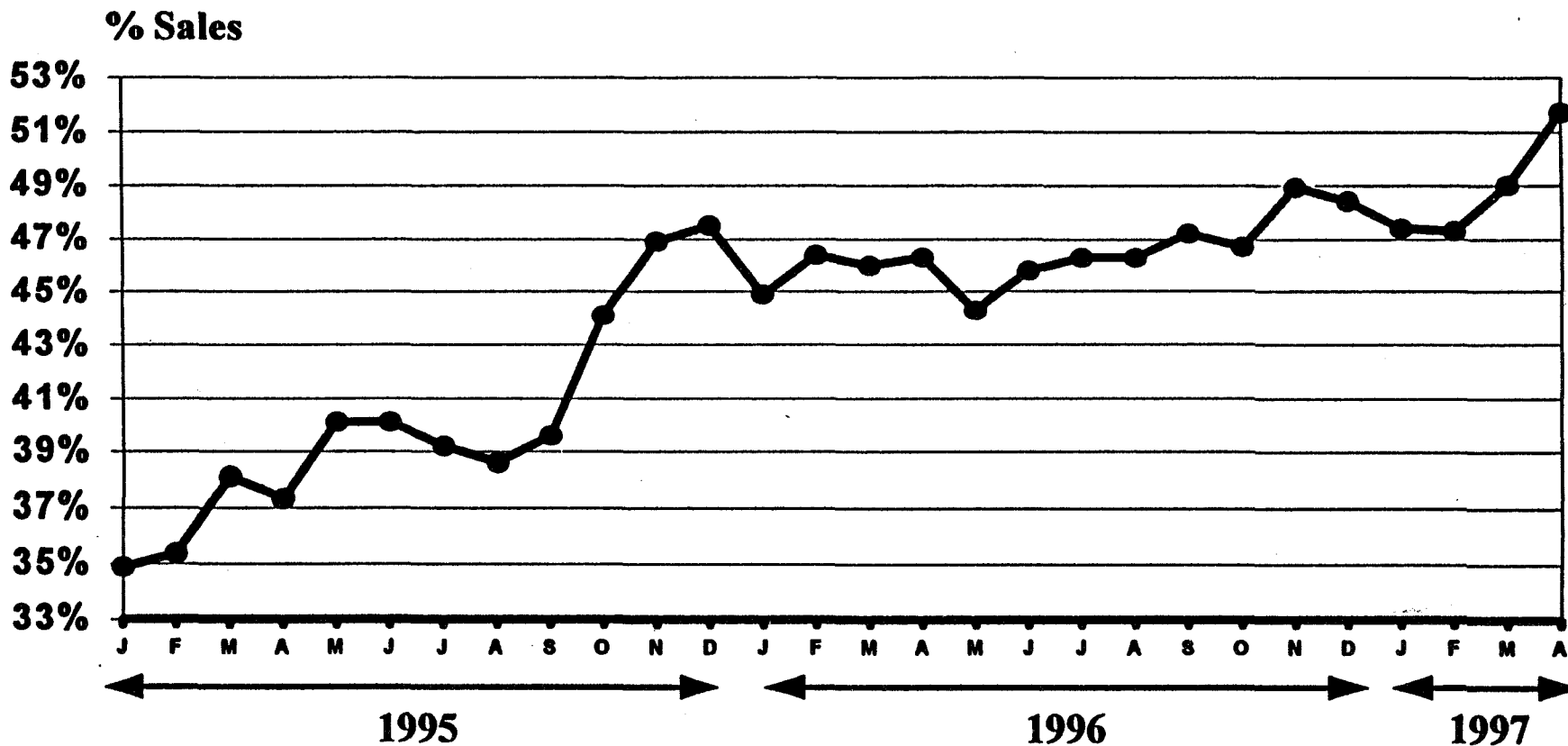
- o **OVER 1,200 WEEKLY TRANSBORDER FLIGHTS OPERATED WITH "OWN AIRCRAFT" - SUPPLEMENTED BY:**
 - **1,200 code-share flights/week on United Airlines**
 - * **Pre-Open Skies weekly flights = 651**

Transborder Market Share Up 40%



***Scheduled service only**

Toronto Based Market Share Up 48%



***Scheduled service only**

SUCCESS FACTORS

- o **AIR CANADA WAS READY FOR OPEN SKIES WITH THE U.S.**
 - **Fully privatized in 1989**
 - **Major restructuring in early 1990s**
 - **Ordered new aircraft (i.e. 24 CRJs and 35 A319s)**

- o **AIR CANADA WELL-ESTABLISHED IN CANADA WHERE TWO-THIRDS OF TRANSBORDER TRAFFIC ORIGINATES**

- o **AIR CANADA HAS BEEN VERY EFFECTIVE IN PENETRATING THE U.S. INTERIOR DUE TO:**
 - **Strength of its Toronto hub**
 - **United Airlines Alliance**
 - **CRJs - particularly in low density markets and high frequency potential**

CONTRIBUTING AUTHORS
VOLUME 1, NUMBER 1

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R.R. Mayes
Yasuo Sakakibara

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*Air Canada and the Canada- U.S. Open Skies Agreement of February 24, 1995:
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Modeling Intercontinental Demand: An Integration of Demand Analysis and Trade Theory
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NOTES FOR A PRESENTATION

TO

OPENING PLENARY SESSION, ATRG CONFERENCE

VANCOUVER - JUNE 26, 1997

R.R. Mayes

Transport Canada

Good morning ladies and gentlemen. As one of the first speakers to take the podium this morning, I would like to take this opportunity, first, to welcome our many distinguished visitors from all around the world to Canada, and more particularly, to Vancouver. Secondly, I would like to congratulate the organizers for bringing together such a formidable array of knowledge and talent for these discussions and presentations. (I will exempt myself from that comment.)

Our opening subject is “current and future issues in international air policy”. There is so much expertise in this room that I feel definitely intimidated!

However, perhaps I can add something to the debate by dusting off a few truths we need to keep in mind. Perhaps, also I can add to the challenge by pointing out a few issues that may make it harder for air services to develop in just the way that some believe they will or they should. So, I will hope to leave you with a few thoughts that will stay with you as you follow, or participate in, the discussions of the next two days.

I think that, as a government official, it is incumbent upon me to reflect a government point of view. Now, some of you may wonder, what’s new or different about that. Well, in some quarters, there is a rather facile assumption building that the nation state is fast withering away and it merely remains a husk of its former self - principally existing to normalize economic relations of rapidly globalising companies.

While this point of view can be viewed as an extreme - because it takes, as a given, that recent trends with regard to the role of government will continue unchecked - it is not entirely without foundation. Let me start by reviewing some of the elements of that trend, using our experience in Canada by way of illustration.

Over the past four years, we have made unprecedented changes to the role of government. This has been particularly true in the transportation sector.

Our current approach concentrates on: setting a framework of policy and legislation, developing and enforcing regulations and standards and, finally, monitoring the transportation sector's performance.

To illustrate, over the past several years, the government has pursued a number of initiatives that have:

First, through policy and regulatory measures, made Canadian transportation more subject to the disciplines of the marketplace and less to those of the economic regulator.

Second, commercialized or divested transportation infrastructure to local authorities and communities and to other entities that are commercially oriented.

Last, shifted the burden of costs from the general taxpayer to the specific user of the service through subsidy reduction (or elimination) and cost recovery.

That's on the internal, or domestic front. In the international arena, Canada has pursued progressive liberalization of the framework within which air transport services are operated. For example, we have our agreement with the US, our liberal bilaterals with the UK and Germany and our adjustments to our International Air Transportation Policy announced in December 1994, wherein Canadian carriers must use their route rights or risk losing them.

Clearly, with all these changes, it is not difficult to see why some observers have felt that governments are withdrawing from the field.

However, in our view, we have merely brought our role up to date and clarified it. Indeed, in some instances, we have enlarged it. Government has reduced its role as a provider of transportation services and related infrastructure, has removed itself from the day to day conduct of activities, but has firmly planted itself watchfully on the sidelines, as a sort of referee, to ensure that the game is played fairly and according to those rules that remain.

Two examples. First, safety remains a core government responsibility. After several years of intensive and open review, new Canadian Aviation Regulations came into effect in October 1996. A most notable aspect was the process by which these new regulations were developed - in close consultation and collaboration with, not only those whose behaviour they are meant to govern, but also with other affected or interested parties such as employees (and their union representatives) and users, both shippers and travellers. The new regulations and standards that

complement them are more complete and comprehensible than the previous system of regulations and orders. They are intended not only to maintain but to enhance aviation safety.

The noteworthy aspect of this is that we have changed the way we do the business we do. Governments must increasingly respond to the concerns and interests of a broad range of stakeholders. The cozy club between industry and regulators, whether they be economic or operational regulators, has been expanded to allow others to join. And I will boldly predict that, as economies develop and populations become better educated and more sophisticated around the globe, governments almost everywhere will have to adopt comparable approaches, i.e. they will have to involve consumers, travellers and shippers, in their decision making processes. Please do not lose sight of this thought.

And in keeping with that thought, I would add this further one as its counterpart. In Canada, transparency and fairness to the consumer are major objectives of our policy. Hence, in the changes to our licensing legislation last year, we tightened up several requirements relating to new carrier entry because of abuses and problems we had experienced under our previous entry regime. Now, we prohibit ticket sales prior to licensing and we require new carriers to demonstrate they are adequately capitalized so that they do not depend on funds obtained from consumers to launch their operations.

Whether we speak of the consumer, or the traveller, or the taxpayer or citizen - all of these categories of people have expectations of their elected representatives and their governments. True, these may vary or change, depending on which view they have of themselves in a given context or at a given time. Despite this complication, which is part of what makes being in government so stimulating, there are still some obvious truths here as well.

If you are travelling internationally, on a ticket bought in one country, to be used on the carrier of a third country, and your flight is delayed, causing your travel plans fall apart - how do you obtain redress? If your luggage is misplaced when you are thousands of miles from home and the local carriers don't care to respond, where do you go for help?

Governments/Ministers receive complaints. These come from people who pay taxes and vote. The message here is that either the industry has adequate mechanisms to deal with these situations, or governments will come under pressure to create regulations or other mechanisms for dealing with them. Let me close on this thought with two words - "code sharing"... . A growing area of carrier activity, an area fraught with potential concerns regarding transparency for consumers. A word to the wise perhaps ... ?

Another set of pressures that is emerging for governments is the environmental impact of transportation.

The transportation sector presents major challenges for sustainable development. The actual and potential global effects are significant and you know the litany: climate change, noise, the consumption of non-renewable resources, the depletion of the ozone layer, the contamination of water supplies, and the disruption of wildlife habitats. And those are just the so-called “soft” issues. Predictions of virtually exponential growth in air services (particularly in the Asia-Pacific region) imply competition for scarce or non-renewable resources with other sectors of economic activity. Runway expansion and airport expansion will become even more difficult to undertake than they have been in the recent past.

In Canada, as of June of 1995, all federal ministers have an obligation to address “sustainable development” within their area of responsibility. Every federal department is required to table a sustainable development strategy in Parliament by December of this year, outlining its goals and action plans for integrating sustainable development into its policies, programs and operations. Each plan must include a process of consultation with relevant stakeholders. “Sustainable transportation”, of course, will be the focus for Transport Canada.

A central feature of this process is the integration, from the outset, of environmental considerations into decision-making.

The legislative and institutional framework also includes Canada's participation in multilateral bodies - such as the International Civil Aviation Organization (ICAO) - that set standards and seek multilateral consensus on transportation issues, including its impact on the environment. An example is ICAO's most recent standard for aircraft engine emissions, itself a 20 percent reduction from the previous limit.

Other multilateral bodies (such as the OECD and the United Nations Commission on Sustainable Development) are also addressing the challenges presented by the transportation sector for global sustainable development and it is not always possible to see or to believe that the efforts are coordinated...

Nevertheless, in the spring of 1996, Transport Canada outlined a framework for its sustainable transportation strategy. The department is currently conducting consultations with stakeholders to help define strategic directions from the following perspectives:

- where Transport Canada can act on its own authority
- where it can act in partnership with others
- where it can encourage others to take preferred action

The strategy will have to provide the basis for fostering sustainable development within the national transportation system and will also set the framework within which the department will report to the Commissioner of the Environment and Sustainable Development on the department's environmental progress.

Having said all this, it is not at all certain how the various pressures will play out. The situation may be confused but it is very clear - the issue is not going to go away. Business "as usual" will no longer be "usual".

The third and final perspective I would like to cover this morning concerns the interface between trade agreements and air services agreements.

Over the past ten years, Canada has been very progressive in the trade field - beginning with the Free Trade Agreement (FTA) between Canada and the U.S. in 1988. (Since then we have been party to: NAFTA, FTAA, APEC, WTO and, for good measure, we have negotiated bilateral agreements, inter alia, with Israel and Chile.)

However, it is worth noting that with the exceptions of a few ancillary issues, air services, per se, have been excluded from these free trade arrangements.

Reflecting for a moment on the Canada - U.S. situation, this is the largest bilateral trading relationship in the world - approximately \$1B of trade occurs per day between the two countries. While the FTA was signed in 1988, the so-called Open Skies agreement was not signed until 1995. That is, a full seven years elapsed between the finalization of the two agreements.

This underscores the fact that trade in goods and services in general and liberalization in air services in particular are both occurring but not at the same rate. This illustrates the point that as far as Canada is concerned, we are pragmatists.

We are not convinced that “one size fits all” liberalization is appropriate for us. We have negotiated - and will continue to negotiate - more open agreements as markets mature. I mentioned earlier our agreements with the US, the UK and with Germany. For our part, participation in the recent OECD study - and you will hear more on that later from Dr. Button - was a very useful exercise. In fact, we have sought to go further by developing a cost-benefit methodology which integrates both transportation and trade effects. We have now received the final software and are becoming thoroughly acquainted with it. If all goes well, we will be making this model available to interested countries later this year.

These three examples - consumers, the environment and the link with trade agreements - are just some of the issues which national governments must address when dealing with matters relating to air services. They are increasingly a factor in the decision making processes of governments and there is every indication they will continue to be. If one contemplates the future development of air transportation, whether at the national or international level, without bearing in mind both the direct impact of these types of matters on the industry itself, the recommendations of bureaucrats and on the eventual decisions of politicians, one risks being naively in error.

This, then, is the final thought I want to leave with you. Do not underestimate the potential for seemingly soft or inconsequential matters to complicate and delay governmental decision making. On the other hand, be ready to consider direct solutions to a problem, even if they initially seem intractable. Therein lies the paradox!

I hope my comments have been helpful. I will be glad to answer questions in the second part of our session.

Thank you.

ABOUT THE EDITORS

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Dr. Brent D. Bowen is Director and Professor, Aviation Institute, University of Nebraska at Omaha. He has been appointed as a Graduate Faculty Fellow of the University of Nebraska System-wide Graduate College. Bowen attained his Doctorate in Higher Education and Aviation from Oklahoma State University and a Master of Business Administration degree from Oklahoma City University. His Federal Aviation Administration certifications include Airline Transport Pilot, Certified Flight Instructor, Advanced-Instrument Ground Instructor, Aviation Safety Counselor, and Aerospace Education Counselor. Dr. Bowen's research on the development of the national Airline Quality Rating is regularly featured on *ABC's Good Morning America*, *The Cable News Network*, *USA Today*, *The Today Show*, *The Associated Press*, the network evening news shows, and in numerous other national and international media, as well as refereed academic publications. Dr. Bowen has in excess of 200 publications, papers, and program appearances to his credit. His research interests focus on aviation applications of public productivity enhancement and marketing in the areas of service quality evaluation, forecasting, and student recruitment in collegiate aviation programs. He is also well published in areas related to effective teaching. His professional affiliations include the University Aviation Association, Council on Aviation Accreditation, World Aerospace Education Association, Alpha Eta Rho International Aviation Fraternity, and the Nebraska Academy of Sciences. Additionally, Dr. Bowen has authored /co-authored numerous successful funding proposals totaling in awards exceeding nine million dollars. He also serves as program director of the National Aeronautics and Space Administration funded Nebraska Space Grant Consortium.

Remarks at Plenary Symposium

Yasuo SAKAKIBARA
(Osaka University of Commerce)

International aviation in Japan faces similar issues as in other countries, and I am somewhat pessimistic about Japan's capability to cope with those issues. The Ministry of Transport in Japan (JMOT) has taken some measures to liberalize domestic aviation, but has not done much in international aviation.

There are at least three factors that will continue to impact the formulation of international aviation policy in Japan.

One such factor is an absolute shortage of airport capacity: currently only a total of two runways in two airports, Narita and Kansai, are handling 80 percent of the international passengers and freight. The JMOT will be building two more runways at Narita, but six farmers have not consented to sell their land for the proposed runways. Kansai will soon start reclamation of land on which a second runway will be built, but it will take another eight years or so before the second runway is completed.

Japan has 90 airports altogether, but, because of the high land price and the lack of the concept of eminent domain, airports have been built wherever land or, for that matter, the sea is available. Often reclamation of land is cheaper than the purchase of land¹, but the sea is not a free good. There are properties called fishing rights. Unless you purchase these fishing rights you can not change the sea; and as soon as the Government tries to purchase the fishing rights, the number of fishermen tends to increase. So Japanese airports are being built more in the countryside than near the urban centers.

These newly built airports in the countryside are small and can not handle international passengers and freight. Japan can expand them but what airlines would like to fly into Shonai or Tajima, airports whose

¹ Yasuo SAKAKIBARA, "Planning for a New Generation of Japanese Airports," *UN Regional Development Dialogue*, Vol. 14, No.2, Summer 1993.

names they never heard of.

I may add that our land price is high but not unreasonably so; the Japanese highway authority purchases the necessary land for construction at a price 25 times higher than the US Highway Authority, on the average. But, if you compare GNP produced per acre of habitable land, excluding tall mountains, lakes, desert, rivers etc., Japan produces 23 times more GNP per acre of land than the US. More serious problems are small land holdings and the lack of eminent domain. In order to build one-kilometer of highway, you may have to negotiate with 100 or more landowners and receive consent to sell from all of them. You can imagine what would happen if you want to secure 1,200 hectares of flat land suitable for an international airport that has three runways and a large terminal building.

The second factor is the lack of competitiveness of Japanese international carriers. According to Professor Oum's study, if I remember correctly, the cost per passenger kilometer of JAL and ANA is some 50 percent higher than the cost of major US carriers. If Japan liberalizes international aviation now completely, the JMOT is afraid that Japanese airlines would have a great deal of difficulty and about 50,000 jobs directly connected to aviation and another 100,000 jobs in related industries may be affected.

We have to look into causes of the high cost of JAL and ANA. Some analysts emphasize Government regulations, some others high wages for flight attendants and still others feather bedding as the cause. I do not deny the validity of these causes, but it looks to me that most are results of the high yen price. Back in '85, 240 yen equaled a dollar; now 120 yen or less equals a dollar. Eight million yen yearly pay for a flight attendant was \$35,000 in 1985, but it is now \$70,000. The purchasing power parity between dollar and yen now stands at 180 yen to a dollar. It took ten years to adjust to the lowering of yen from 240 to 180, and it may take another ten years to adjust to 120 yen to one dollar. It is not easy to move prices and wages downwards, so the aviation industry has waited for foreign prices to go up.

In other words, we have to consider what will happen to the exchange ratio in the future as well as other dynamic factors in considering the future performance of Japanese carriers.

I am for liberalization of international aviation, and immediate liberalization may speed up the process. Economists can argue somewhat irresponsibly that, even if JAL and ANA fail, Japanese consumers would be better off because they could travel at cheaper prices. For the JMOT, that sort of event is, and will be, an absolutely unthinkable situation.

The third factor is the nature and the style of the administration of the Japanese Government. For some reason, many foreigners assume that the Japanese Government is a powerful policy maker and enforcer. Not at all. The Japanese Government is relatively small in size, and most officials were born after WWII and believe in democracy. They are careful in weighing public opinion and a variety of interests. That is what politicians do in other countries. The Japanese Government tends to pursue a policy of making the least number of people unhappy. Time, patience and money are its arms for implementing policies.

We have a saying that a "rich man does not quarrel." Our rich government did not quarrel in the 70's and 80's, but now the government is not rich anymore. Yet the government is still playing the role of a mediator among various interests, foreign pressure being a newcomer to the interests, and not the enforcer. The government can take an initiative; but if some powerful element opposes it, it tends to go laissez-passez and time will become its only friend. You can not call it "undemocratic." It is "too democratic" or "democracy without leadership."

So, I do not think that Japan will change its stance quickly. Only if liberalization of international aviation continues in Asia-Pacific, if its impact on Japanese aviation is strongly felt, (already 10 percent of the Japanese passengers who go to Seoul have destinations other than

Korea), and if so-called "foreign pressure" in aviation negotiations continues, can we expect gradual shifts towards liberalization and an open sky in JMOT. Thus, it looks like too much to ask of Japan to take leadership in the liberalization of international aviation in Asia and the Pacific.

Thank you.

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June 26, 1997

Koki Nagata, Japan Airlines

Initiatives for Liberalization Asia-Pacific Aviation

Thank you Mr.Chairman for your kind introduction.

Good afternoon, ladies and gentlemen. I am delighted to be here to speak about my vision on current Asia Pacific aviation.

It is amazing to see the extensive range of aviation issues this conference intends to cover, eight sessions with some 100 presentations. It is daunting to think, what my contribution might lead to.

My brief is to give an overview of how Japan Airlines sees the current state of US/Japan aviation relations, in the light of the current "Open Skies" policy of the United States with regard to Asia.

(I). Liberalization; US approach

First, a little background: the US/Japan bilateral aviation agreement came into effect in 1952 and it would be true to say that ever since, Japan has been trying to rectify what was -and continues to be- a grossly imbalanced treaty. The current situation is the result of attempts to renegotiate which started some 20 year ago.

What Japan seeks now is unchanged from then. It is simply "fair and equal opportunity". Comparing the basis of debates over "Open Skies", in the case of Japan/US, we have not yet been successful in leaving behind the post war agreement of 1952 unlike the UK which achieved Bermuda II in 1977. The US/Japan 1952 agreement belongs to history. That agreement is so grossly imbalanced in favor of the US carriers that there is no incentive for US side to seriously negotiate with Japan.

Today, the US reluctantly admits this imbalance. However their strategy seems to be that by disregarding such imbalance factors, they can bulldoze through their massive liberalization proposals only to further their airlines' interest.

But, these are the facts we must claim for redress, as a prerequisite to

any new agreement.

1. Take Beyond Rights: US airlines enjoy more than 150 flights a week beyond Japan to other Asian destinations, competing freely with Japanese and Asian airlines, while Japanese airlines are allowed only two flights per week from Los Angeles to Brazil. US carriers take about 1.6 million passengers from Japan to Asia compared to 4000 passengers annually on JAL's Los Angeles to Sao Paolo route.

Similar rights for Japanese airlines beyond the U.S. will never equal the value of U.S. rights beyond Japan, so access beyond gateway cities to other destinations in the Continental U.S. for international traffic would be one way of leveling the playing field and balancing the present rights disparity.

2. U.S. airlines control 800 slots, one third of all weekly slots, at Japan's major gateway, Narita Airport, and only slightly less than the total number of weekly slots used by all the airlines of Japan for all flights world wide.

Of these 800 U.S. slots, about 540 are used for flights between Japan and U.S. and the rest for flights beyond Japan. Japanese carriers' slots dedicated to U.S.-Japan flights number 270, half the U.S. total for the same services. Capacity at Narita is frozen, yet the U.S. dominates, a discrepancy that arises directly from the imbalance inherent in the 1952 agreement.

We would like to see some changes;

For example, the U.S. must open up access to its domestic market to foreign airlines. The restrictions on foreign ownership of U.S. carriers which inhibit access should be liberalized.

A relaxation of the U.S. government law that dictates its employees fly on U.S. airlines; no other advanced country has such a protective law. JAL cannot carry U.S. government employees, contractors or even U.S. mail across the Pacific. Japanese government officials are free to fly with whom they please.

It is easy and misleading for US defenders of "Open Skies" to repeatedly maintain that Japanese airlines are saddled with high costs, are not competitive and rely on Government protection. A decade ago, our costs were 20 to 30 percent below U.S. carriers, measured in dollars and cents. Today the reverse appears true, but consider that the yen/dollars exchange rate has changed completely, from 240 yen to the dollar in 1985 to about 115 yen to the dollar today. JAL's costs expressed in yen, are steadily decreasing as our restructuring proceeds.

So much for Japan-U.S. relations. But I placed special emphasis on Beyond Rights or 5th freedom rights because they are contentious issues in the Asian region, especially when there are shortages in airport capacity in this area.

As in current UK/US negotiations, the Japan/US case contains airport slot problems, The former at London Heathrow in regard to the question whether the proposed BA/AA alliance is too dominant for fair competition, the latter applies usage of Tokyo's Narita Airport. Due to foreseen airport slot shortages, the best and most efficient utilization of limited slots need to be appraised. These needs are already acute at major airports, urging an international rule for slot allocation to decide priorities by flights.

In Asia too, the increasing number of flights and new entrants in all airports will force government authorities to review conventional methods of slot allocations in order to best utilize them.

(II). Liberalization; ICAO multilateral approach

Air transportation is counted as an integral part of total economic activities by most countries, therefore governments play an important role in setting policies to promote air transportation. Among such policies for example, are liberalization of currency exchange and foreign investment, visa waivers for foreign visitors and easy procedures for obtaining passport for their nationals.

Governments would undertake large scale expansion in such key infrastructure as airport, ground access facilities, air traffic control, and navigation aids system in the air, if they find strategic importance

in such investment and also they will introduce less restrictive foreign policies together with more relaxed exchange of traffic rights and more procompetitive market policy for healthier development of their aviation industry.

Asian countries have been successfully sustaining healthy growth in respective industry in the past decades and they will maintain this even in more rapid expansion in the future.

Each year the member airlines of the region AAPA (Association of Asia Pacific Airlines, former OAA, Orient Airlines Association) have proudly reported about profitable operations with a high rate of sustained growth, and the quality of their services has never been compromised.

Just two decades ago, there were 29 international scheduled airlines in Asia, most of which were government owned national flag carriers. But today, the number has doubled. Some governments have privatized their airlines and invited new airlines to enter into international competition by giving multiple designation status under the bilateral system.

The World Air Traffic Conference of ICAO in 1994 triggered lively discussions for global liberalization in response to criticism that the current bilateral system is already too restrictive for future aviation. Following one week's discussions on a draft multilateral agreement prototype presented by ICAO's secretariat, it was directed that ICAO ATRP (Air Transport Regulatory Panel) be reconvened and it should further study on "safe guard mechanism", "safety net", "ownership and control", "doing business", "preferential measures for smaller and less competitive carriers" in order to give assurances to airlines who want to participate in global aviation network and competition. The report is due in the fall 1998 for the triennial ICAO Assembly.

During the meeting, liberalization developments on a regional level, such as those in the European Union, drew many delegates' attention as good examples for their studies and an option for further liberalization steps.

(III). Liberalization; Regional approach

In January 1996, the first meeting of Regional Cooperation Forum for International Air Transport in Asia and Oceania was held in Kyoto. Representatives of the aviation authorities from 13 countries and airlines discussed the rapid development in the region and possible measures to enhance regional cooperation among the countries in the presence of ICAO representatives. Also exchanged were views regarding new air transportation regulation.

The second meeting was held in Bangkok in March 1997. Exchange of views and information of such issues as the promotion of multiple designation of airlines, standard text of bilateral air services agreement, airport congestion, code-sharing standardization, encouragement for cross border trade and tourism under "growth area" or "growth triangle" scheme for an example, Indonesia, Malaysia, Thailand Growth Triangle, fair and equal "competitive skies" rather than "open skies", and support for ICAO on economic issues and technical cooperation.

It was agreed to meet again in early 1998 to explore common ground in the future air transport regulation among Forum countries for 1998 ICAO Assembly.

As each country of Asia has a different history and perspective in their policies and strategies for aviation development, responses to such a proposal as the Open Skies model agreement are naturally diverse. Singapore and Malaysia formally concluded the agreement this year, Brunei and Taiwan have initialed and Korea is negotiating for agreement with the U.S. The Philippines, Thailand and Honkong had liberalized agreements with the U.S. before such model agreement was introduced. Countries which have not made such agreements include Indonesia, Vietnam, China and Japan.

On the other hand, all countries of Asia are aware that the Asia-Pacific region will be a driving force in the future growth of the aviation industry. Also they are well aware that seventy per cent of the passenger traffic in this expanding region is intra-regional traffic and Asian carriers both, incumbents and new entrants not unreasonably, feel they should have the first claim for it.

Further, the needs of third country airline participation based on old

beyond rights, such as those belonging to the U.S., are regarded as secondary.

At Tokyo's Narita Airport especially, a large number of precious slots are being occupied for services beyond Japan by U.S. carriers. Because today's aircraft can serve directly to many Asian points from U.S. without landing at crowded Narita, the need for this occupation is highly questionable especially when there is no quid pro quo for Japanese carriers in the U.S.

Therefore such diversity in stance of aeropolitics does not predicate the base of regional cooperative activities. In fact, regional cooperation and communication are even more enhanced among government authorities and airlines, in response to extra-regional development.

Conclusion

"Open Skies" as currently peddled by the U.S. is a prerequisite to considering anti-trust immunity for commercial alliances under U.S. domestic laws. In this scheme, made in USA, fair trading gives way to American mercantilist approaches through the "Open Skies" policy.

A respected academic conference such as this could hardly approve such a policy for a new world order to replace the current bilateral system which continues to work well among Asian countries. But please do not misunderstand, I am not against liberalization. I am just saying that there should be better approaches to reach the goal.

It is about time for the US to face the reality of world aviation today and share a common goal with other countries more broadly in order to forge a new world regulatory regime for civil aviation, rather than sticking to an old fashioned mercantilist approach simply to further their own airlines' interests.

Omit

INITIATIVES FOR LIBERALISING ASIA-PACIFIC AVIATION: WHERE DO WE GO FROM HERE?

**Mr Karmjit Singh
Assistant Director Corporate Affairs,
Singapore Airlines Ltd**

**University of British Columbia
26 June 1997**

The organisers of this conference must be congratulated for their impeccable timing. Even as recently as six months ago, talk of "open skies" in Asia-Pacific was still mostly just that – talk. As other regions such as Europe and North America have pressed ahead over recent years with regulatory reform, Asia-Pacific has lagged well behind.

But since the start of this year, promising headway has been made – most notably, with the United States' initiative to forge open skies accords with several Asian nations. I'm confident that the U.S. move will prove to be the catalyst for reform on a much broader scale within the region, rather than just restricted to isolated bilateral arrangements between countries.

Global Trends in Aviation Liberalisation

But before we attempt to chart a flight path for Open Skies within Asia-Pacific, let's put the matter into context by reviewing recent progress achieved around the globe. Historically, regulators have been slow to accommodate the commercial dynamics of the international aviation industry. However, in many parts of the world, governments are recognising that less regulation means better airlines, better service and a better deal for the travelling public – and, most importantly, better prospects for economic growth, in terms of trade, tourism and investment.

This deregulatory trend has been particularly evident in Europe and North America. From the 1st of April this year, air travel between and within the 17 nations of the European Economic Area (EEA) has become a single market. It means that all airlines registered in any of these countries are now considered to be domestic carriers anywhere within the EEA. In terms of other international destinations, however, these airlines are still bound by the restrictions of bilateral air services agreements negotiated between their respective home countries and other nations.

Running parallel to the advent of this European single market has been the progress made to free up the trans-Atlantic market. Since 1993, the US has signed "open skies" agreements with 11 European countries. The movement started with tiny Netherlands, continued with other small countries like Austria and Switzerland, and gained momentum until the giant, Germany, found it difficult not to have its own open-skies bilateral with the US. The United Kingdom is holding

out, but depending on how the proposed British Airways-American Airlines alliance develops, it too many find open skies with the US irresistible.

On this side of the Atlantic, the US already has an open skies accord with Canada. The Cross Border Air Transport Agreement is not quite as free as the European single market regime, as it doesn't include cabotage or rights of establishment, but it is a lot more progressive than the old bilateral 'horse trading' system.

The tantalising prospect of bringing all these separate arrangements together into a multilateral agreement encompassing the nations of Europe and north America has become a topic for credible discussion.

The pace for liberalisation is also quickening in central and south America. The US has initiated open skies discussions on a bilateral basis with seven central American countries, with Panama recently becoming the first country to initial such an agreement. Further south, the five Mercosur nations have taken a significant if limited step towards open skies, tentatively agreeing to give their airlines the right to launch third and fourth freedom services on routes not covered by existing bilaterals.

Asia-Pacific – the current status

So where does all this leave the Asia-Pacific? As noted earlier, the liberalisation agenda has been kick-started by the US. Already, it has clinched agreements with Singapore, Taiwan and Brunei, and similar agreements are on the cards with Malaysia, South Korea and New Zealand.

There are similarities between the approach taken by the US in Asia and its earlier initiatives in Europe. Within Asia-Pacific, as with Europe, there is already intense competition between airports vying to be among the region's major hubs. In offering the potential for an increased share of Asia-Pacific traffic, the US is holding out a tempting carrot to many Asian countries.

The first of the European open skies bilaterals, between the US and the Netherlands, was a huge boost to Amsterdam's Schiphol's status as an international hub. This immediately put pressure on the likes of Frankfurt. It took some time, but ultimately even mighty Germany yielded and signed a similar accord. Clearly, the US desires a similar domino effect in the Asia-Pacific, with the goal of mounting pressure on the region's heavyweight, Japan. More about Japan later.

But there is also a significant difference between Asia-Pacific and the European experience. Compared with Europe, Asia is much more fragmented – politically, economically and even culturally. Asia is currently a long way from having any equivalent of the European Union. Although the US initiatives in Europe have been undertaken on a country-by-country basis, there is little doubt that the closer affinity felt between European nations – as evidenced by the single aviation market – was a key contributor to their success across Europe. More about this later too.

Other liberalisation initiatives within Asia-Pacific include agreement in principle for an open skies pact between Singapore and New Zealand, and the deregulation of domestic aviation in countries such as Taiwan, South Korea, Indonesia, and the Philippines. In the case of Australia and New Zealand, this has extended into a single aviation market at the domestic level. We have also seen the emergence of new, privately-owned Asian carriers which are competing against the established state-owned airlines, coupled with the privatisation of some national flag carriers.

But these pockets of progress cannot hide the fact that, overall, Asia-Pacific lags behind the US and Europe in approach, pace and commitment to deregulation. By the same token, most Asian airlines are not nearly as prepared as their U.S. or European counterparts to cope with the pressures of deregulation.

The prevailing attitude of many Asian governments appears to be that, since their carriers are benefiting from the inherent growth in the sector and have been performing relatively well, the regulatory status quo will suffice. There is no long term view. All that needs to be done is to expand capacity in the traditional manner through bilateral negotiations – which are now required almost annually in many markets.

This complacency is also evident at the airline level. Many western airlines have emerged from the past few years of recession, restructuring and deregulation as far leaner, more efficient and more aggressive competitors. Asian carriers, by contrast, face rising costs – particularly for labour – falling yields and lower profitability. Somewhat ironically, aviation is now one of the few industry sectors in which many Asians are beginning to fear the Americans and the Europeans, rather than the other way round.

The Benefits of Liberalisation

In countries where the aviation market has been liberalised, consumers have benefited from increases in service frequency and quality, reduced prices and greater choice. Airlines themselves have also benefited from significant increases in traffic volumes. It's no coincidence that those airlines which have accepted liberalisation and embraced competition head-on are now among the world's most successful and profitable. Others which have been much slower to embrace market disciplines and have clung to government subsidies and protection, rank among the world's worst performing.

Growth forecasts for the Asia-Pacific region underscore the importance of moving towards a more liberalised regulatory regime for aviation. With growth rates outpacing those of most other regions, the International Air Transport Association predicts that Asia-Pacific will become the world's largest aviation market by 2010 -- accounting for slightly more than half of all global traffic.

This growth is being underpinned by economic development across the region, particularly in emerging markets. Research has indicated that as a country's per-capita Gross National Product rises to about US\$5000, the amount of air travel rises dramatically. Yet Asia's big three, China,

India and Indonesia – among the world’s four most populous countries -- are all still well below this threshold.

As Asian living standards rise, travel and tourism throughout the region is expected to continue to boom. Already the performance is impressive – in 1997, the World Travel & Tourism Council predicts that Asia-Pacific travel and tourism will generate gross output of close to one trillion US dollars (US\$969 billion) and provide employment for 175 million people.

Few industries are quicker or more effective than travel and tourism at creating jobs, earning foreign exchange and stimulating economic activity. It creates the infrastructural facilities, such as hotels, transport, communications and financial services, which are essential to support general trade and industrial growth. These infrastructure projects in turn inject new demand and attract private sector investment. The industry also creates many small and medium-sized businesses, nurturing entrepreneurial drive. According to the WTTC, this economic multiplier effect of travel and tourism generates up to two and a half times the industry’s direct output.

The linkage between aviation liberalisation and economic growth is clear. Increased competition, through more choice, better service and lower fares, encourages more people to travel, more often.

The potential for aviation liberalisation to contribute to world economic growth was recognised in a major report into air transport policy published in February this year by the Organisation for Economic Co-operation and Development. The report recommended further liberalisation and a more business-oriented approach to aviation policy – the first time that that the OECD has taken a policy stance on such matters. The report was also notable for another first, with Japan becoming the only member country to ever publicly dissent from an OECD report.

Shortcomings of the US Open Skies Initiative

So internationally, the forces in favour of aviation liberalisation are growing. But within Asia-Pacific, how do we make significant progress from here? In seeking an answer to this question, let’s start by taking a closer look at the current US open skies initiative within the region.

The American effort certainly represents an improvement on the status quo. Someone had to seize the initiative, and it had to be a big player with the necessary clout to get things moving. But let’s not be under any illusions as to why the US is making all the running on a bilateral approach to open skies. Quite simply, a bilateral approach will always favour the strongest party – which puts them in a truly formidable position.

The US can use its market clout to negotiate open-skies agreements, including fifth freedom rights, with a handful of much smaller Asian countries. As the only common element in this group of bilaterals, it stands to reap a huge advantage of each of its Asian bilateral partners. US airlines will be able to fly freely between these Asian countries. The only way to restore a level playing field will be for the Asian countries to negotiate similarly-liberal bilateral agreements between one

another – in other words, replicate the effect of a single multilateral accord involving all these Asian countries.

The Need for Greater Regional Co-operation

Setting aside the US issue, it would also be in the interests of Asian countries to develop stronger aviation links among themselves, to encourage increased travel and economic development at a regional level.

Another powerful reason for greater co-operation between Asian countries, and their airlines, is the need to improve their ability to withstand the growing threat faced from Western carriers. As mentioned earlier, many Western airlines are now more efficient and aggressive competitors than their Asian counterparts; this commercial advantage has been compounded by the formation of mega-alliances. The most far-reaching alliances in global aviation are those between major carriers in the US and Europe, such as United/Lufthansa, Northwest/KLM, Delta/Swissair/Sabena and the proposed BA/American tie-up. Within Europe, there are also various forms of alliance, often involving equity stakes, to exploit the Single Market. In Asia-Pacific, there are few examples of alliances of equivalent scope or size, and regional strategic alliances are virtually unknown.

In Europe and North America, there has been a strong correlation between the liberalisation of aviation policies and establishment of alliances between airlines. Increased competition, through liberalisation, and greater co-operation, through alliances, are necessary if Asian airlines are to prosper, and Asian consumers and economies are to benefit in the long term.

The most effective path to open skies on a comprehensive basis throughout Asia will require a more collective effort by governments. In short, Asia-Pacific needs to develop its own regional open skies bloc, similar to that developed in Europe.

Let's be under no illusions of the challenges faced in getting Asian nations to think as one on this issue. However, Asian nations are increasingly showing a willingness to work more closely together. And as growth rates in the region moderate as economies begin to mature, governments will be required to look harder at sectors such as aviation to extract their maximum economic potential.

The Development of Regional Blocs

As noted earlier, there is currently no Asia-Pacific body comparable to the European Union. About the closest grouping would be the Asia Pacific Economic Co-operation forum, APEC, which is committed to fostering economic growth throughout the region.

Indeed, Australia's Transport Minister John Sharp has already advocated that the air cargo sector be liberalised under the auspices of APEC. Many countries seem more comfortable about considering liberalisation of cargo than passenger transport. Perhaps this is because the correlation between increased air cargo competition and economic growth is more apparent: greater competition means more capacity, lower prices and a strong focus by carriers on providing value-added services.

But it must be recognised that APEC is a quite loose confederation, with a diverse membership. It may be difficult to develop a united position on aviation liberalisation overnight. It may be more feasible, therefore, to start the process through the formation of mini blocs.

The Association of South East Asian Nations (ASEAN) would be a logical place to start. It is currently the strongest and most cohesive forum of any involving Asian countries. ASEAN open skies would probably evolve from bilateral agreements between members, which would eventually coalesce into a multilateral accord within the grouping. This might then be extended to include Australia and New Zealand, which have already achieved a lot between themselves. Some of the countries in North Asia might be another logical mini-bloc.

In the absence of any such initiative at the moment, Singapore is doing what it can to achieve more liberal agreements with its Asia-Pacific counterparts. As well as the New Zealand open skies accord mentioned earlier, Singapore has significantly expanded air links with Australia.

Other international forums, such as the World Trade Organisation (WTO) may also have an important role to play. The past efforts of the WTO, and its GATT predecessor, to liberalise trade in services have included air transport, albeit with the focus being on so-called “soft” rights only. With the groundswell for liberalisation growing around the world, “hard” rights – including air traffic rights – might still be pushed up the WTO agenda. There is no reason why the principles and disciplines of the WTO cannot apply to aviation.

The Involvement of Japan

But regardless of which groupings are used to drive the process, substantive open skies in Asia-Pacific can only occur with the involvement of Japan. Unfortunately, as evidenced by their negative reaction to the recent OECD report, Japanese Transportation Ministry officials appear to continue to devote their energies to interpreting a historical document drawn up 40 years ago – the US/Japan bilateral.

Few people doubt that this agreement is lop-sided in favour of a fortunate few US airlines. But trying to fix or ‘reinterpret’ the agreement is missing the real opportunity – to look afresh at what sort of regulatory environment would benefit Japan as a whole into the 21st century. Japan could perhaps benefit from examining how Germany, with a somewhat similar outlook when it comes to aviation, previously became converted to open skies.

There are a number of powerful reasons why Japan should support aviation liberalisation. Efficient international aviation is vital to an economy that is export-led and that has substantial investment interests abroad. A nation that travels extensively also needs an efficient and market-driven aviation industry, while at a domestic level the very geography of Japan demands an efficient aviation system. Finally, liberalisation would benefit Japanese airlines and encourage them to become more internationally competitive.

This is not to suggest that Japan needs to immediately drop all restrictions. However, the longer the status quo is maintained, the longer the Japanese economy and consumers will be made to

pay, and the more difficult it will become for the high-cost Japanese airlines to adjust to the competitive world. Japan should also look to play a leadership role within Asia-Pacific and be at the forefront of the development of a regional open skies bloc. In doing so, its ability – and that of its neighbours – to negotiate with Europe or north America would be greatly enhanced.

Let's hope that, for the future success of Asian aviation, the bureaucrats in Tokyo can be persuaded that open skies is in the best interest of their compatriots as well as the neighbours throughout the region.

Conclusion

To summarize:

- Rapid air traffic growth in Asia-Pacific has served to obscure the fact that the region lags behind the West in terms of aviation liberalisation.
- Although the recent US initiative to introduce open skies on a bilateral basis with some countries is to be congratulated, it contains some inherent shortcomings and should only be seen as a first step in a much broader liberalisation process.
- The countries and airlines that will benefit most from the Asia-Pacific travel boom will be those which embrace the principles of liberalisation and competition. Established regional forums such as APEC and ASEAN have an important role to play in bringing about regulatory reform throughout the region.
- It is in all our interests – governments, airlines, consumers – to free aviation from its regulatory shackles, make our airlines more efficient and competitive, and unleash the full economic potential of this important industry.

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**INITIATIVES FOR LIBERALIZING
ASIA-PACIFIC AVIATION:
WHERE DO WE GO FROM HERE**

BY

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INITIATIVES FOR LIBERALIZING ASIA-PACIFIC AVIATION : "WHERE DO WE GO FROM HERE"

INTRODUCTION

Good afternoon. It is indeed an honour to be here and to be included in the distinguished group of panelists, moderators and guests to discuss and exchange views on the initiatives taken to liberalize the aviation industry in the Asia Pacific region. The aviation industry as a whole has gone through some turbulent times and is now beginning to show results of extensive belt tightening measures and innovative re-engineering that has enabled the industry to emerge stronger and better prepared for the future.

BACKGROUND

International air transport is a vibrant, high technology and capital intensive industry which has grown and expanded rapidly for the past fifty over years within a well defined legal, economic, regulatory and institutional framework set down in the **Convention on International Civil Aviation (the Chicago Convention)**. Air transport relations between States are basically governed by the approximately three thousand bilateral air transport agreements signed between States. This bilateral system of air services agreements have served reasonably well in facilitating growth and liberalization of international air services.

However, the regulatory and operating environment has been challenged in recent years by many changing trends and forces both external and internal to the industry.

The conclusion in **December 1993**, of the **Uruguay Round** on trade negotiations and the adoption of the **General Agreement on Trade in services** has had a significant bearing on air transport in particular increasing competition, globalization of the world economy, privatisation and liberalization of services industries. This has led to many aviation experts questioning the effectiveness of the traditional bilateral tools for regulatory market access, capacity, pricing and dispute resolution and also their responsiveness and suitability in providing for the most efficient and economic development of air transport in a global world economy.

Against this background, **ICAO** organised the **Air Transport Conference** from **23 November - 06 December 1994** to provide the aviation community with a unique, appropriate and timely opportunity to review the regulatory fundamentals and to consider a set of ideas for possible future arrangements emanating from the aviation perspective that will enable the industry to adjust to the more open competitive and dynamic global operating environment.

However, as we now all know this **Conference** failed to achieve its objective in propagating "**Multilateralism**" as the way forward for the growth and expansion of the airline industry.

This was mainly due to the differing views and objectives amongst the participating States as well as a certain degree of apprehension and understanding within the aviation industry.

The Asia Pacific aviation industry today is once again engulfed by the liberalization issue. This is partly due to the liberalization within the European Community as well as the signing of the "Open Skies" Agreements between the US and several European and Asian countries. Other contributing factors are the privatisation of airlines and the possible emergence of mega carrier alliances, development and growth of tourism industry and the desire to establish "hubs" within the region by individual countries.

GROWTH OPPORTUNITIES IN ASIA PACIFIC

The focus of the aviation industry would now seem to be centred on the Asia Pacific region. Growth in the Asia-Pacific region in the 1990's has compared favourably with that in Western Europe and is expected to out perform the rest of the world. The Asia Pacific region is now regarded as the dynamo of international air aviation industry and has become the focus of growth and a catalyst for growth beyond its own boundaries. Air transport has emerged as a significant mode of transportation, offering a competitive and viable alternative to other established modes of transport. It has also grown in importance in terms of GNP contribution and foreign earnings for most Asia Pacific countries. A report by ICAO, **Asia Pacific Traffic**

Forecasting Group projects the top 40 city pairs within the region could show traffic increases in aggregate terms at an average annual growth rate of 8.4% up to 1999, resulting in passenger traffic increasing from 34.5 million to 60.7 million. IATA also expects total air traffic to and from the region to reach by 2000 or 41.2% of the total global scheduled traffic. Asia-Pacific airlines are also projected to carry 39% of the total global air passenger traffic at the end of the century and 51% in 2010. Factors contributing to the buoyant growth are the region's strong economic performances, political stability and opening of new markets. The aggressive promotions and successful implementation of tourism programmes by countries in the region are responsible for Asia Pacific registering the fastest growth market for air traffic.

LIBERALIZATION IN ASIA PACIFIC AVIATION INDUSTRY

Given the above scenario for growth opportunities within the Asia Pacific region, it can only be expected that Governments within the region would actively pursue the issue of liberalization of air services. However, in reality, as in the past, countries within the Air Pacific region have generally been cautious and restrictive in terms of liberalization. Their philosophy has basically been one of "incremental increases" based on growth and market demand justification. This method have not gone down well with some carriers (particularly privatised carriers) looking forward to expansion of air services within the region. However, on a positive note this has to a certain extent ensured an orderly development of capacity

tailored to meet traffic demand in the region. This could possibly be one of the reasons for the success and profitability of most Asia Pacific carriers. Therefore, liberalization initiatives within the Asia Pacific region would be basically driven by the competitive self interest of carriers (especially privatised carriers) and the economic interest of the countries within the region. As we are fully aware that national aviation policy is the prerogative of the governments but in reality carriers do have a significant influence on the development of air policy.

It is expected the competitive self interest of privatised carriers will influence government policy and initiatives to seek for further liberalisation within the Asia Pacific region. This will enhance their competitive positioning as well as to take advantage of the opportunities available under a liberalized regime e.g. code-sharing alliances and greater market access. The existing restrictive bilateral arrangements do not augur well for privatised carriers. It acts as a hindrance to their growth potential and market accessibility.

The second factor for liberalization would be the economic interest of countries within the Asia Pacific region. The rapid growth and development of the economies within the Asia-Pacific region would spur Governments to seek for further liberalization within the aviation industry to boost tourism and economic activity. National interests would to a certain extent dictate the pace at which liberalization would be pursued at the expense of the

interests of national carriers who continue to seek protection and safeguards against competition from their Governments.

Therefore, it can be assumed that liberalization of the aviation industry by the Asia-Pacific region is inevitable except that it may be at a slower pace as compared to liberalization within the European Community and US. In summary, initiatives for liberalization within the Asia-Pacific region would also be dependent upon numerous factors as follows:

(i) ECONOMIC/POLITICAL/LEGAL DEVELOPMENTS

Countries within the Asia-Pacific region particularly Asian countries differ significantly in terms of economic, political and legal developments. This is somewhat different from the European countries who have a more or less homogenous economic, political and legal environments. Importance of air services increases proportionately with economic and political development as evident in the Asia-Pacific region. Thus, we have a wide gap between countries seeking rapid liberalization e.g. Singapore and those wanting to preserve the existing bilateral systems. e.g Vietnam. Moreover, the fear of being swarmed by mega carriers from North America and Europe, may also drive some Asian countries to put up barriers for

protection. However, on the whole, gradual liberalization based on a phased in time frame may be the key to liberalization of the aviation industry in the Asia-Pacific region. This may help allay the fears of Asia-Pacific carriers (particularly national carriers) and allow them to strengthen themselves to face competition under a liberalised environment.

(ii) **INFRASTRUCTURAL DEVELOPMENT**

The level of infrastructural development could be another important factor. At the moment, most airports in Asia are facing congestion and infrastructural problems. The opening up of new airports and the desire of the Governments to create major hubs in the region could have a significant bearing on the pace of liberalization in the region. Air corridors into and within Asia-Pacific are congested, a problem which won't be solved until **Future Air Navigation System (FANS)** is a widespread operational reality. However, the Governments desire to promote tourism growth within the Asia Pacific region coupled with the opening of new airports will dictate the pace of liberalization. Most Governments in the region will consider the total economic impact of new airports in terms of employment, financial and investment benefits.

(iii) **NATIONAL OR PRIVATISED CARRIERS**

It is also expected that countries with privatised carriers may be more inclined towards liberalization of air services than those countries with state owned carriers. State owned carriers may continue to seek for protection to maintain their share of the market. Countries whose carriers are ill prepared and incapable to withstand competition may be reluctant to pursue liberalization.

On the other hand, emerging and ambitious secondary carriers could bring upon pressure on their Governments to move towards liberalization. The allocation of traffic rights has always been a tricky and difficult decision for Governments which have more than one carrier.

(iv) **REGIONAL PACTS**

Some countries may prefer that their own bilateral and regional pacts be strengthened before moving towards, full liberalization. **Indonesia, Malaysia and Thailand** have signed a somewhat limited "Open Skies" deal as a part of a package to liberalize trade and services in the **Growth Triangle** area. Another example is the **Brunei, Indonesia, Malaysia and Philippines (BIMP) - East Asia Growth Area** regional pact. This could possibly provide a model for a broader intra Asian pact in the future e.g. an ASEAN "Open Skies" regime.

Overall regional cooperation and global attempts to further free trade will gradually pave the way for liberalization of the air services sector. However, this process has to be actively pursued by the respective Governments within the region in the interests of the nation and economic development of the region. National carrier interests may be sacrificed to a certain extent in the process.

CONCLUSION

In conclusion, it can be said that initiatives for liberalization of the aviation industry in the Asia Pacific region will gain further momentum in the near future. However, the degree and the pace of liberalization within the Asia Pacific region would somewhat be dictated by the above factors. In this regard, the role of individual Governments and their vision and desire for liberalization will be a significant factor. The individual governments and the desire of the privatised carriers for growth and expansion will practically dictate the pace of liberalization in the Asia Pacific region.

**British Airways/USAir Merger:
Financial and Traffic Analysis**

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ABSTRACT

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By late March 1993, the US Department of Transportation (DOT) and the Justice Department agreed to allow British Airways to purchase a 25% equity interest in USAir, with a 21% voting interest and code-sharing rights. This paper previews the history and background of the involved carriers, rationale of mergers, and the consequences of airline mergers and alliances. Part II of this paper evaluates pre- and post-alliance traffic statistics and financial performance in great details. This study examines the relative changes in traffic and profits on British Airways and USAir Group, Inc. Despite the consumer-led recession in 1988 and other social factors, it was found, subjectively, that USAir's management achieved a successful implementation of the cost reduction program announced in late 1991, a new labor agreement were reached with major organized employee groups, and a significant accomplishment in reducing expenditure. The alliance between USAir and British Airways offered travelers the most benefits of any global airline partnership.

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1.0 INTRODUCTION:

The trend toward globalization of the airline industry has accelerated in recent years as certain U. S. and foreign carriers have formed marketing alliances. Certain foreign carriers have made substantial investments in U. S. carriers, which have frequently been tied to marketing alliances, or, less frequently, reciprocal investments by the U. S. carrier in its foreign partner. Foreign investment in U. S. air carriers is restricted by statute and may be subject to review by the U. S. Department of Transportation ("DOT") and, on antitrust grounds, by the U. S. Department of Justice ("DOJ").

On January 21, 1993, British Airways and USAir announced that they have agreed terms for a new alliance between the two airlines. The first stage of the transaction included an initial equity investment by British Airways of \$300 million in USAir Group preferred stock and the signing of a flight code sharing agreement. This stage provided the foundation for achieving USAir goal of improved liquidity during 1993.

In April 1993, in conjunction with USAir's proposed sale of million shares of common stock, British Airways announced that it will exercise its right under the investment agreement of January 21, 1993 to purchase additional preferred stock in USAir to maintain its 24.6% holding in USAir Group's equity share capital on an undiluted basis. In May 1993, British Airways also invested an additional \$100.7 million in exchange for USAir convertible preferred stock.

British Airways nominated three of the sixteen directors of USAir and, accordingly, Sir Colin Marshal (Chairman), Derek Stevens (Chief Financial Officer), and Roger Maynard (Director of Corporate Strategy) have joined the USAir Board of Directors.

2.0 AIR CARRIER BACKGROUND:

British Airways (BA) is the world's largest scheduled international airline. Based at London's Heathrow, the busiest airport in the world for international flights. BA serves 165 destinations in 75 countries and carries 30 million passengers and 600,000 metric tons of cargo a year. About 1/3 of the company's revenues and 1/4 of its operating income result from service to the Americas. BA has worked hard at upgrading its services, and through layoffs and restructuring has transformed itself from a bloated, second-rate airline into the world's most profitable airline. The carrier has a 24.6% stake in both USAir and Australian Qantas Airlines and stake in many other domestic and international airlines.

USAir Group is a holding company for USAir, the fifth largest U. S. airline. Operating more than 400 aircraft, the company has hubs in Baltimore/Washington, DC; Charlotte, North Carolina; Philadelphia; and Pittsburgh, and overseas destinations in countries such as Bahamas, Canada, France, and Germany. USAir Group also owns

Allegheny Airlines and other aviation subsidiaries. The company's plans to end years of losses (stemming largely from price wars) included cutting annual costs by over \$1 billion, reducing under-performing flights, and seeking a merger.

3.0 RATIONALE OF MERGERS:

To enhance their profits, many businesses grow, which is often closely aligned with sales, operating capacity, and competition, among other factors. Most corporate growth occurs through internal expansion, which take place when the firm's existing divisions grow through normal capital budgeting activities. However, the most dramatic examples of growth, and often the largest increase in firms' stock prices, is the result of mergers¹. Mergers are the quickest way to grow and the most popular avenue to diversification. Mergers are highly visible, lumpy investment decisions, whose effects to company size, profitability, and employment has to be determined.

In most mergers, there are more or less clearly identified sellers and buyers. The simplest explanation must be that both buyers and sellers consider themselves to be better off from the merger transaction than without it. The primary motivation for most mergers is to increase the value of the combined enterprise, wealth increasing of share holders, and opportunities for improved operations.

If company A and B merged to form company C, and if company C's value exceeds that of A and B taken separately, then synergy is said to exist². Such a merger should be beneficial to both A's and B's stockholders. Synergistic effects can arise from four sources: (1) operating economies, which result from economies of scale in management, marketing, production, or distribution; (2) financial economies, including lower transaction costs and better financial analysts and media coverage; (3) differential efficiency, which implies that the management of one firm is inefficient, and that the firm's assets will be more productive after the merger; (4) eliminate access capacity; and (5) probably, a short run effect, increased market power due to reduced competition.

Operating and financial economies are socially desirable, as are mergers that increase managerial efficiency and lift profits to normal level, but mergers that reduce competition and lead to monopoly profit level are both undesirable and illegal.

Also, mergers can provide an outlet for excess cash. If a firm has a shortage of internal investment opportunities compared to its cash flow, it could pay an extra dividend, invest in marketable securities, repurchase its own stocks, repay outstanding bank credit and account receivable facility, or purchase another firm.

¹ Merger means any combination that forms any economic unit from two or more previous ones. For legal purposes, there are distinctions among the various ways these combinations can occur.

² If synergy exists, then the whole is greater than the sum of the parts. Synergy is also called the "2 + 2 = 5 effect."

In the case of the airline industry, mergers can bring among other incentives: (1) economies of traffic density; (2) preference of customers for large airlines; and (3) if the merger occurred at one hub, there may be limited opportunity for new carrier to enter the market because of gates and landing slots dominance and control.

European airlines are focusing on joint business arrangements (mergers) as a means for gaining strength and matching new competition from carriers based in the U. S. and other areas of the world. USAir/British Airways merger is directed toward the formation of a multinational holding company to oversee what would be two independent airline subsidiaries, and diversity partnerships. Some advantages arising from the development of a cross-border giant airline would be in purchasing power and in controlling passenger traffic and cargo movement over key routes.

4.0 CONSEQUENCES OF AIRLINE MERGERS:

There are a number of likely consequences of airline mergers. In the short run:

1. Increased equipment;
2. Opportunity to establish market identity;
3. Immediate access to more markets.

The consequences in the long run are:

1. Entry barriers;
2. A monopoly on some routes;
3. Coordination of behavior to lessen competition;
4. Reduced disparity with other competitors;
5. Better/worse carrier finance;
6. The release of airplanes for other uses or liquidation of equipment;
7. Increase/decrease in employment;
8. Better domestic and/or international route structure;
9. Domestic industry concentration.

Airline mergers do not conclude all the mentioned consequences. It all depends on the size, market, geographic location, and the financial/capital resources the merged airline have.

In analyzing the consequences after the merger, it is difficult, if not impossible, to isolate and distinguish the affects of the merger from the affects of the many forces such as the state of the economy, interest rate, fuel prices, and any major strike, which would influence the airline's behavior.

5.0 BRITISH AIRWAYS/USAir MERGER:

From British Airways point of view, the investments in USAir give the airline strategic alliance and a stronger presence in the major market of North America. In particular British Airways saw additional revenues from the 54 routes in the United States on which code-sharing agreement was in place.

The results of British Airways for the year of 1994 reflect early cost and revenue benefits from the global alliance. The majority of the benefits had come from the alliance with USAir, where work on achieving benefits from the transatlantic partnership was well advanced. Cost savings had been achieved in many areas including joint purchasing initiatives and engineering best practice.

Revenue benefits, which made up the major parts of the benefits, had principally been generated by linking the British Airways and USAir route networks through code sharing, joint frequent flyer programs and coordination of the airlines' sales efforts.

From USAir point of view, the alliance initial equity investment by British Airways provided the foundation for achieving the airline goal of improved liquidity during 1993. At the same time, British Airways commitment to the alliance with USAir, including code-share services and joint-programs for increasing operating efficiencies and revenues.

Through the combined route structures, USAir customers had improved access to 339 destinations in 71 countries. Code sharing between USAir and British Airways, initiated in 1993, offered customers the benefits of seamless travel- including one-stop ticketing and baggage check-in -to London and points beyond.

On the revenue side, the code sharing arrangement with British Airways provided a more attractive, seamless international product for USAir customers traveling to London and beyond. Reciprocal and redemption of mileage for USAir frequent travelers, along with the ability to combine mileage earned in the two programs, has spurred a two-fold increase for both airlines in frequent travelers flying each other's routes.

On the cost side, USAir realized savings through coordinated efforts in the areas of purchasing, aircraft maintenance, and cargo services.

Routes to London formally operated by USAir continued to be operated by British Airways under a "wet lease" agreement, through which British Airways leased three B767 aircraft from USAir, including cockpit and cabin crews, for service to London from Pittsburgh, Baltimore/Washington and Charlotte.

Both airlines also continued their joint program of reciprocal mileage earning and redemption for both USAir and British Airways' frequent travelers, which ended March 1997. Members of USAir's Frequent Traveler Program (FTP) received mileage credit for

any British Airways flights taken world wide and can request FTP awards to nearly 114 destinations in the British Airways' system.

5.1 Traffic and Financial Analysis:

5.1.1 Traffic and Operating Review:

Traffic between 1990 and 1993 for the airlines was weak in general and USAir in particular. There were two developments in 1990. First, the Middle East war which stood at the top of the list. The damage was done in the first quarter, when the Gulf War was accompanied by media inspired fear of terrorist attacks on commercial aircraft. No such attack occurred. Also, USAir had cut West Coast operations and a planned 6% growth in capacity for 1991 was reduced to what was essentially a "no growth" plan for the year, as can be seen in Table (1).

Second, was the death of many airlines. The year 1991 was the great extension. Three U. S. airlines closed their doors (Eastern, Midway, and Pan American), and two of them, Eastern and Pan American, go back to the earliest days of commercial aviation. In terms of traffic trends, the significance is that the closing of these airlines had almost no effect on the results. In the context of day-to-day operations they passed almost without notice.

The year of the merger (1993) had a positive impact on British Airways and USAir traffic. British Airways benefited the most despite of IATA member airlines weak international traffic and services in 1993, as can be seen in Table (1). In 1994-1995, USAir had been severely affected by increasing competition from low-cost, low-fare airlines in its principal geographic market area in the northeast of the United States.

In 1995 and 1996 British Airways passenger traffic (RPK) increased by 6.7% and 9.8% respectively while capacity (ASK) increased 4.4% and 6.7% respectively, resulting in a record passenger load factor for both years of 71.6% and 73.6% respectively, as can be seen in Tables (1), (2), and (3). The results reflect the continued strong performance in customer service standards, creating demand for passenger services on a capacity growth, which produced record seat and overall load factors.

USAir passenger traffic (RPM) for 1995 decreased by 0.9% while capacity (ASM) had decreased by 4.7% resulting in passenger load factor of 64.7%. USAir's 1996 available seat mile, or capacity, was down 2.2%, while revenue passenger miles increased by 4.3% resulting in a record load factor of 68.5%, as can be seen in Tables (1), (2), and (3). These results were USAir efforts to maximize revenues and yields in its core domestic markets through capacity "rightsizing" and operational refinements. Many of USAir's unprofitable flights had been eliminated.

BA/USAir Revenue Passengers Comparison 1990-1996						
British Airways			USAir			
Year	RPK m	% Change		RPM m	% Chnage	
1990	61,915			35,551		
1991	64,734	4.6		34,120	-4.0	
1992	65,896	1.8		35,097	2.9	
1993	73,996	12.3		35,221	0.4	
1994	81,907	10.7		37,941	7.7	
1995	87,395	6.7		37,618	-0.9	
1996	95,947	9.8		39,220	4.3	

Table (1)

BA/USAir Available Seats Comparison 1990-1996						
British Airways			USAir			
Year	ASK m	% Chnage		ASM m	% Chnage	
1990	86,601			59,484		
1991	92,399	6.7		58,261	-2.1	
1992	93,877	1.6		59,667	2.4	
1993	104,507	11.3		59,485	-0.3	
1994	116,974	11.9		61,027	2.6	
1995	122,063	4.4		58,163	-4.7	
1996	130,286	6.7		56,885	-2.2	

Table (2)

British Airways/USAir Load Factor Comparison 1990-1996				
Year	British Airways		USAir	
	Load Factor	Break-even LF	Load Factor	Break-even LF
1990	71.50%	63.30%	59.80%	64.50%
1991	70.10	64.80	58.60	62.70
1992	70.20	61.20	58.80	63.20
1993	70.80	62.80	59.20	61.70
1994	70.00	61.30	62.20	67.30
1995	71.60	61.50	64.70	64.90
1996	73.60	62.90	68.50	67.90

Table (3)

5.1.2 Employee Productivity:

A critical issue regarding the merger of British Airways and USAir was the integration of the two carriers without major disruptions. Experience with airline mergers suggests that “Murphy’s Law” occur more often than not. To address this issue, Table (4) following the text explore a productivity indicator for both carriers. Industry productivity has risen reflecting an essentially flat employee head count between 1990 and 1993 while overall capacity has grown. British Airways and USAir experienced rising RPK/Employee and RPM/Employee respectively.

British Airways was, and still is committed to recognizing the contribution to its success by its well-motivated and dedicated employees, and to fully involve them in making decisions. USAir has a dedicated, committed and able group of employees. Pilots, flight attendants, mechanics, ramp workers, customer service agents, and operations control employees all play vital roles in the operation of the airline.

British Airways/USAir Productivity Indicator 1990-1996				
	British Airways		USAir	
Year	Employees	RPK/Employee	Employees	RPM/Employee
1990	52,054	118,944	49,200	72,258
1991	54,427	118,937	45,300	75,320
1992	50,409	130,723	46,200	75,968
1993	48,960	151,136	45,400	77,579
1994	51,530	158,950	42,400	89,483
1995	53,060	164,710	39,900	94,281
1996	55,296	173,515	42,402	92,496

Table (4)

5.1.3 Financial Analysis:

Many different individuals and groups are interested in the success or failure of a given business. The most important are owners (investors), managers, lenders and creditors. An assessment of the long term financial health of a company is an important task for outsiders considering the extension of credit or an investment and for insiders in their formulation of strategy.

One measure of the profitability of a business is its net profit margin (NPM). This information is necessary to determine a company’s profit as a percentage of sales, which can be found in the company’s income statement.

British Airways net profit margin had been fluctuating between 1.92 to 7.56 over the period of this study. British Airways NPM increased by 2.61 reflecting strength in scheduled service businesses partly offset by the reduction in non-scheduled services.

USAir's net profit margin had been in the negative territory between 1990 and 1994. After five years of large and disappointing loses, USAir net profit margin (1995 and 1996 NPM of 1.60 and 2.38 respectively) was a refreshing and well-earned change from the previous years, as can be seen in Table (5).

This movement in profitability was the result of both improvements in the general economy as well as actions on the part of British Airways and USAir.

BA/USAir Net Profit Margin (NPM) Comparison 1990-1996						
		British Airways			USAir	
Year			NPM		NPM	
1990			5.10		-6.93	
1991			1.92		-4.69	
1992			7.56		-18.38	
1993			3.20		-5.55	
1994			4.53		-9.79	
1995			3.48		1.60	
1996			6.09		2.38	

Table (5)

Clearly the best-known liquidity measure is the current ratio, which examines the relationship between current assets and current liabilities. Current ratio measures the ability of the company to meet its financial obligations, as they become current. The main orientations of the lenders of a company are of two folds. Lenders have an interest in funding the needs of a successful business that will perform as expected. At the same time, they must consider the possible negative consequences of default and liquidation.

From the lenders' point of view, the larger this ratio, the better the position of the debt holder. In the case of British Airways, the current ratio had been improving with best result was in 1994 of 1.22 and it is fairly good relative to the "typical" industry current ratio. On the other hand, USAir's current ratio had deteriorated from 1990 to 1992 and had been showing improvement since the merger with British airways as can be seen in Table (6).

BA/USAir Current Ratio Comparison 1990-1996						
		British Airways			USAir	
Year						
1990			0.71		0.67	
1991			0.66		0.53	
1992			0.98		0.40	
1993			0.85		0.52	
1994			1.22		0.49	
1995			1.04		0.63	
1996			0.95		0.69	

Table (6)

The use of borrowed funds supplied by owners (investors) by profitable companies will improve the return on equity, which is translated to earning per share (EPS). However, it increases the risk of the business and, if used in excessive amounts, can result in financial embarrassment.

British Airways profit for 1996 was a new record, which was up 17.8% over 1995 (before provision against investment in USAir). This record profit is reflected by 1996 EPS of \$7.21. The result reflects continued focus on managing costs. Price/Earning ratio (P/E) is used to indicate how the stock market is judging the company's earning performance and prospects. British Airways P/E ratio has been very conservative in comparison to the industry average.

For USAir, this ratio does not indicate or measure anything between 1990 and 1994, because of the negativity of EPS for that period. USAir recorded positive net income for the years 1995 and 1996 compared to net losses in the previous years. USAir's improvement in net income reflects a revenue increase coupled with a decrease in operating expenses, as can be seen in Table (7).

BA/USAir Earning Per Share & Price/Earning Ratio Comparison 1990-1996							
		British Airways				USAir	
Year		EPS	P/E Ratio			EPS	P/E Ratio
1990		\$5.62	6.00			-\$10.89	-1.45
1991		2.34	14.00			-7.62	-1.59
1992		5.38	6.50			-27.23	-0.47
1993		3.37	14.00			-8.48	-1.52
1994		4.26	12.50			-12.73	-0.33
1995		3.97	16.50			0.55	4.10
1996		7.21	14.50			2.69	6.20

Table (7)

British Airways stock price shown an impressive performance since 1990. The maximum value for the stock between 1990 and 1996 was \$102.75 and the minimum value was \$37.625, while the average value was \$70.19³. On the other hand, USAir stock price has dipped to \$4.25 in 1994 from its maximum value of \$33.25 in 1990. The average stock price for USAir stock between 1990 and 1996 was \$28.31.

One interpretation of the variance is that it measures the "expected surprises". The surprise is not in the fact that expectation has not been realized, but rather in the direction and the magnitude of deviation. British Airways variance for the period 1990-1996 was 1060.32 compared to USAir variance for the same period of 24.38.

³ British Airways and USAir stock prices are based on daily closing price from January 1990 till December 1996. The data was collected by the author.

Because the variance squares each deviation, the author computed standard deviation, which is the square root of the variance. British Airways average stock price for the period 1990-1996 was \$70.19 and a standard deviation of 32.56% (which was more volatile than any single period) compared to USAir average stock price of \$28.31 and a standard deviation of 4.94% for the same period. Thus, during 1990-1996 USAir stock price was lower on average and slightly less volatile, other factors considered constant, than for British Airways. As a trend, British Airways stock price has been climbing since 1990 on average compared to USAir stock price which been fluctuating for the same period, as can be seen in Tables (8) and (9).

British Airways Stock Price Statistical Analysis 1990-1996						
Year		MAX	MIN	AVG	STD DEV	VAR
1990		\$37.625	\$27.50	\$32.56	5.06	25.63
1991		44.38	27.25	35.81	8.56	73.32
1992		46.50	43.13	44.81	1.69	2.85
1993		66.50	45.88	56.19	10.31	106.35
1994		66.63	56.63	61.63	5.00	25.00
1995		72.75	57.63	65.19	7.56	57.19
1996		102.75	72.00	87.38	15.38	236.39
1990-1996		\$102.75	\$37.625	\$70.19	32.56	1060.32

Table (8)

USAir Stock Price Statistical Analysis 1990-1996						
Year		MAX	MIN	AVG	STD DEV	VAR
1990		\$33.25	\$15.75	\$24.50	8.75	76.56
1991		15.88	12.13	14.00	1.88	3.52
1992		12.75	12.00	12.38	0.38	0.14
1993		13.00	12.88	12.94	0.06	0.00
1994		13.00	4.25	8.63	4.38	19.40
1995		13.25	4.63	8.94	4.31	18.60
1996		23.38	13.38	18.38	5.00	25.00
1990-1996		\$33.25	\$23.38	\$28.31	4.94	24.38

Table (9)

6.0 CONCLUSION:

British Airways/USAir merger had been a mutually beneficial relationship. It allowed USAir access to British Airways' market, created tremendous synergy, provided added value and convenience to customers, and extra cash that USAir desperately needed to reduce costs and expand its global presence. In 1996, British Airways expanded its network of code-sharing services with USAir in the United States to 78 cities. Passengers transferring to British Airways from USAir had risen by 49% to 560 passenger a day.

On October 24, 1996, USAir said that it is ending a key marketing agreement with British Airways effective Mar 29, 1997, in light of the British carrier's proposed alliance with American Airlines. USAir also said that it has informed British Airways that the link between the two airlines' frequent traveler programs will end on the same date. Although the move was a surprise, it will have little impact on USAir, which received far less revenue from the alliance that did British Airways.

The economic outlook is encouraging and industry results for the first three months in 1997 continue to show improvements in both domestic and international airlines' load factor. Industry financial performance remains positive, with IATA forecasting increased profitability for 1997.

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A TYPOLOGY OF STRATEGIC ALLIANCES IN THE AIRLINE INDUSTRY:

PROPOSITIONS FOR STABILITY AND DURATION

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Alliances: Stability and duration

**A typology of strategic alliances in the airline industry: Propositions
for stability and duration**

ABSTRACT

While strategic alliances have become commonplace in the airline industry, the stability and performance of these alliances remains questionable. In this article, the authors review the structure of recent alliances in the airline industry and propose a typology of alliances based on two key dimensions: commitment of resources and complexity of arrangement. Using this typology, the authors derive a series of propositions on the stability and duration of various types of alliances.

**A typology of strategic alliances in the airline industry: Propositions
for stability and duration**

A 1996 survey by Airline Business reported 389 alliances in the global airline industry, a 19 percent increase over 1995. These alliances range from simple code sharing agreements to equity swaps, management agreements, and joint governance arrangements. According to Airline Business, several trends emerged. First, there has been a decline in alliances involving equity stakes. Only 16 percent of the current agreements involved equity as compared to 18 percent of the prior year's alliances. Second, more airlines are becoming involved in the alliance movement. In 1994, there were 136 airlines engaged in some form of alliance. This increased to 153 in 1995 and 171 in 1996. Finally, many airlines are in the process of restructuring their alliance network, dropping some alliances and adding new ones. Iberia who reduced the number of its alliances from 27 last year to 13 was cited as typical of this trend, dropping alliances with a number of smaller carriers and adding larger, more established partners.

The airline industry is not alone in its growing attraction to alliance arrangements. According to Anderson (1990), more alliances have been announced since 1981 than in all of the previous years combined. Since 1985 the annual rate of alliance formation has been over 25 percent (Pekar & Allio, 1994). Problems of instability, poor performance, and failure are also not limited to the airline industry (Business Week, 1986; Geringer &

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Herbert, 1991). Doorley (1993) found that 60 percent of the alliances he examined had a survival rate of only four years. Less than 20 percent survived for ten years.

Porter (1990) has suggested that alliances are transitional rather than stable arrangements and rarely result in a sustainable competitive advantage. Hamel (1991) views them as a race to learn in which the winner will eventually establish dominance in the “partnership”. In their article, Bleeke and Ernst (1995) classify alliances into six types, only one of which they suggest will last longer than the median life span of seven years. The other types are destined to end in dissolution, acquisition or divestiture.

A growing body of research has begun to focus on the role of alliance structure and scope in promoting stable relationships and improved performance (Dussauge & Garrette, 1995; Osborn & Baughn, 1990; Parkhe, 1993). For this paper, we examined the structure, scope, and resource commitment of a number of alliances within the airline industry. Based on this study, we developed a typology of alliances from which we derived a series of propositions on the stability and duration of these alliances.

THEORETICAL BACKGROUND

Definitions

Strategic alliances are a distinct form of entry mode that have been used as a low-cost means of gaining access to new markets and local infrastructure (Doz, Prahalad, & Hamel, 1990). They have been defined as “relatively enduring interfirm cooperative arrangements, involving flows and linkages that utilize resources and/or governance structures from autonomous organizations, for the joint accomplishment of individual

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goals” (Parkhe, 1991: 581). We have excluded mergers and acquisitions from consideration since there would technically no longer be two “autonomous organizations”. This was not a major problem in the airline industry for two reasons. First, the industry is highly concentrated already and mergers and acquisitions are relatively rare events. Second, most national governments place severe restrictions on such activity.

In the joint venture literature, instability has been defined in terms of changing control (equity), termination, and duration (Franko, 1971; Killing, 1983; Kogut, 1989). From our perspective, a stable relationship is one in which there are no major changes in the relationship. This would include changes designed to increase or decrease the linkages between firms, however, it would not necessarily include the termination of the relationship. As Inkpen and Beamish (1997) point out, a stable venture may terminate when the strategic needs of one or both partners change. A termination that is “unplanned and premature from the perspective of either one or both partners” (182), such as the British Airways/ USAir alliance, would be considered an indication of instability.

Dimensions of an Alliance

Bleeke and Ernst (1995) based their typology of alliances on the market strength of partners, their motivation, and the outcome of the relationship. To this extent, it is a post-facto typology since alliances can not be ultimately classified until the outcome of the relationship is known. For example, an alliance between a weak firm and a strong firm can result in either a Type III alliance in which the weaker partner fails to gain strength and is acquired or divested or a Type IV alliance in which the weak partner increases its strength to become an equal and dissolves the partnership since it can now survive on its own. Our

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goal was to identify several characteristics or qualities that could be used to predict the stability and duration of alliance arrangements.

A review of the reported alliance arrangements to date revealed two key dimensions on which they differed: commitment of resources and complexity of arrangement. Figure 1 reports the classification of different alliance types by these two dimensions.

Type I - Codesharing. This was defined as a commercial agreement between two airlines under which an airline operating a service allows another airline to offer that service to the traveling public under its own flight designator, even though it does not operate the service (Burton & Hanlon, 1995). These agreements are point specific and must be arranged for each city the airline wishes to serve. Beyhoff (1995) distinguishes between five types of codesharing: free sale, wet lease, franchise, blocked space, and joint venture. Differences are related to which carrier is responsible for the risk involved and the predetermined allocation of seats. We have included only the free sale type of codeshare in this category. The benefit to this type of relationship is the ability to be route specific as well as offering “seamless” service to passengers. According to Humphreys (1994) the main reason airlines historically entered codeshare arrangements was to benefit in terms of CRS display since CRSs tend to place multiple displays on the first screen from which seventy to ninety percent of all flights are booked (Hadrovic, 1990).

This type of alliance (free sale code share) is characterized by a low level of required resources and a low level of commitment. Therefore, a codeshare agreement needs less attention from either partner than other types of alliances. There are no real

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resources needed here for either partner because, once programmed, the computer reservation system (CRS) will automatically show the flight with the carriers two letter code anytime it is asked. Due to the low level of commitment and complexity, codeshare agreements are the most widely entered into alliances and account for over 70% of all the alliances in the industry today (Whitaker, 1995).

Type II, Blocked Space Agreements, Revenue Sharing, "wet" lease, and franchising. A blocked space agreement exists when one airline allocates to another a number of seats on some of its flights: a kind of partial "wet lease". The other airline then sells these seats to the traveling public through its own marketing and distribution system (Burton & Hanlon, 1995). The responsibility for selling these seats fall on the "leasing" airline", as well as the losses incurred in the event that the seats are not sold.

In this case, there is a medium level of resource commitment because the airline must provide the seats to the "leasing" airline. This, in effect, means that the airline providing the seats has a better chance of meeting or exceeding break-even load factors due to the fact that those seats "blocked out" to the leasing airline will be paid for whether they are full or not. The "leasing" airline also has only a medium level of resource commitment because it only requires the use of the CRS to display the available seats on the flight. It is important to acknowledge that the "leasing" airline has a greater risk in this case because it will be the one to lose revenue if it does not sell the available seats. The complexity of the arrangement is low because there is not a great deal of coordination that must take place.

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though such things as maintenance support and training may be required, the level of interaction once the system is working is not substantial.

Type IV, Insurance and Parts Pooling. This type of alliance involves the joint purchase of parts or insurance by two airlines. Such an alliance would occur to spread out the high cost of insurance or to allow for a greater availability of parts. This type of alliance may be beneficial to those airlines which share facilities (i.e. hangers, etc), have similar route structures, or have small fleets.

This alliance consists of a low level of resource commitment. This is true for two reasons. First, both airlines in the alliance would have to buy insurance and parts in any event. Second, this agreement actually provides lower expenditures due to the sharing of expenses. The level of complexity is moderated due to the amount of interaction which might normally take place. Areas of coordination would include coordinating policies and coverages and coordinating part ordering for different maintenance facilities. The amount of interaction, although not high, may present a certain amount of difficulty.

Type V, Joint Service. Airlines entering into joint service partnerships have complementary route structures and are able to blend their flights. The partners are striving to provide "seamless" service to as many destinations as possible. This type of alliance is beneficial for airlines which have similar fleets as well as similar or complementary routes. Joint service provides airlines the ability to cut costs through the reduction of 'ground hours' (Gallacher, 1994). This type of alliance may also offer flexibility to both partners.

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Revenue sharing occurs when both airlines experience revenues that they would not otherwise experience without the arrangement. In other words, the ability of an airline to fill more seats through a joint venture codeshare, a blocked space agreement or a joint marketing agreement brings in more revenue for the airline and, in turn, the airline benefiting from the higher revenue will pass a portion of that revenue onto the other carrier (Beyhoff, 1995; Burton & Hanlon, 1995). A “wet” lease occurs when one carrier rents the aircraft and staff of another. In a franchising arrangement the operating airline “rents” the brand name of another airline but supplies its own staff and aircraft (Beyhoff, 1995).

These alliance types were placed under a Type II classification because the amount of interaction which takes place is generally low once the agreement has been reached. At the same time, it requires a moderate level of resources, i.e. the use of CRS, the surrendering of a block of seats from one partner to another, aircraft rental, etc.

Type III, *Computer Reservation Systems (CRS)*. This arrangement is one in which airlines share CRS. There are three major U.S. computer reservation systems, Sabre, System One, and Apollo. For many airlines, it is easier to use another airline’s system than to support its own. An airline could even go so far as to purchase a certain share of the reservation system from another airline.

The commitment of resources is high for this type of alliance. This is true because one airline must purchase\lease the system from another. Conversion to and training in the new system must take place. The airline providing the system may also include maintenance support. The interaction between partners is still low at this point. Even

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Both the commitment of resources and the complexity of the arrangement are moderate. In a joint service agreement, there is a significant amount of coordination of flights as well as the use of at least one partners aircraft.

Type VI, Management Contract. Airlines participating in this type of alliance decide that their partnership would be better served if one group of trained individuals were responsible for a portion of the alliance. This group can be made up of managers from both airlines or can be a group from only one airline. Often this type of alliance is entered into to ensure a constant level of service or to provide consistency in decision making.

The level of resource commitment is high in this case due to the fact that either one or both partners will be providing valuable employees to the alliance. The level of interaction is moderate due in large part to the hands off approach of top level management. The management group that will be working in conjunction with each airline has a high level of interaction in daily operations.

Type VII, Baggage Handling, Ground Maintenance, and Facility Sharing. This type of alliance is for airlines with similar routes who have the ability to work together in providing baggage handling and ground maintenance so that the operations of both airlines can run smoothly. The baggage handling agreement would be beneficial for any airline which has passengers transferring from one airline to another, especially overseas. Ground maintenance contracts can save an airline a great deal of time by having parts and maintenance personnel available at non-hub maintenance facilities. Finally, facility sharing can cut cost and provide each airline with needed gate availability or hanger space.

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Type VIII, Joint marketing. In this type of alliance, airlines are usually looking to market their joint service. Airlines spend a great deal of money in marketing and promotion of themselves, emphasizing in particular the size of their networks and their connections with the networks of their partners (Burton & Hanlon, 1995).

The classification for this type is a moderate level of resource commitment and a high level of interaction. The moderate level of resource commitment is due to the capital that must be placed into the marketing campaign. There is a high level of interaction due to the cooperation that must go into the preparation of the marketing program and the trust required between competitors in an industry where marketing is often seen as a key competitive advantage.

Type IX, Equity/Governance. Equity sharing or swapping is also used in airline alliances. The exchange of a certain percentage of equity or the purchase of shares by one partner accounted for 16 percent of the alliance agreements in the third annual alliance survey by Airline Business (June 1996). These alliances also frequently involve the participation of one or both airlines in the board governance structure of their partner airline.

This type of alliance has both high resource commitment and complexity. The purchase or exchange of shares represents substantial financial commitment while the level of interaction in shared governance situation requires interaction at the highest, strategic levels of the airline.

Stability and Duration of Alliances

Resource commitment and complexity have been the subject of extensive research and debate in a number of fields including entry mode strategy, organizational structure and design, and strategic intent. Resource commitment involves dedicating assets to a particular use in such a way that their redeployment to other uses would result in some level of cost to the firm. It not only limits strategic flexibility and serves as a barrier to exit but may result in sunk, unrecoverable costs to the firm (Harrigan, 1981). According to Parkhe (1993), the willingness to commit resources to an alliance lessens the perception of opportunistic behavior on the part of partners. A high degree of nonrecoverable, alliance-specific investment has been shown to create more stable, higher performing alliances (Freeman, 1987; Heide & John, 1988; Smith & Aldrich, 1991). Based in this line of reasoning, we would suggest that:

Proposition 1: The stability of an alliance will increase with the level of resource commitment. The most stable alliances will involve high levels of commitment by all parties in the alliance.

Proposition 2: The duration of the alliance will be positively related to the level of resource commitment.

Researchers have linked resource commitment (money, personnel, and time) to firm control, involvement in operations, and responsibility for decision making (Anderson & Gatignon, 1986; Root, 1987). Yet, the more complex the relationship the greater the “fundamental problem of cooperation” (Ouchi, 1980: 130). Alliances that involve greater

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coordination and integration of resources require a level of trust and interaction that is generally foreign to competitive firms. Kogut (1988) found that joint ventures were more unstable in highly concentrated industries, particularly when the functional scope included marketing and after-sales services. His finding is likely related to the “competitive” nature of marketing-related issues. The need for higher levels of coordination and integration is also likely to increase problems relating to incompatible systems, procedures, training, and organizational cultures. For these reasons, we suggest that:

Proposition 3: As the complexity of the alliance increases, so will the likelihood that it will experience instability.

Proposition 4: The duration of the alliance will be negatively related to the complexity of the alliance.

As our analysis of the current variation in alliance types (Figure 1) reveals, these two dimensions do not necessarily vary in tandem. It is possible to have an alliance that involves significant commitment of resources but low levels of complexity and visa versa. The difficulty in attempting to predict which type of alliance will be most stable or durable stems from the fact that the pressures applied by these two dimensions are conflicting: increasing resource commitment is expected to increase stability while increasing complexity decreases it. However, we would suggest that taken as a whole a pattern does emerge for both stability and duration.

A Type I alliance is characterized by low levels of both resource commitment and complexity. Such an arrangement is likely to have a very specific, limited scope and purpose. While this type of alliance may be terminated when the strategic focus of one or

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both parties changes, the fact that it requires relatively little attention and resources would seem to make it a potentially stable arrangement. In fact, such an alliance may endure long after its strategic purpose has ceased to apply simply due to organizational inertia or inattention.

Proposition 5: A Type I alliance will exhibit a high level of stability due to the limited nature of the arrangement.

On the other hand, a Type IX alliance consumes a high level of resources and requires the partners to engage in complex interactions such as joint governance. Partners in such an alliance would be expected to experience more problems related to integrating systems, cultures, managerial and competitive philosophies. However, the high level of resource commitment should increase the incentive of both partners to “make the alliance work”.

Proposition 6: A Type IX alliance will exhibit high levels of instability as partners seek to achieve a workable relationship

A Type III alliance involves a high level of resource commitment on the part of at least one party to an alliance arrangement that does not involve a great deal of interaction between the firms. This lack of interaction would tend to lessen the problems associated with incompatible systems, cultures, etc. In this case, the overriding issue may be the sizable cost of terminating the relationship. Therefore, we suggest that:

Proposition 7: Type III alliances will be the most durable type of alliance due to the high level of resource commitment and low level of complexity (interaction).

Finally, a Type VII alliance requires a high level of interaction between partners that is likely to reveal differences in training, supervisory approach, culture, etc. The fact that this type of arrangement does not involve high levels of resource commitment would make the decision to end the relationship less costly. Thus,

Proposition 8: A Type VII alliance is most likely to experience failure due to the high level of complexity (interaction) and low level of resource commitment.

CONCLUSION

The term "strategic alliance" has been applied to a wide variety of interfirm cooperative ventures. Within the airline industry the term has been used to describe everything from a simple single route codesharing to the elaborate agreement proposed between British Air and American. Given this level of diversity, it should not be surprising that researchers and manager alike differ in their assessment of the stability, duration, and performance of strategic alliances. In this paper we have suggested that alliances vary in relationship to two dimensions, commitment of resources and complexity of arrangement. In general, the higher the commitment of resources to the alliance the greater the stability and the duration of the relationship. The more complex the arrangement the less stable and the more likely the alliance is to end in failure. Taken together, these two characteristics result in contradictory pressures on the alliance.

We have argued that the most stable type of alliance is one in which there is low resource commitment and complexity because such a relationship usually has a very narrow, specific purpose and does not consume valuable resources in an effort to integrate

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interfirm activities or cultures. The most durable alliance will involve high levels of resource commitment to a relatively simple activity or arrangement. In this case, cost is the most significant pressure on the alliance. Those types of alliances most likely to fail are characterized by low levels of resource commitment, particularly nonrecoverable resources, to activities involving a high degree of complexity, interaction, and integration. Finally, alliances subject to the dual pressures of high cost and high interaction are more likely to experience instability.

From our perspective, instability in and of itself is not necessarily a “bad thing.” It can be an indication that the parties in the alliance are committed to establishing a successful partnership. Alliances have often been referred to as marriages. As such, we would expect to see periods of conflict, change, and readjustment as the partners learn and grow in their own right and in their knowledge of each other. It is possible that stability in complex relationships is the exception rather than the norm and that expecting stability only sets the relationship up for failure.

Further efforts should be undertaken to understand the elements that contribute to “successful” alliances in order to help firms achieve the theoretical benefits of this type of market entry. It is hoped that this paper will provide a fruitful basis for some of this effort.

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Figure 1

Typology of Alliances

Commitment of Resources

H i g h	III CRS	VI Management Contracts	IX Equity Governance
M o d e r a t e	II Blocked-Space Agreement & Revenue Sharing “Wet Lease Franchising	V Joint Service	VIII Joint Marketing
L o w	I Codesharing	IV Insurance & Part Pooling	VII Baggage Handling Ground Maintenance Facilities Sharing
	Low	Moderate	High

Complexity of Arrangement

The Effect of Strategic Alliance on Performance

A Study of International Airline Industry

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The Effect of Strategic Alliance on Performance

A Study of the global Airline Industry

< Abstract >

This study investigates codesharing alliances to see if they increase market shares of the carriers involved by analyzing a time-series data of fifty six airlines over the 1986-93 period. Our empirical results indicate: (a) codesharing, in fact, increases the carriers' market shares; (b) codesharings between existing airlines increase market shares less than those between relatively new carriers; and (c) the market-share-increasing effect of codesharing alliance is higher in markets with fewer competing carriers.

Introduction

As strategic alliances (SAs) within and across borders have attracted growing attention among scholars as well as managers since 1980s, prolific academic efforts have built up various theoretical perspectives on the dynamics of SA. One of the main academic efforts is the studies on the motives of strategic alliances: sharing risks and costs, learning through alliances, getting access to financial and technological resources, entering new markets, and creating new technology or venture projects (Berg, Duncan, & Friedman, 1982; Contractor & Lorange, 1988; Friedman & Kalmanoff, 1961; Gomes-Casseres, 1993; Gulati, 1993; Hagedoorn & Schakenrad, 1990; Harrigan, 1988a; Hennert, 1991; Kanter, 1988; Kogut, 1988; Mody, 1993; Parkhe, 1993; Pisano, 1990; Porter & Fuller, 1986; Shan, 1987; Williamson, 1975, 1985). However, only a few studies analyze the effects of SAs on performance of allied firms (Beamish, 1984; Blodgett, 1992; Franko, 1971; Geringer & Hebert, 1989 ; Hamel, 1991; Killing, 1983; Kogut, 1989; Parkhe, 1991, 1993; Porter & Fuller, 1986; Schaan & Beamish, 1988).

Even though these studies about the effects of SAs on performance have contributed to theoretical development, they have some limitations in explaining the dynamics of SA. First, to analyze the performance of SAs, they use proxy variables such as stability, duration of alliances, survival ratio, or perceptual satisfaction of managers. However, these proxy measures of performance may not properly reflect the real performance of SAs. For example, if the objective of an alliance was learning a specific skill as soon as possible, then a shorter duration could represent better performance. Perceptual satisfaction of managers can also create respondent bias. If a responding manager is a person who has highly involved in the alliance project, or has a strong commitment to the alliance, he or she may tend to answer more positively than otherwise. Second, the samples used in these studies included various kinds

of alliances in multiple industries. The bias resulting from differences in the nature of alliances and various industries may blur the effects of alliances on performance. Finally, previous studies measured only the performance of SAs themselves, mainly joint ventures, not the effect of SAs on the allied firms' performance. That is, they measured the performance of joint ventures in terms of stability, durability, or perceptual satisfaction. With a few exceptions (Mitchell & Singh, 1996), they did not measure how much SAs can improve the current performance of the allied firms.

As the number of non-equity alliances such as co-development of new products, co-promotion, cross licensing of technology, and co-purchasing has increased due to intensified competition, "what effects do SAs have on performance of the allied firms?" has become one of the most important, yet difficult questions. The difficulty of this research question is obvious by the following facts. First, firms may be reluctant to release confidential performance data, which can be critical in analyzing the effect of SAs on current performance. Second, it is not easy for scholars to control for various types of non-equity alliances, which can be a potential source of bias. Lastly, although non-equity alliances can be affected by market structure or market characteristics, it is very hard for scholars to obtain such data for some industries.

Therefore, in this paper, we analyze the effect of a single strategic alliance on the performance of allied firms in a single industry, i.e., codesharing alliance¹ in the international airline industry. Also, to control for some potential biases arising out of the selection of performance variables, we use the market share of each airline in a specific market. The market shares of the involving airlines in a specific

¹ The alliance involves one airline using its two-character designator code (e.g., "NW" for Northwest Airlines) to advertise a flight as its own in travel agents computer reservation systems, even though the flight is actually operated by its partner. Such 'code-sharing' allows airlines to connect traffic from foreign cities, which they do not fly to, with their flights. Because one airline lists another airline's flight as its own, that flight is listed twice in computer reservation systems (once under each airline's code) and more times if connections are involved (Mead, 1995). Therefore, a code-sharing alliance in a specific city-pair market can directly affect the market shares of the involving airlines in that market.

city-pair market can be directly affected by a code-sharing alliance in that market because one airline can list another airline's flight as its own through the alliance. Furthermore, to incorporate the market characteristics, we use some concrete market data which is fortunately available in the international airline industry. We also test how important the partner selection is in SA management.

The SA Effects on Performance

There are two main streams in the research of the SA performance. The majority of studies measured the performance of SAs by instability, mortality and longevity and dichotomized them into success and failure (Beamish, 1984; Blodgett, 1992; Franko, 1971; Geringer & Hebert, 1989; Hamel, 1991; Killing, 1983; Kogut, 1989; Parkhe, 1991; Porter & Fuller, 1986). Considering the various motives for forming SAs, we believe that this approach is too simple to measure the real effects of SAs on performance. Dissolution of SAs does not necessarily mean failure, just as survival and longevity do not necessarily reflect success. Other factors such as hidden agendas and conceptually flawed logic of SAs may explain the high mortality rates and low performance levels more effectively than the explicit and seemingly logical factors studied by various scholars. For example, as Parkhe (1993) argued, longevity may be related not with high performance, but with high commitment of managers or high exit barriers. When the objectives of SAs are temporary ventures such as learning specific skills, or when SAs are used as "stepping stones" or transitional modes of organizational structure until firms figure out more permanent or fitting structures, the dissolution of SAs should be planned, and would be considered by the parents as a success rather than as a failure (Parkhe, 1993).

The other stream, but minority, is to use more qualitative methods to measure SA effects, such as survey, case study, and combinations of several indices into one variable to measure

performance (Bleeke & Ernst, 1993; Parkhe, 1993). Although this approach can use more subjective data and measure performance of SAs more comprehensively than the first one, it has its own limitations. Because respondents of a survey or a qualitative research are usually the persons who were responsible for specific SAs and who have high commitment on their alliance projects, they might evaluate SAs more positively than others. This respondent bias may disguise the real performance of SAs. Furthermore, most samples of the previous studies have included a mix of various types of SAs such as licensing, sub-contracting, joint venture, commercial agreement, and marketing cooperation. They have also included various industries such as chemicals, machinery, transport, services, biotechnology, semi-conductor, and so on. Accordingly the biases created from the sample heterogeneity of alliance types and industries may confuse or dilute measurement of the SA effect on performance.

Even though we need to have some reservation in interpreting the result of previous studies due to these problems, SAs have implied some positive effect on the performance. Young, Smith and Grimm (1994) analyzed pooled time-series data of 2,347 competitive moves undertaken by 111 unique firms in the software industry from 1983 to 1991 and found out that allied firms outperformed other firms without cooperative moves in this industry. Mitchell and Singh (1996) found that interfirm collaboration can increase the allied firms' sales in the analysis of 938 software system businesses for American hospitals from 1961 to 1991. Harrigan (1988b) also suggested that among 895 SAs competing in 23 industries during the years 1924 to 1985, 45.3 percent of the ventures studied were judged to be successful by their partners. Parkhe (1993) surveyed 342 top managers, sixty percent of them directly responsible for the SAs, and found that game theoretic structure and partner nationality affected alliance performance. Bleeke and Ernst argued that among the 49 SAs, 51 percent were successful for both partners and only 33 percent resulted in failure for both. In their study, they employed two criteria to

measure performance; one was whether both partners achieved their ongoing strategic objectives, and the other was whether both recovered their financial costs of invested capital. Other studies suggested that performance of SAs could be affected by governance structure, partners, and scope of alliances (Axelrod & Keohane, 1986; Blodgett, 1992; Bucklin & Sengupta, 1993; Contractor & Lorange, 1988; Geringer, 1991; Geringer & Herbert, 1989; Legros & Matthews, 1993; Metcalfe, 1988; Oye, 1986; Paine & Power, 1984). Therefore, we hypothesize that strategic alliances will have positive effects on the performance of the allied firms.

Hypothesis 1: Strategic alliance in a given market has a positive effect on the performance of allied firms.

Partner Characteristics and Performance

Partner characteristics in SAs can be an important factor determining alliance performance. Previous studies related partner characteristics with the SAs themselves rather than with the performance of the allied firms. Even though no universal relationship has been found until now, Killing (1983) suggested that dominant partner alliances, among his three alliance categories, were more likely to be successful, at least compared to shared management ventures. This result implied how firms should select alliance partners and alliance patterns. On the other hand, Blodgett (1992) argued, in a study of 1,025 joint ventures, that joint ventures with 50%-50% division of equity were more stable than those with uneven shares of equity. He also maintained that joint ventures in relatively open economies were more unstable, as measured by shifting proportion of equity ownership, than joint ventures in restrictive economies. Harrigan (1988b) investigated country origin effects on alliances. According to her, cultural difference has a significant negative association with alliance success and a positively impact on alliance duration. Kogut (1989) and Harrigan (1988b) posited that horizontal

alliances tended to be more successful than vertical ones and Parkhe (1991) identified the importance of partner's resources. However, no general consensus has been emerged about the partner selection in alliance management.

Considering the positive effect of pooling various resources such as technology, know-how, brand image, and corporate identity (Pate, 1969; Nohria & Garcia-Pont, 1991; Pisano & Mang, 1992; Shan & Hamilton, 1991), we argue that partner selection can affect SA performance. Especially in inter-competitor alliances in a given market, partner selection can be more important in alliance management because the scope of available partners in inter-competitor alliances are restricted to the firms in the given market. More significantly, partner selection in inter-competitor alliances may determine the amount of resources that partner firms can utilize through alliances. In this respect, among inter-competitor alliances in the same market, the alliances between large firms may have stronger positive effect on performance than those between small firms due to the difference in the amount of resources. Similarly, the alliances between existing firms may have stronger positive impact on performance than those between new entrants due to know-how, brand image, marketing channels, and so on.

Hypothesis 2: SAs between current competitors or between large market sharers will have greater impact on the allied firms' performance than SAs between new entrants or between small market sharers.

Market Attributes and Performance

The impact of the strategy of a firm on its performance is one of the controversial issues in the strategy field. The resource based theory provides a theoretical underpinning for explaining and predicting significant firm effects (Barney, 1991; Hansen and Wernerfelt, 1989; Jacobson, 1988; Rumelt, 1984, 1987; Vasconcellos and Hambrick, 1989; Wernerfelt and Montgomery, 1988; etc.). Yet

their overemphasis on the intra-firm context leaves room for us to apply more comprehensive approaches.

Industrial organization (IO) theorists stimulated by Mason (1957) & Bain (1956) have maintained that industry structure is more important than other factors in explaining firm performance. In essence, IO theorists argue for a deterministic association between market structure and the average performance of firms operating in the market (Bain, 1968; Caves, 1982; Demsetz, 1982; Mason, 1957; Porter, 1980; Scherer & Ross, 1990; Stigler, 1968; Tirole, 1988). In line with IO theses, the marketing literature has long emphasized the significance of market context and its implications for competitor analysis, competition, and performance (Abell, 1980; Bass, Cattin & Wittink, 1978; Day, 1981; Fraser & Bradford, 1983; Kotler & Armstrong, 1989; Lehmann & Winer, 1990; Urban, Johnson & Hauser, 1984; Weitz, 1985). Yet, there is a general lack of attention to the specific market context in which firms compete with each other (Chen, 1994).

To test market context effects on performance of SAs, we incorporate market structure, market fluctuation, and market growth. Considering the argument that the performance of joint ventures and other forms of cooperation is more heavily influenced by their industries' structural traits than by the partnership and diversification traits (Harrigan, 1986; 1988b), these variables may explain new components of alliance effects on performance.

Market structure may be influenced by several factors such as the number of participating firms, firm size, concentration ratio, advertising-to-sales ratio, and so on. Among these factors, we focus on the number of participating firms because it largely determines market structures, and because it also has a major impact on the competitive intensity of a given market. The structure-conduct-performance paradigm contends that an industry characterized by high levels of competitive behaviors has negative

consequences on firm performance and profit (Astley & Fombrun, 1983; Khandwalla, 1981; Scherer & Ross, 1990; Stigler, 1968; Young, Smith, & Grimm, 1994). Intense competition in an industry or a market can drive up the acquisition costs of needed resources. It also makes competition for products or market positions more serious because competitors are more likely to attempt to respond to or deter competitive attacks. Nanda (1994) argued that as the number of firms in an industry increased, a firm's marginal revenue for any given output should decline. He also provided some evidences that the greater the number of firms in an industry, the more fierce the rivalry among competitors.

In the view of population ecology (Hannan & Freeman, 1977; Singh, Tucker & House, 1986; Romanelli, 1988), as the number of firms increases, the population density also increases. This process will decrease the number of niches left in a given market and will increase the competitive intensity of existing firms for resources and customers. Therefore the number of participating firms may determine the competitive intensity as well as market structure. For example, the competitive intensity of a market with many current firms and new entrants may be lower than that of another market with many current firms and new entrants. These differences in market structure, measured by the number of participating firms, will moderate the SA effect on firm performance.

Hypothesis 3: The performance of strategic alliances will be negatively associated with the number of participating firms in the markets.

Market share fluctuation can also be important because it represents the flexibility of the market. In a more fluctuating market, market shares of existing firms tend to change more easily than otherwise. Even though firms' strategies can make a difference in their performance, it is not easy for the firms to increase their market shares when market shares of existing firms are stable over a long period of time. Therefore firms can be more likely to increase their market shares through a specific strategy, like

strategic alliance, in fluctuating markets than stable markets. However, in a fluctuating, the effect of As can be exhausted more quickly than in a stable market. For this reason we treat the effect of market share fluctuation as an open research question in this paper.

The growth rate of a market can moderate the competitive intensity of markets. As Day & Jedungadi (1994) argue, "Early in the life cycle, when environmental uncertainty is mostly about customer requirements and market demand, the representation will give greater salience to the customer dimension. As growth slows and uncertainty about customer need abates, the emphasis is likely to shift to holding or gaining market share, which increases the salience of the competitor dimension."

When the growth rate of a market slows, firms' orientation to competitors and markets will be intensified, accentuating the competitive intensity of the given market. The growth rate of markets or industries was found to influence profitability of firms positively in a study of ten industries (Bass, Jattin & Wittink, 1978). For example, the competitive intensity in a fast growing market will be less likely to be intensified by new entrants than in a stagnant market. When market size decreases and market participants increase, the competitive intensity will most likely increase. Competitive intensity of a market usually has a negative relationship with performance of strategies as supported by Porter (1976). Given that the growth rate of a market influences the competitive intensity of that market, the growth rate of a market must moderate the individual firm performance which SAs can affect. However, low or stagnant growth rate of a market can drive incumbent firms to exit from the market, lowering the competitive intensity of that market. For this reason, we also treat the effect of market growth as an open research question in this study.

Data and Analysis Method

The sample selection is critically important in this research. For the purpose of generalizing the SA effects on firm performance, we must include various types of SAs in several industries. At the same time, to measure the pure effect of SAs on performance, we need to delineate exogenous effects caused by the differences in SA types and in the nature of industries. Considering the current state of art in SA literature which is at an exploratory stage, we choose to take the second path, that is to investigate a single SA in an industry. More specifically, we choose codesharing alliances in the international airline industry as our sample.

Performance measurement is another issue we need to compromise. It is not easy to define the exact scope of performance which could be directly influenced by SAs. Evaluating the effect of SAs in terms of simple criteria may create spurious relationships because SAs are driven by various motives and objectives such as reduced uncertainty, stabilized production, lower costs, quicker adaptation to market, technological and environmental shifts, and changes in consumer behaviors(Kono, 1984; Contractor & Lorange, 1988; Gulati, 1993; Hagedoorn & Schakenrad, 1990; Harrigan, 1988a; Kogut, 1988; Parkhe, 1993; Pisano, 1990). However, if certain alliances between competitors in a given market are driven by obvious objectives like more efficient production or market share increase, they can be evaluated in terms of a single criterion such as market share change or production cost. For instance, if a firm makes alliances for larger market shares in a given market with competitors of the market in which it also does business, this alliance's effect on performance can be evaluated by the change in market shares of the allied firms. we call this kind of alliance the inter-competitor alliance(Park, 1995), i.e., alliance between competitors in the same market.

We will limit analysis scope in this study within the inter-competitor alliance to test the alliance effect on performance. We seek to test whether SAs, in fact, have a linkage with performance improvement by analyzing a single strategic alliance in a single industry- codesharing alliance in the international airline industry. The reasons why we chose codesharing alliances in the international airline industry are as follows: 1) we needed an industry which had a large number of a single-form alliance to provide sufficient number of cases for the empirical study. Strategic alliances among international airlines have proliferated more than in any other industry. The number of strategic alliances in the international airline industry amounted to 263 as of 1994 July and to 177 during 1986-1993. This abundance of alliances gives opportunities for statistical analysis; 2) because codesharing alliances in specific routes usually aim to increase participating airlines' market shares in given markets, performance of SAs can be appropriately measured in terms of changes in their market shares. Therefore our choice of the sample is in line with the research guideline, that is to choose an industry with well defined and separated markets so as to increase the robustness of the relationship between independent and dependent variables (Gasscon, 1993; Karnani & Wernerfelt, 1985; Chen, 1994). In the context of the international airline industry, a market is usually defined as a route or city-pair of two different countries. Specifically, markets of international airline routes can be developed only with the bilateral or multilateral contracts of countries, which can play the role of entry barrier to outside airlines; 3) This industry has been traditionally known for its competitiveness (Bailey, Graham, & Kaplan, 1985; D'Aveni, 1994), rich source of public information (Chen & MacMillan, 1992; Chen, 1994), and identifiable strategic resources(Levine, 1987; Taneja, 1989).

Among the 177 SAs that took place during the period of 1986-93, we selected the 99 codesharing alliances among fifty six airlines as the final sample of this study. A codesharing alliance

permits researchers not only to limit its effect within that route but also to use the context of the given market as one of explanatory variables. We collected panel data about relevant markets and airlines in the international airline industry from 1986 to 1993.

When we tried to use some statistical analysis methods to analyze panel data such as panel probit model, panel logit analysis, or event history analysis, we encountered the problem that the dependent variable of this study was not a binary but a continuous variable. So, we centered all panel data on the point where codesharing alliances took place and pooled data of post-codesharing alliance period. To analyze the codesharing effect on market share change, we used frequency test and multivariate regression analysis.

Operationalization of Variables

Dependent Variable-Performance

Performance measurement has been one of the controversial topics in the business research. Scholars are frequently advised to be careful in measuring performance with ROA, ROS, or operating profit(Hax & Majluf, 1984; Venkatraman & Ramanujam, 1985,1986). Market share, on the other hand, has long been identified as one of the important variables that might affect a firm's strategy and the relationship between its strategy and performance(Buzzell, Gale, & Sultan, 1975; Ginsberg & Venkatraman, 1985; Hofer, 1975; Prescott, Kohli & Venkatraman, 1986). It is also argued that market share is largely free of aggregation biases and definition problems (Venkatraman & Ramanujam, 1986). Support for market share as a determinant of profitability was provided in the BCG(1974) and PIMS studies(1977). Therefore, we choose market share as a relevant indicator of performance in this study.

We measure changes in the sum of market shares of the two airlines which make a codesharing alliance with each other in a specific international route. If the codesharing alliance is effective, the sum of the market shares of the two partners will increase after the alliance agreement. The increase in the sum of market shares implies that codesharing is a positive-sum game to the two airlines. If the codesharing alliance is not effective, the sum of market shares of the two airlines will not change significantly. The data for market shares of each airline was obtained from the T-100 Data Bank 28 IM of U. S. Department of Transportation. The formula for market share change is as follows:

$$SMS_{kt} = (MS_{ikt} + MS_{jkt}) - (MS_{iko} + MS_{jko})$$

SMS_{kt} = Change in the sum of market shares of two airlines in market k at year t

MS_{ikt} = Market share of airline i in market k at year t

MS_{jkt} = Market share of airline j in market k at year t

MS_{iko} = Market share of airline i in market k at year 0

MS_{jko} = Market share of airline j in market k at year 0

Independent Variables

Alliance Period: We also controlled alliance period because it can moderate the effect of SAs on performance. It was measured in terms of years after a codesharing alliance took place in a specific route. Because some of the codesharing alliances that happened in 1986 lasted until 1993, the number of alliance periods ranged from one to seven. Due to the data pooling, the research design of this paper does not properly analyze the dynamic process of market share change along with the time lapse. We expect, however, that this variable can allow us to control briefly the effect of the longevity of the alliance period on performance improvement.

Partner Characteristics I & II: Partner characteristics were measured by the following two variables each of which we divided into two groups along with market share and status of each airline in a specific market:

Partner characteristics I = 1 if each codesharing partner is an airline which has above-median market share in that route.
= 0 if otherwise.

Partner characteristics II = 1 if each codesharing partner is an existing airline in that route.
= 0 if otherwise.

With these variables, we can test whether the effect of codesharing alliance on market share increase is significantly different according to the characteristics of alliance partners. This test will give us very useful implications about partner selection in inter-competitor alliance contract.

Market Structure: Market structure was divided into four groups by two criteria. One is the number of existing airlines divided by the total revenue-passenger miles (RPM) of that route and the other is the number of new entrants in a route divided by RPM of that route during the research period. These two numbers imply the number of existing or new entering airlines of each route per RPM. After finding the median values of these two numbers, we divided 99 international routes into the following four groups according to their structures;

- group one- above median of existing airlines and above median of new entrants
- group two- above median of existing airlines and below median of new entrants
- group three- below median of existing airlines and above median of new entrants
- group four- below median of existing airlines and below median of new entrants.

To test the relationship between market structure and performance increase through codesharing alliances, we assigned a dummy variable for this market structure as follows.

MSSTR = 1 if the market structure of a given route belongs to group one,
= 0 if otherwise.

This dummy variable can distinguish the market structure effect of group one by assigning zero for the other groups. Data for the market structure came from T-100 Data Bank 28 IM of U. S. Department of Transportation.

Market Growth: Market growth was measured in terms of the percentile change of RPM in each year divided by the previous year's RPM in that market. Data for this market growth measurement came from T-100 Data Bank 28 IM of U. S. Department of Transportation. To control exceptional cases, for instance, growing market with a decreasing number of airline companies or a decreasing market with an increasing number of airline companies, the growth rate of the market was divided by the growth rate of airline numbers in a given market. This process can reflect the change of competitive intensity which results from the change of the number of serving airlines and the change of market size. To use the market growth variable as an independent variable, which required one year's data loss, we shortened the research period from 1986-1993 to 1987-1993.

Market Share Fluctuation²: Market share fluctuation was assessed by adding the absolute values of percentile changes in market shares of all airlines in a market, compared to those of the previous year:

$$MF_{kt} = \sum_{j=0}^n abs(MS_{jkt} - MS_{jkt-1})$$

MF_{kt} = Market share fluctuation of the market k at year t.

MS_{jkt} = Market share of airline j in the market k at year t.

MS_{jkt-1} = Market share of airline j in the market k at year t-1.

² The mean value of the market share fluctuation is 47.89%, much higher than expected in the airline industry, which is shown in Table 1. The formula for the market share fluctuation resulted in the extraordinarily high mean value because the change of market share for all airline companies in a route was summed in terms of absolute value. For example, if airline A loses 5% of market share in a market and airline B gets 5% of market share in the market, then the fluctuation of market share should be 10% according to the formula. The other reason is that the data set of this study was originally constructed with a 10% sample of passengers of each route. This may create a virtual fluctuation of market shares.

This variable can measure the stability of a given market. For instance, when the market share of each airline in a given market repeatedly increases and decreases, the value of this variables becomes large, implying a great market share fluctuation. The data of market fluctuation was also obtained from the same source of market growth.

Control Variables

Market Size: The market size can moderate the relationship between the codesharing alliance and market share increases in the airline industry because it influences the industry structure as well as the competitive intensity within a given market. For example, market structure, competitive intensity, and strategic behavior patterns of firms in a large market are different from those in a small market. Therefore, we control market size which we measured by the adding RPMs of all airlines in a given market in each year. The information on market size was mainly drawn from the U.S. Department of Transportation database system which was constructed with ten percent sample data of total travelers in international routes.

Experience in Strategic Alliance: Through multiple SAs, participating firms can accumulate know-how how to manage alliances. These learning effects were supported by some empirical studies (Hamel, 1991; Mody, 1993; Park, 1995). This alliance experience can influence the effect of current alliance on performance improvement. We measured experience in strategic alliances by the simple summation of the number of prior SAs which both of alliance partners have established until a given year, with information drawn from the Airline Business. We included the SAs which were formed before 1986 but excluded the alliances after 1993. These numbers reflected all kinds of alliances conducted in the airline industry, such as joint venture, marketing agreement, block space agreement, maintenance agreement,

cooperation on the expansion of airport, joint frequent flyer program, ground handling joint venture, and joint scheduling, in addition to codesharing.

Results

Tables 1 and 2 present basic descriptive statistics and correlation for the variables used in this study. There are no serious problems of multicollinearity across the independent variables for the total sample. Because the correlation between market structure and market size was significantly high, we developed two other models which contained only one of the two variables, market structure and market size. However, the results of these two models were not significantly different from the result of the model reported in the following section. The high correlation between partner characteristics I and II did not cause serious problems because the models which had only one of the two alliance types revealed equivalent signs and significance with the models reported here.

Insert Table 1 & 2 about here

The hypotheses of this study were tested sequentially and the results are reported in Table 3 and 4. Regarding the first hypothesis that SAs will have a positive effect on performance of the allied firms, the result of the frequency test is reported in Table 3. For 62.8 percent of samples, the sum of market shares of the allied airlines increased after alliance formation, much greater than the number of samples of which the sum of market shares decreased. The maximum of the decrease in the sum of market shares after alliance was -35.9 percent while the maximum of increase in the sum of market shares after alliance

was 99.4 percent.³ The median of the change in market share sum was 3.5%. Therefore the fact that SAs have a positive effect on performance improvement was supported by the results of this study.

Insert Table 3 about here

Two models in table 4 were significant as indicated by the values of R square and F-value. Positive(negative) coefficients of variables reported in table 4 indicate positive(negative) effect of inter-competitor alliances on performance, measured by the change in the sum of market shares of two airlines in a specific market, with respect to that variable. The standard errors of coefficients are in parentheses.

To test the effect of each independent variable on performance of SAs, we developed two models based on different assumptions about the relationship between SA period and performance. The first model assumed a linear relationship with respect to these two variables. The underlying logic is that the alliance effect will increase with lapse of time because it takes time for managers to learn about this new cooperative system and for consumers to acknowledge the strategic change. Also, the effects of strategy implementation usually tend to have a certain time lag. The second model supposed a non-linear relationship between the two variables. It tests if a specific year has a significant relationship with performance. In the first model, the alliance period had a positive effect on market share increase while none of the six time dummy variables for each of the 7 years was significant in the second model. This supported a positive linear relationship between alliance period and performance.

Insert Table 4 about here

³ 99.4%, the increase of the sum of market shares of two airlines, is much higher than expected. This results from some extreme cases of sample which consist of only a few airline companies serving for the small number of passengers.

As hypothesized, the partner characteristics I variable has a positive effect at 1% significance level. This implied that the effects of codesharing alliances between large market sharers on performance was greater than those between small market sharers. However, the partner characteristics I variable, measured by the status of airlines in a market, has a negative effect on performance at the significance level of 1%. That is, codesharing alliances between new entrants increased their sum of market shares in a specific market more than those between existing airlines.⁴ This result suggests that it is relatively easier for new entrants to get some new market shares in a given market than for existing firms to acquire some additional market shares.

The research shows the negative effect of the market structure variable on performance, significant at 10% level. This means that the alliance effect on performance is likely to be greater in markets with fewer current competitors and new entrants than in markets with more current competitors and new entrants. This confirmed again the IO paradigm positing the negative relationship between the number of market participants and performance. Two open research questions are also supported at 1% significance level. These results show that SAs might contribute to performance increase greater in the fluctuating or growing markets than in the stable or decreasing markets. These results can be interpreted as follows: the possibility of market share increase may be greater in more fluctuating or faster growing markets than otherwise.

⁴ The correlation between market shares of airlines and market status was not significant at 10% level though the result was not reported here.

Discussion

We believe that this study increased robustness of research design testing the relationship between SAs and their impact on performance through the control of sample biases: one type of alliance, codesharing alliance, and its direct effect on market share. Compared to the previous studies measured duration or survival ratio of alliance, the result of this study may provide scholars and managers with more precise implications about the effect of SAs on performance.

For managers, this study confirms that SA may increase performance of sponsoring firms represented in terms of market share, market status, sales, or size. Specifically, for managers of airline companies, we expect this study to give a concrete answer to the question-whether airlines should make alliances with other airlines or not. The second lesson concerns partner selection. Inter-competitor alliance can seriously affect the competitive dynamics of firms in a market because a partner in an inter-competitor alliance is yesterday's competitor. The performance improvement through SAs can be significantly affected by partner selection. For example, in the case of large market sharers, it is better to select an equivalent airline as an inter-competitor alliance partner than smaller airlines in a given market. Lastly, airline managers should take into account the market context when they are going to establish a new SA such as market structure, market growth rate, and market share fluctuation.

This study, however, has a number of limitations in generalizing the empirical results into other industries. First, this paper analyzes only codesharing alliances in the international airline industry. The result of this study restricts the possibility of generalization into other forms of alliances, such as joint venture, licensing, R & D consortium, or marketing agreement. Second, the observation period after strategic alliance formation is only six years which is not long enough to evaluate the long-term effect of alliances. Third, the market share of an airline at a specific point could be affected by other factors such

as special package promotion, advertising, and price discount. However, this study can not control these kinds of promotional activities of airline companies. These restrictions may require researchers to be careful in interpreting results and also to do further research about various aspects of strategic alliances.

There is a need for strategy scholars to analyze the following topics which are related to what we have attempted in this research. The dynamic process of performance change with the lapse of alliance periods is an important issue in SA analysis. The distribution of increased performance through alliances between two or more allied firms is also a very sensitive and interesting topic. These more detailed topics are waiting for challenges from bright scholars as well as the generalization of research results of this study.

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Table 2. Pearson Correlation Matrix

Correlations	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1)	1.0000							
(2)	0.1187							
(3)	0.0893	0.0975						
(4)	-0.2948 **	0.1294	0.3773 **					
(5)	-0.0321	-0.0394	-0.1834 *	0.1191				
(6)	0.2557 **	-0.0211	0.1257	-0.1239	-0.0740			
(7)	0.2403 **	0.0852	0.0498	-0.0144	-0.0864	0.0535		
(8)	-0.1178	0.1084	-0.1891 *	0.1167	0.4542 **	-0.0297	-0.0323	
(9)	0.0131	0.1878 *	0.4372 **	0.1764 *	-0.0808	-0.0233	-0.0081	-0.1959 *

N of Cases: 215

1-tailed Significance: * - .01 , ** - .001

Table 4 Result of Multivariate Regression about Market Share Change

Variables	Model 1	Model 2
(Constant)	7.3444 (4.4769)	7.2491 (19.9237)
Alliance Period	2.3848 * (0.9534)	
Partner Characteristics I	6.8844 ** (2.6075)	6.7518 ** (2.6125)
Partner Characteristics II	-11.7329 *** (2.2448)	-11.7239 *** (2.2520)
Market Structure	-3.5867 * (1.8858)	-3.5206 * (1.8941)
Market Fluctuation	0.0951 *** (0.0322)	0.0918 *** (0.0328)
Market Growth	0.0073 *** (0.0021)	0.0082 *** (0.0023)
Market Size	-4.2115 (2.6541)	-3.9919 (2.6675)
Sum of Prior Alliances	-0.1377 (0.2107)	-0.1073 (0.2119)
Time Dummy 87		0.0974 (19.2588)
Time Dummy 88		7.3366 (19.2970)
Time Dummy 89		10.2418 (19.3147)
Time Dummy 90		8.1429 (19.3852)
Time dummy 91		11.4819 (19.8423)
Time dummy 92		7.6621 (20.7469)
R Square	0.2479	0.2647
F	8.4909 ***	5.5667 ***

*** < 0.01 ** < 0.05 * < 0.10

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Canadian Carrier Strategies and the 1995 Open Skies Agreement

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Introduction

The Canada - US "Open Skies" negotiation took place during a brief period which spanned the fall of 1994 and early 1995. It was conducted first through personal representatives, and later in formal bargaining sessions. After nearly 30 years of acrimonious exchanges between the two governments, the 1995 agreement was concluded with surprisingly little difficulty, and has ushered in a new era in transborder air transport.

This paper draws heavily on research presented in a longer paper entitled *Break in Overcast: The Negotiation of the 1995 Canada-US Open Skies Agreement*,¹ which discussed the dynamics of the negotiations in 1991-92 and 1994 Elliot-Kaplan talks. The current paper focuses on Canadian carrier strategy before and after the agreement.

The History of Canada-US Bilateral Agreements

The nature of Canada-US bilaterals has been tempered by a number of factors: asymmetries of market structure and size, and differences in ideology and state preferences. Transborder agreements have never been particularly easy to negotiate. The 1949 agreement was the first to grant *fifth freedoms* and this agreement was amended in 1959, when several routes were added. By the mid-1960s, both parties were dissatisfied with the agreement, but the resulting 1966 agreement took four years to negotiate and in the end was only successful following personal interventions by the US President, the Canadian Prime Minister, and the Canadian-born economist and former US Ambassador John Kenneth Galbraith (Chesen 1989: 7).

The 1966 *Air Transport Agreement* was modified in 1974. The US sought an agreement to cover charter flights, while Canada sought more and longer routes for its carriers. Again, the process was protracted, lasting more than two years. The result was three separate agreements which covered supplementary services: the 1974 *Non-Scheduled Services Agreement* which concerned charters, the 1974 *Pre-Clearance Agreement*, and a route agreement which granted US carriers 23 new routes and 5 route additions, and 14 new routes and 3 route additions to Canadian carriers.

This negotiation preceded the deregulation of the US market and the deployment of the *hub-and-spoke* route systems, and was a very limited Bermuda-pattern bilateral exchange of routes. The new traffic patterns produced by deregulation in the US sparked almost immediate demands by the US carriers for routes which fed into their hubs. As well, the US government wished to liberalize tariff-setting on the routes. Canadian carriers, operating in a market with a different structure and regulatory environment, and desiring far fewer routes than were demanded by the US carriers, were lukewarm to these proposals.

¹ This paper by the present author was written as a graduate research essay at the Norman Paterson School of International Affairs, Carleton University, October 1996.

The “bean-counting rounds” of 1979-82 were unproductive, and produced considerable bitterness on both sides of the border. Two years later, in an attempt to produce a history of success, several lesser disputes were addressed through exchanges of diplomatic notes: the *Regional, Local and Commuter Services Agreement*, and the *Experimental Transborder Air Services Program*.² The 1984 *Exchange of Notes on Regional, Local, and Commuter Services* (RLCS notes) was an addendum to the bilateral agreement which covered services by aircraft of 60 or fewer seats. The notes allowed for automatic qualification for new services on some routes, while others could be flown under discretionary approval from both governments.

Position papers were exchanged in the 1980s. The Canadian position on routes allowed for the granting of *cabotage extensions* for both countries; the US proposed “Open Skies” liberalization of international routes only, with no domestic rights.³ The Canadian position on tariffs was somewhat less liberal. Where the US suggested a virtually unregulated regime, requiring *double disapproval*⁴ to block tariff changes, Canada favoured a regime less restrictive than the prevailing one, but which contained safeguards against destructive competition and rate wars.

By 1991, however, it was clear to virtually all parties that the agreement was stifling transborder market growth. The Canada-US aviation market is the “single biggest bilateral air relationship in the world, with more than 13 million air passengers in 1989 generating approximately \$2.3 billion in revenue” (Transport Minister Doug Lewis quoted in *Financial Post*⁵ 1991:12).⁶ However, while passenger traffic between Canada and its other markets grew by 5.9 per cent annually between 1980 and 1989, the average growth in the Canada-US market was only 2.3 per cent (Carr, 1991). While long-term growth in air travel worldwide is significantly higher than the growth in total trade, the transborder air services between the two countries had underperformed trade growth. The United States Airports for Better International Air Service (USA-BIAS) lobby estimated that, had a less restrictive air agreement been put in place in 1980, the transborder market would have handled 15.1 million passengers in 1989, instead of 8.3 million (actual), generating \$9.3 billion more in benefits to airport communities (USA-BIAS 1990). Despite this, of the 238 US hub-Canadian city pairs which could have been served, only 28 per cent had non-stop or one-stop service (USA-BIAS 1990).

² Geoffrey Elliot was External Affairs’ Chief Air Negotiator for the 1984-85 rounds, which constituted an attempt to repair the relationship. The actual negotiation of treaties is conducted by External Affairs (now the Department of Foreign Affairs and International Trade – DFAIT) while Transport Canada is responsible for developing the negotiating mandate and providing policy and technical advice to the Chief Air Negotiator.

³ The use of the term “Open Skies” in transborder talks dates to this period.

⁴ Both governments would have to reject a tariff change for it to be disallowed.

⁵ *Financial Post* Conference *Open Skies: Thrive or Survive in the Deregulated '90s*, hereafter FP91.

⁶ The discrepancy between this and the previous cited figure probably arises from the exclusion of charter traffic and transborder portions of international journeys.

There were also imbalances in the traffic. The market share of US carriers on transborder routes has risen over the life of the agreement. While only 40 per cent of transborder traffic originated in the US, American airlines carried 60 per cent of it, earning approximately \$500 million more in revenue than Canadian carriers. This gap had grown by almost 90 per cent between 1981 and 1987 (Desrochers, FP91: 57).

For its part, the US continued to press for a liberalized agreement called "Open Skies" in which there would be no restrictions on routes, capacity, or tariffs, and which would be effective immediately on the signing of the agreement. This was clearly a political non-starter in Canada, where voter sentiment is easily aroused by any concessions to US interests over Canadian. While some Canadian stakeholders favoured immediate Open Skies, the airlines were amenable only to an agreement which was phased in over time. Smaller communities, which feared they might lose services, and labour, which feared job loss, could be counted upon to lobby strongly against any rapid deregulation of the transborder market. The Progressive Conservative government under Brian Mulroney had concluded a Free Trade Agreement with the US, despite strong opposition from economic nationalists, organized labour, and left-wing political parties. There was a limit to its ability to negotiate a liberal air transport agreement.

The 1991-92 Negotiations

Twelve rounds of bilateral negotiations were conducted in 1991-92, but ended in deadlock on a number of key issues. These included Canadian access to the US market (airport access standards and the "slots" issue") and safeguards for the Canadian industry (which had come to be seen as a phase-in period). Also under discussion were the "Fly America" policies, traffic rights involving third countries, code-sharing, pricing issues, harmonization of standards, dispute settlement, and a range of issues pertaining to customs. Momentum on the slots issue, in particular, had slowed to a crawl far short of agreement. Both negotiating teams were exhausted and frustrated. The end of the Bush administration in the US added to the difficulties. The US team's mandate to negotiate was increasingly questioned, and eventually the head negotiator resigned.

The failure of the talks, though it was largely a function of competing stakeholder demands, left virtually none of the stakeholders on either side of the border satisfied. The 1966 agreement was a bottleneck in the further development of a market of significant value. While both sides recognized this, there was little political will to engage in another fruitless negotiation.

The Elliot-Kaplan Framework Talks

After the breakdown of talks in 1992, the Progressive Conservative government was defeated in the election of 1993, and the Liberal Party took power. The new Minister of Transport, Doug Young, agreed with the consensus that the agreement needed to be modernized, but had other pressing issues on which he placed a higher priority. His officials at Transport Canada continued to hold the view that some sort of agreement might be possible, even if it was a series of partial agreements like those which had been created to address specific issues in the 1980s.

Federico Pena, the Secretary of the US Department of Transportation (DOT), held similar views about the value of partial agreements. Like Young, he had no previous investment in the failed negotiation. At a meeting on an unrelated matter, Young and Pena concluded that they would like to try to break the log jam. Each would send a single personal representative to conduct a series of meetings, the purpose of which was to describe the areas in which an agreement was possible.

The two representatives would discuss in good faith, and with the clear understanding that they spoke with the blessing of their respective top officials, but any result they reached would be non-binding, and concessions made in the course of the discussions were not, themselves, binding for any future negotiation. It was further agreed that neither representative could be a principal in the previous failed negotiations. This latter condition was meant to ensure that the two had not built up entrenched views as a result of a long and unsuccessful bargaining process.

The representatives eventually agreed upon were Geoffrey Elliot and Stephen Kaplan, both experienced in air negotiations. Elliot had been Chief Air Negotiator for Canada's Department of External Affairs from 1983 to 1986, and was well-known in the industry. He subsequently served as Consul General of Canada in Atlanta, Georgia, and at the time he was asked to hold the talks, had been an executive of a major Canadian forest products company for five years. Stephen Kaplan was Senior Counsel for the US DOT, and was well-acquainted with the bilateral process.

The Elliot-Kaplan Process

When Elliot was contacted by Assistant Deputy Minister of Transport Moya Greene in the early summer of 1994, the proposal was for a couple of meetings with a US negotiator over a two-week period. If no assurances of success could be given, the issue would be dropped. In subsequent discussions with Transport Minister Young, however, Elliot pointed out that the only way that he could guarantee a successful outcome to any proposed talks would be if all the issues which had led to failure in the past were pre-negotiated. In any case, though he was willing to have informal discussions, Elliot was unwilling to lead a formal government negotiating team. It was agreed that he would report directly to the Minister.

Elliot and Kaplan first met in September 1994 at a hotel in downtown Toronto. The meeting was attended by Transport Minister Young and his executive assistant, Secretary Pena, and US Ambassador to Canada, James Blanchard. After a brief introduction, the two negotiators were left alone to chart their course. Elliot and Kaplan came to an almost immediate meeting of minds. They agreed that both their respective governments would not enter into formal negotiations if they could not be assured of success, and that:

- meetings would be private, with only one junior note-taker⁷ present for each side,
- meetings would not take place in government offices,
- the objective of their talks would be to identify all issues which were deal-breakers and reach substantive agreement on them, and that
- they would submit one agreed-upon document to their political masters "as a package".

Elliot and Kaplan felt that most of the small issues could be set aside with confidence that if the big issues could be solved, these could be negotiated later by governments. Four meetings took place, which were supplemented by phone conversations.⁸ Meetings alternated between Washington and Toronto. In Washington they met in the Grand Hotel, in Toronto at the office of the forest products company at which Elliot was then working.

The meetings which followed resulted in a 13-page briefing note to the respective governments, called *Framework for Resumption of Canada-US Transborder Air Negotiations*, or simply the "Framework Agreement". It recommended a set of principles which were agreeable to both Elliot and Kaplan, and laid out the major issues. Issues which were secondary were noted at the end of the document. Several major issues relating to US pre-clearance at Canadian airports were considered outside the mandate of the two representatives. These were noted and left aside, with the recommendation that governments address them only after an Open Skies deal was reached.

The Negotiation of the 1995 Air Agreement

As the government negotiating teams got down to settling the details and converting the document into legal language, it rapidly became evident that both sides viewed the Framework provisions as unalterable. Neither side attempted to re-negotiate a major provision, recognizing that any such attempt risked disturbing the Framework provisions on other major issues. In one or two cases the governments still had to resolve differences in interpretation of the Framework language however, on the whole, the precise terminology used by Kaplan and Elliot had the desired effect of making the terms of

⁷ The note-taker was to be a person who had not been substantively involved with the file.

⁸ The meetings were October 17-18 1994 in Washington, November 14-15 in Toronto, November 30-December 2 in Washington, and December 12-13 in Toronto.

resolution for each issue very clear. This tended to speed up the process to some extent, since only relatively minor issues remained under discussion.

Another impetus to the rapid conclusion of the agreement was the recognition that if it could be completed by February 1995, it could be signed during President Clinton's visit to Ottawa which had been planned for some time. The visit was a diplomatic courtesy, and no outstanding event had been identified for it. The signing of a major international agreement such as "Open Skies" offered an opportunity for the White House press office to showcase the President's diplomacy. This lent a measure of urgency to the US team's efforts and may have allowed the Canadian team a degree of leverage which it generally lacked in negotiations with the US.

Open Skies as a Product of Changing Strategy

In *Break in Overcast*, a number of changes were presented as contributing the success of the Elliot-Kaplan talks. These included changes in the Canadian politics as the benefits of the FTA and NAFTA became more clearly understood, changes within the airline industry brought on by globalization, and changes in US legislation which made the slots issue easier to manage for DOT (Gleimer, 1996). The change in the bargaining process was also a decisive factor. The Elliot-Kaplan framework collapsed the bargaining into a one-shot game, reducing uncertainty and the potential for strategic behaviour among the stakeholders.

These factors were all important, but this paper concentrates on one significant change: the willingness of the air carriers to buy into the Elliot-Kaplan process in the first place. In previous iterations, bargaining had been carried out with the airlines at the table. While the Minister had brought a variety of other stakeholders to the table in 1991-92, airline representatives considered them to be unnecessary, and discussions took place to which these other members were not privy.

The approach of using a single government negotiator, without direct airline participation, was unprecedented. Air Canada and Canadian were willing to accept this in 1994, partly because of the evolution of very different corporate strategies, each of which could be facilitated by a liberalized agreement.

The carriers started the 1991 negotiations with very different views of what an agreement should look like. Air Canada had a dominant position relative to its domestic rival on the transborder. It had route authorities and slots for virtually all of the routes which interested it at the time. The exception was Washington National, and this airport, for reasons too involved to mention here, was treated as a separate issue in the negotiations. The status quo was not perfect for Air Canada, but the "cost of no-agreement"⁹ was low.

⁹ Putnam (1988) provided the framework used in *Break in Overcast*.

At the outset, Air Canada had held that some sort of limited cabotage for Canadian carriers in the US could "level the playing field". Leo Desrochers, Executive Vice-President Marketing and Sales, commented that:

the ability of Canadian carriers to carry passengers beyond domestic US gateways could be another means of off-setting the huge imbalance and inherent advantage US carriers now enjoy (FP91: 59).

The issue has been seen in another light, however. As long as cabotage was on the table, it could be used to scuttle the negotiations, since the US was very unlikely to accept it. The issue pointed to a split within Air Canada management:

Claude Taylor gives the impression open skies with cabotage is the ultimate price. Other Air Canada spokespersons talk about the dire consequences of any form of cabotage. Canadian Airlines are at least consistent on the cabotage issue; they are opposed (Bourgeois, FP91: 32).

By some accounts, this reflects a "schizophrenia" in which the carrier's management was split among three strategic responses. The first was a tactical response, keeping cabotage on the table and using it as an excuse to kill any potential agreement which they considered negative on other dimensions. A second group was affected by a "hubris" which caused them to believe that they could be a global carrier -- for them, the expansion of market into the US was a stepping stone to a global position. A third group was violently opposed to the idea, and considered it a "doomsday" option. This ambiguous situation within Air Canada no doubt contributed to the vagueness of their proposals, led to frustrations among other stakeholders, and may have impeded coalition forming among them.

Air Canada's public statements, made clear references to the economic rents that the airline wished to gain and to protect, domestically and internationally, but did not indicate any strong desire for a liberalized transborder market.

Canada's view on cabotage was, as mentioned, consistent. Cabotage, according to Executive Vice-President and Chief Operating Officer Kevin Jenkins was "a solution where there is no problem". The notion of trading some measure of cabotage in Canada for Canadian access in the US would not address any existing capacity shortage on either side of the border and, he argued, "the potential downside for the Canadian industry is far greater than the upside" (FP91: 65).

A domestic issue also would have to be addressed in any negotiation which led to the acquisition of new routes. Canada's, Kevin Jenkins, was of the opinion that

the extent to which our domestic competitor is larger than us is attributable in large measure to their far greater access to US routes. The next agreement must reflect the new reality. (FP91: 65)

In other words, Canadi>n could be counted upon to lobby for a larger share of the new routes to address what it perceived as an uneven existing arrangement. By blocking a new agreement, Air Canada would preserve its own dominant position.

While Canadi>n was not as clearly protectionist as Air Canada, its initial bargaining position was not a formula for "Open Skies" but for a somewhat more liberalized Bermuda-style bilateral. It addressed the issues of new service requirements within a framework which implied continued government control over the development of incremental route additions.

The reason Canadi>n opposed cabotage was not limited to the perception that there was no capacity shortage which provided a market opportunity. Canadi>n was in the process of negotiating a deeper strategic alliance with American Airlines, in which the airlines used codesharing extensively. This meant that Canadian had little to gain from cabotage in the US, since moving its passengers in the US was most effectively handled by code-sharing with its much-larger US partner. This strategy grew in importance through the period of the negotiations.

The cost of no-agreement for Canadi>n was a limitation on its ability to serve transborder routes, and the continuation of its competitive disadvantage vis-à-vis its domestic rival. While Canadi>n favoured an agreement, the cost of failure was still relatively low compared to an outcome which might have benefited Air Canada. It is difficult to imagine, however, that the Canadian government could have constructed a more favourable situation for Air Canada than it already had. Air Canada completely dominated the Canadian share of scheduled transborder traffic.

The Airlines in 1994

In the period between the failed 1991-92 talks and the "Framework talks", several developments modified the perceptions of the cost of no-agreement. The first was the resolution of the Gemini computer reservation system dispute.¹⁰ This had been a protracted battle in which the fate of Canadi>n hung in the balance. The decision, in which Canadi>n was allowed to withdraw from the contract and purchase its services from American Airlines' *SABRE*, was less important than the implications it had for the strategic alliances of the two airlines. Canadi>n was able to pursue a strategy based on integration with American Airlines operations through code-sharing which ultimately resulted in an anti-trust exemption under US law in 1996 for their combined operation.

In the period between the failed negotiations and the Elliot-Kaplan Framework discussions, Air Canada also built alliances with major US carriers United and Continental, taking an equity position in the latter. By 1993, Jean-Jacques Bourgeault articulated an

¹⁰ Canadi>n sought to withdraw from the CRS which was jointly owned by the two airlines.

Air Canada strategy based on alliances, in which increased US access was a key selling point to its partners:

Our niche at Air Canada is largely geographical. ... Of course, we cannot compete with the mega carriers – plane for plane, route for route, passenger for passenger. What we can do is develop our niche as a strong Canadian-based international carrier, the “cornerstone” for a global alliance. To do that, we need the mutual marketing fit of other complementary carriers to develop our potential.¹¹

Another strategic change was the deployment of regional jets (RJs) by Air Canada starting late in 1994. The 50-seat Canadair RJs could operate under the “RLCS notes”, which meant that new route approval was possible without a new bilateral agreement. In September 1994, Air Canada took delivery of the first of its RJ fleet. It had made firm orders for 10 aircraft, conditional orders for a further 14, and held options for another 24 (Bombardier 1994b: 2). The first 24 were destined for operations under the RLCS notes, the others were earmarked for operations under “Open Skies”.

Air Canada had the cash on hand to finance acquisition of a small RJ fleet for transborder operations, a move which its cash-strapped competitor could not match. In other words, the differentiation of the strategies provided an environment in which both carriers were receptive to a more liberalized agreement, though for different reasons. Air Canada, which had traditionally been the more protectionist of the carriers, had seen an opportunity to build a new market which required liberalization. The cost of no-agreement had increased.

Predictions on the Signing of the Agreement

The signing of the new bilateral agreement was greeted with a predictable bally-hoo by politicians on both sides of the border. The United States praised it as a glowing example of the success of its liberalization policies in air transport. Canadian politicians portrayed it as a good economic deal in which the air carriers received long-sought access to the US market and a transition period in which to adapt to open competition with their much larger US rivals.

Both Transport Canada and US DOT released predictions of economic benefits to communities and consumers as well as to air carriers. By the end of the first year, these predictions seemed to have been borne out, at least if a growth in the number city-pairs served by the carriers is a good measure. In fact, Air Canada, which had promised 20 new routes in 18 months, in fact had 31 routes in place by October 1996 (Pustay 1997: 29).

¹¹ Financial Post. 1993. *International Air Transportation Forum*. Tuesday, 3 August, 1993 (hereafter FP93), page 7.

Traffic growth in the year following the agreement exceeded one million passengers (The Impact of the New US-Canada Aviation Agreement at Its First Anniversary: Summary¹²), representing a growth estimated at 15 per cent -- 5 times the historic average. While official statistics have yet to be released, growth is estimated in the same range for the second year.

Canadian Carrier Approaches to Open Skies

Air Canada

The response of carriers to the agreement in the first 15 months was quite different, for a number of reasons. The Canadian carriers seemed to be quickest off the mark, especially Air Canada, which deployed its fleet of Canadair RJs on routes from Toronto and Montreal to smaller US cities which had generally been served by one-stop routes over the major US hubs. Air Canada increased its total number of transborder flights by 40 per cent -- from 43,000 to 60,000 -- which accounted for 84 per cent of the total increase by Canadian carriers (Statistics Canada Catalogue No. 51-206-XPB, 1995: vii).

By May of 1996, Air Canada had announced direct connections to Nashville, Kansas City, Columbus, Philadelphia, and Washington Dulles from Toronto. From Montreal, it added Philadelphia. The most sought-after routes, direct from Toronto and Montreal to Washington National, were added, and were served by USAir as well. Air Canada also connected the Canadian hubs to the US hubs at Atlanta, Minneapolis, and St. Louis.

Twelve of the routes which were added were "charter conversions". These sun destination routes had been served by charter service. Air Canada converted routes from Toronto to Ft. Lauderdale, Ft. Myers, Las Vegas, Orlando, and West Palm Beach to scheduled service, and from Montreal to Orlando and Ft. Lauderdale. Vancouver charters to Honolulu and Kahului/Maui were also converted. Nor was this process limited to the hubs. Halifax charters to Orlando and Tampa were converted, as was a Winnipeg to Orlando route.

Air Canada, as mentioned earlier, purchased Canadair CL65 "RJs" for use in its non-stop "hub-busting" strategy. These could have been deployed without the Open skies agreement, because the 50-seat aircraft was allowed to fly transborder routes under the RLCS Notes. In addition to non-hub city markets however, RJs are also used on Toronto flights to Chicago, Minneapolis, and St. Louis, and in combination with wide-body Airbus A320 flights on the Toronto-Atlanta route. This latter development is noteworthy, since it demonstrates that the RJs allow not only the service of low-volume routes, but also allow greater capacity flexibility on higher volume routes. A320 service has been added on the Vancouver routes to Denver and Los Angeles, Toronto-Denver, and Calgary-Houston pairs.

¹² Office of International Aviation, US DOT, hereafter OIA96.

Canadi>n

Canadi>n added capacity much less aggressively in the transborder market for a number of reasons, primarily financial. Instead, it proceeded with an extensive code-sharing agreement with its partner and shareholder, American Airlines. This, under the circumstances, was the most efficient approach to the market.

Canadi>n suffered under a historic disadvantage on the transborder routes. Air Canada, as a matter of policy, had been allocated all but a few of the routes under previous bilaterals, and was firmly established with reasonable slots at the US hubs. It had an existing marketing presence in these markets. Penetration of the transborder market by Canadi>n would have involved significant marketing costs, aside from the costs of purchasing new aircraft. American, on the other hand, was well established in the US domestic market.

The major benefit of the transborder for Canadi>n probably did not lie in the new routes it could create, but in the traffic which could be fed into its Pacific route system by American over the Vancouver hub. American added non-stops from Kennedy and Miami to Vancouver in year 2 of the agreement.

The Miami hub flight was perhaps the most interesting, in that it highlighted a source of strategic advantage for Vancouver International (YVR). American collects traffic from its large Latin American network, and can then feed it to Canadi>n over YVR. From Sao Paulo, for instance, this comes about as close as is feasible to a "great circle route" to the Orient. Vancouver, itself, is 3-1/2 hours closer to Hong Kong than the US gateway at Los Angeles.¹³ This topic will be discussed in greater detail below.

Canadi>n had 21 charter conversions, which represented significant portion of its response to liberalization. Routes from Toronto to Ft. Lauderdale, Ft. Myers, Orlando, St. Petersburg, Sarasota, and West Palm Beach, and from Vancouver to Las Vegas, Palm Springs and Reno were converted. Non-hub routes from Calgary to Los Vegas, Los Angeles, Palm Springs and Phoenix, from Edmonton to Las Vegas, from Halifax to Ft. Lauderdale, Orlando, and St. Petersburg, and from Winnipeg to Las Vegas and Palm Springs were also brought into scheduled service.

Service to the American hubs was modestly increased. Canadi>n added routes from Vancouver and Toronto to Chicago, and from Toronto to La Guardia. These routes were necessary additions because Canadi>n had received slots at these airports in the Open Skies agreement under a "use-it-or lose it" policy, and its alliance partner, American, was still bound by the phase-in provisions of the agreement. In addition to the routes already mentioned, which fed traffic between the partners, American chose to use its allocations at Montreal, adding routes from Miami and Kennedy. Canadi>n added no transborder routes

¹³ Transport Canada Backgrounder: One Stop Process Enhances Competitiveness of Canadian Airports and Airlines, April 9, 1997, hereafter TCB97.

to Montreal, perhaps allowing its more healthy partner to compete against existing routes from Air Canada's hub.

In 1995, Canadian leased 3 "jumbo" airliners, a Boeing 747-400 and two DC10-30s, for use on long-haul routes, freeing up 3 of their Boeing 737s for use on the transborder routes (Cassels, Brock and Blackwell 1995).

Charter Conversions

While 621,000 scheduled passengers were carried in the July-December 1995 period, charter passengers dropped by 175,000 (OIA96). This represented a 29 per cent decrease in charter operations for Canada. The US carriers experienced a 45 per cent drop in charter operations but, in absolute figures, this was negligible. Canadian carriers continued to dominate the charter market. Canadian charter operations in the period accounted for 6.24 per cent (down from 10.23 per cent) of the total transborder market, but their share of the charter market rose from 94 per cent to 95 per cent. This is hardly surprising, since a significant portion of this market is Canadian passengers heading south for US "sun destinations",¹⁴ and the charter market is the only segment in which Canadian carriers have a significant cost advantage.

The scheduled operations also grew in absolute terms, but the outlook for Canadian carriers in terms of market share is somewhat more murky. US carriers, which already carried close to two-thirds of the passenger traffic on the existing routes,¹⁵ gained a greater share (53 per cent) of the increased total traffic in the first year (OAI96).

Pustay (1997: 25) points out that the charter conversions by the Canadian carriers represented over half of the "new" services by Canadian carriers in the first year of the agreement, and that these routes are often served with less than daily basis. The significance of these services is a matter of interpretation. On one hand, the conversion creates value for consumers because it simplifies travel between these city-pairs. On the other, it does not represent "new" service, and in the analysis of changes brought about by Open Skies, it is fair to treat these conversions as a separate case.

Pustay points out that when conversions are excluded, for instance, the "new" services in Canada are as concentrated as had been the case under the previous air service agreement, with Toronto, Montreal, Vancouver and Calgary receiving 87 per cent of the routes, while on the US side the top four hubs received only 22 of 70 new routes (1995:25).

This may be explained by a strategy on the part of Air Canada, particularly, to "exploit the temporary constraints imposed on US carriers" (Pustay 1995: 30) at the airports where

¹⁴ About two-thirds of total transborder passengers are Canadian (Dresner 1992: 3).

¹⁵ In the period 1983-93, the US carrier share of passengers has ranged from a low of 59 per cent in 1989 to a high of 66 per cent in 1993 (Statistics Canada Catalogue 51-205, 1993 --Highlights).

phase-in provisions were in effect. Another explanation may lie in the linear market structure of the Canadian market, and the demographics which make Montreal, Toronto, and Vancouver the natural hub cities. In any case, it implies that the smaller Canadian cities received somewhat less benefit from Skies than they may have hoped for, at least initially.

The share of new services between US and Canadian carriers is also highly sensitive to this sort of analysis. If charter conversions are included, Canadian carriers flew 55 per cent of the new routes, if they are excluded, this figure drops to 33 per cent (Pustay 1995: 26). While Air Canada is clearly the most aggressive carrier in the transborder market, the share of services created in the first year may not favour the Canadian carriers as much as it appears to on the surface.

The significance of the charter conversions remains a matter of outlook and is, in any case, an artifact of the previous system. The creation of new services has continued in the second year of the agreement, and preliminary indications are that the transborder market may have grown by close to 15 per cent again. Even at the more modest growth rates which can be anticipated for future years, the issue of charter conversions may soon pale into insignificance.

Intransit Preclearance

The "routes" and "slots" issues were clearly the focus of much of the energy spent in both the 1991-92 negotiations and the Framework talks. For Canadian carriers, these were the largest issues. A third strategic issue, intransit preclearance, was set aside by Elliot and Kaplan, and was addressed only briefly in the framework. Preclearance issues, the Framework stated, should not delay negotiation and implementation of the air agreement.¹⁶

Intransit preclearance combines the intransit facility common to international hubs with the preclearance facility for US Customs which has become a feature of Canadian hubs. Intransit preclearance allows passengers from foreign origin points to proceed to US Customs preclearance without first clearing Canadian Customs. For passengers whose destination is in the US, this eliminates the need to clear customs or produce visas for a country they are not visiting.

This relatively obvious extension of existing arrangements was seen partly as a way of addressing the structural imbalance that preclearance had created. US carriers benefit from preclearance because it allows them to clear their passengers at the Canadian origin of the journey, rather than at their US hubs. This eliminates what would otherwise be a bottle-neck in the hub operation, since many of the passengers are traveling onward to destinations beyond the hub.

¹⁶ Article XI, page 12.

Canadian carriers gain no advantage from preclearance because they have no route system beyond the first US destination, and are therefore indifferent about which end of the journey their passengers clear customs. Successive Canadian governments have been unwilling to eliminate preclearance facilities, despite the occasional demands of the carriers, because it is seen as a convenience to travelers. On the other hand, this convenience has created a widening advantage for US carriers. Although Canadian passengers make up close to two-thirds of the transborder passengers, US airlines carry 60 per cent of the traffic.

Intransit preclearance allows Canadian carriers to compete with US gateways for the *behind the gateway* traffic¹⁷ and addresses their competitive disadvantage vis-à-vis US carriers on transborder routes. US Customs vehemently opposed the creation of intransit preclearance facilities during the 1991-92 negotiating rounds, but Canadian carriers felt that this was simply a blatant attempt by the US government to keep the economic advantage for its carriers.

The presence of US Customs at the bargaining table in 1991-92 was a major irritant to some Canadian stakeholders, since Customs was viewed as being obstructionist at worst, and at best an unneeded presence at the table. To this day, some stakeholders express vitriolic opinions about the waste of negotiating time on issues such as the fact that US Customs could not carry sidearms in Canada. Canadian stakeholders felt these were utterly unrelated to air transport. US DOT faced a challenge on this issue, however. Intransit preclearance was a key Canadian demand, but DOT could not deliver on it. Any agreement including it required US Customs' agreement, but DOT had no real leverage over it.

The Elliot-Kaplan solution was to sever this discussion from the rest of the negotiation. It is not at all clear that this would have been possible with the stakeholders at the table, partly because of the build-up of resentment, and partly because this issue was growing in importance as global airline alliances were cemented.

The latter was especially true for Canadian. Aside from the cash infusion, the alliance with American also presented the opportunity to feed traffic from American's US and South American network into Canadian's extensive Pacific route system and vice versa. The most efficient method for both airlines was to use Canadian's Vancouver hub for this purpose. The new YVR terminal had been designed to include intransit preclearance facilities. Without US Customs agreement, however, this could not be implemented.

Once preclearance was severed from the framework, Elliot and Kaplan created a situation in which DOT could deliver on all of the remaining Canadian issues. Both governments could present a package to their stakeholders which was largely unalterable, but deliverable with a high degree of certainty. On both sides, stakeholders had to weigh the

¹⁷ Behind the gateway traffic is destined for airports which are not, themselves, international gateways, but can be accessed through the gateway.

value of a set agreement against the cost of continuing with the status quo. The response was quick and affirmative from carriers and airport operators on both sides of the border.

The agreement to sever intransit preclearance was an act of faith on the part of the Canadian government. Without the leverage of an Open Skies negotiation, Canada reduced its bargaining power on the issue. Short of cabotage, Canada now had nothing to offer the US which would be sufficient to bring it back to the table. On the other hand, Canada may have concluded that the politicization of the issue in the context of the larger negotiation was a source of friction. Once severed, it could be negotiated between DFAIT and US Customs without the pressure of economic interests.

In the management of US politics, American Airlines would be a potential ally. American holds 25 per cent of Canadian's equity, and therefore has a direct interest in Canadian's survival. Strategically, it also gains high value from Canadian's routes and slots in the Far East allowing it to compete more effectively with its domestic rivals' global networks.

Recent Developments in Preclearance

The intransit preclearance talks went on for two years after Open Skies entered into force. In April 1997, the governments announced a pilot project at YVR. This arrangement allows for intransit preclearance, while at the same time providing US Customs with enhanced ability to screen foreign passengers, and cooperation between the RCMP and US Customs in searches.

Currently, the US lacks the right to detain suspects on Canadian soil. In the pilot project, Canadian police will assist US Customs in the preclearance facility. If the Canadian officer feels that there are grounds, a search will take place under Canadian law. The US preclearance facility is in close proximity to the Canadian Customs, allowing for a rapid clearance of both by transiting passengers.

Extension of the agreement beyond the pilot project will require Parliamentary approval, since it will have to allow for broader application of US Customs powers. The concept is that US Customs could search if it had reasonable grounds to believe it was being lied to. It could then arrest suspects under Canadian law, and detain them until Canadian police officers arrived. The Canadian government is given until the end of the pilot project on June 1, 1998 to pass the required legislation.

The increased screening ability uses information from the passenger name record (PNR) of the airline computer reservation system (CRS). This raised concerns, since passing the whole PNR might constitute a violation of privacy rights guaranteed by the Canadian Charter of Rights and Freedoms. Until the airlines can provide an electronic record with the sensitive areas filtered out, the information will be passed in printed form, with these data blocked out.

Conclusions

The 1995 Open Skies Agreement has been successful beyond the expectations of even some of its strongest proponents. The negotiation of the agreement from 1991 to 1995, reveals a change in the preferences of Canadian carriers, and this has been borne out in their responses to the agreement. Air Canada, which was protectionist in its philosophy, and conservative in its strategy at the outset of the 1991 negotiations, has been transformed into the most aggressive force in the transborder market. Whether this is the result of the leadership of Hollis Harris, or a general shift in attitude among top management, is beyond the scope of this paper, however the transformation is striking.

Air Canada now pursues a strategy in which it overflies the US hubs to serve smaller US markets with direct flights. It uses the Canadair RJ as a tool for market penetration, and in combination with larger Airbuses to better manage capacity on its routes. The economics of the RJ make it ideal for thin routes, while providing consumers with the opportunity of non-stop travel.

Canada, the more entrepreneurial and less protectionist of the carriers in 1991, has been limited in its strategy choices by poor financial health. It was badly handicapped by the debt load it carried into the Gulf War recession, and has not regained the freedom of action available to its domestic rival. Canada has deepened its alliance with American Airlines, and the two airlines are adding capacity from US markets into the hub at YVR. This provides a benefit to consumers of reduced time to many Asia-Pacific markets, and provides American the benefit of its partner's routes in the Far East. The implementation of a pilot program of intransit preclearance at YVR facilitates this strategy.

The two airlines, which had similar approaches but different endowments in 1991, have evolved very different strategies in the transborder market.

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SINGLE SCAN

**TOWARDS AN INTERNATIONAL OPEN SKIES REGIME:
ADVANCES, IMPEDIMENTS, AND IMPACTS**

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The International Air Transportation Competition Act of 1979 heralded the era of Open Skies in international aviation. This paper traces the post-war regulation and then deregulation of fares, rates, routes, and capacity all the way from Bermuda I through the partial dismantling of the IATA price fixing apparatus, discusses the impediments to Open Skies, and examines the impact on the International Air Transport Association (IATA).

THE POST WORLD WAR II ERA OF REGULATION

Following the collapse of the Chicago Conference of 1944 in resolving the issue of the regulation of international airline routes and fares due to the many divergent views of the major participants, the United States and Britain signed the precedent-setting Bermuda I Agreement in 1946. Bermuda I granted each

party the five freedoms of the air¹ on named routes and for approved multiple carriers without capacity or flight frequency restrictions (but which could be imposed ex-post facto), clearly favoring the United States which then accounted for about 60 percent of the world's passenger airline traffic and which had the largest and most efficient international airlines. As a concession to the British who feared American domination, the Americans agreed to allow the International Air Transport Association (IATA) to set international fares and cargo rates, and fifth freedom rights were severely limited. Bermuda I was precedent-setting and served as the model for future bilateral aviation agreements between countries, making IATA a virtual fare setting cartel. But note that in subsequent bilaterals not involving the United States, capacity and flight frequency was determined ex-ante with an attempt to evenly split the traffic

¹ Five Freedoms of the Air:

- 1. An airline of one country has the right of innocent passage to overfly another country en route to a third country with pro forma approval.
- 2. An airline of one country has the right to land in another country for technical reasons without offering any commercial service to or from that point.
- 3. An airline has the right to discharge commercial traffic originating from its own country of registry, into another country.
- 4. An airline has the right to pick up traffic from another country to be discharged into its own country of registry.
- 5. An airline has the right to carry traffic between two countries outside its own country of registry as long as the flight originates or terminates in its country of registry.

between the carriers of the two countries, often involving pooling agreements to evenly share the revenues.²

In 1976, thirty years later, the British gave notice of termination of Bermuda I, claiming that under the terms of the treaty, the American carriers had a disproportionate share of the traffic. Fearing a complete breakdown of commercial air activity with Britain, the United States was forced to sign Bermuda II in 1977, capitulating to British demands to virtually eliminate multiple carrier designations, limit the capacity offered, and give up some of the American fifth freedom or "beyond" rights to carry traffic between Britain and other countries. Bermuda II was a devastating policy setback for the United States which had always advocated a freely competitive market structure.

On the other hand, in the same year in 1977, Freddy Laker launched Laker Airways, a charter service that lowered fares on the North Atlantic blue ribbon route. In the meantime, non-IATA air carriers from developing countries particularly in Southeast Asia were heavily discounting fares by as much as 50%,³ causing

² For a long time, Singapore had a pooling agreement with Indonesia whereby the revenues generated from traffic between Singapore and Jakarta were shared, even though Singapore Airlines carried much more passengers than Garuda. In pooling arrangements, the carrying airline is compensated for variable costs, and sometimes there is a limitation clause to limit the extent of pooling.

³ See Roy Gowan, address in Proceedings, Papers and Dialogue from the IATA 14th International Air Transport Public Relations Conference, Dublin, October 4-5, 1979, pp. 18-21.

illegal discounting of IATA fares through extra commissions to travel agents by the association's own members.

THE PUSH FOR OPEN SKIES

In 1978, the United States orchestrated three events to show the international aviation community that her concessions in Bermuda II did not signal a policy change and that she was firmly committed to a pro-competitive negotiation policy.

First in early 1978, the United State issued a statement entitled, "Policy for the Conduct of International Air Transportation," which proclaimed that America will endeavor to "trade competitive opportunities, rather than restrictions...and pursue our interests in expanded air transportation and reduced prices."⁴ At the same time, U.S. Department of Transportation officials made clear that the new policy directives signaled the denunciation of Bermuda II.

Second, in the same year, the CAB issued an order directing the International Air Transport Association to "show cause" as to why the CAB should not rule that its international tariff

⁴Hearings before the Subcommittee on Aviation of the Committee on Commerce, Science and Transportation, United States Senate, 95th Congress Second Session 1978 on S.3363, pp. 19-20.

agreements are no longer in the public interest and therefore should be disapproved.⁵

Third, towards the end of 1978, Congress passed the Airline Deregulation Act which deregulated domestic airline transportation and provided for the eventual demise of the CAB at the end of 1984, clearly setting the stage for an Open Skies policy to be pursued internationally.

Soon after, the International Air Transportation Competition Act (IATCA) of 1979 was passed promulgating, among other things three categories of goals:

- Category I: Multiple carrier designations or traffic rights for American air carriers with permissive route authority and without operational restrictions with respect to capacity and flight frequency to allow them to swiftly respond to shifts in market demand.
- Category II: Freedom of air carriers to offer fares which correspond with, and are responsive to, consumer demand.
- Category III: Elimination of discrimination and unfair competitive practices against American air carriers.

The guiding principles of American negotiating strategies were to trade competitive opportunities rather than oppressive

⁵Report of the Subcommittee on Investigations and Oversight of the Committee on Public Work and Transportation, U.S. House of Representatives, on the Improvement Needed in the Implementation of the United States International Aviation Policy (98th Congress First Session 1983), p. 3.

restrictions and to ensure that mutual concessions were to be of a liberalizing nature. It was expected that increased open competition will result in greater consumer benefits through increased travel options and reduced fares and rates, improved airline efficiencies through more extensive and rational routes structures, and general increase in economic welfare.

ADVANCES TOWARD OPEN SKIES

Soon after the passage of IATCA 1979, the United States achieved some success in getting multiple carrier designations and unlimited route authority without operational restrictions from South Korea, Singapore, Thailand, Finland, Belgium, and New Zealand. Note that the smaller countries, particularly those in the Far East, by themselves did not generate much third and fourth freedom traffic with the United States, and were therefore willing to make liberal concessions to the United States in the way of multiple carrier rights to all their major airports plus unlimited fifth freedom beyond rights, in return for the lucrative fifth freedom traffic going to and from the United States. On the other hand, the larger countries such as Japan, The United Kingdom, France, and Italy by themselves generate a tremendous amount of third and fourth freedom traffic with the United States and therefore, unlike the smaller countries, they were less willing to concede fifth freedom rights without

substantial reciprocity. Also, fearing domination by the larger and more numerous American carriers, the larger countries resisted American attempts to obtain multiple carrier traffic rights and unlimited capacity and flight capacity. The United States also had difficulty negotiating with Brazil and other Latin American countries because the South Americans have always had a tradition of tight economic control over civil aviation.

The United States had much greater success in seeking increased freedom of pricing to counter the success of Freddy Laker Airways which had diverted a large portion of the tourist market from the scheduled airlines by providing low cost service across the North Atlantic. In the first post-Bermuda II Agreement signed with Israel in early 1978, the United States insisted on and got a mutual disapproval provision which ensured that fares can only be disapproved if both governments disallowed them. Shortly after, in an agreement with The Netherlands, the country-of-origin rule of pricing principle was adopted, stipulating that each contracting party had the exclusive right to approve or disapprove prices for one-way or round-trip carriage commencing in its own territory. These two liberal concepts were widely adopted in subsequent bilateral agreements. (The country-of-origin rule was widely used to liberalize charter operations worldwide.) Government intervention in pricing was

generally limited to the prevention of predatory or discrimination pricing, protection of consumers from unduly high monopoly fares, and protection of airlines from the prices of others that are artificially low because of government subsidy.

Perhaps the greatest advances in freedom of pricing were achieved in Europe where tight economic regulation of fares used to prevail. Under the shadow of the 1978 CAB "show cause" order, the United States managed to convince the European Civil Aviation Conference to agree, on several occasions, to liberalize air fares within broad zones of reasonableness. These agreements represent, for the first time, a successful regional approach to free competitive pricing.

A multilateral aviation agreement with the European Civil Aviation Conference was signed on October 1984. The price fixing machinery is complicated, but the basic features are as follows. Reference fares for round-trip trans-Atlantic scheduled passenger services between city pairs in the United States and Europe are established once a year, based on cost and capacity data supplied. Different reference fares are set for basic, shoulder, and peak periods differentiated by country and directionally defined by the origin of the flight. Then, different zones of reasonableness are established for each city pair and for each class of service. For instance, in the first year of operation in 1984, the reference round-trip fares for New York-Frankfurt (U.S. originating) were as follows:

Basic season (September 15 to May 14): \$1,221

Peak season (May 15 to September 14): \$1,321

Shoulder season (None)

The initial zones of reasonableness for each class of travel were as follows:

<u>Deep Discount</u>	<u>Discount</u>	<u>Economy</u>	<u>Business</u>	<u>First</u>
54-70	70-80	80-120	100-130	130 and above

This means that any American or participating European airline could set a round-trip economy fare of not less than 80% below or more than 120% above the peak season reference fare of \$1,321 for a passenger traveling economy class from New York to Frankfurt and back if the flight begins between May 15 and September 14. As long as the fare is within the prescribed zone of reasonableness, all participating governments must approve or "refrain from notifying dissatisfaction" with the fare filed by the carrier.

Additionally, there have been great advances in liberalizing bilaterals among European countries. The United Kingdom in particular has led with liberal bilaterals with The Netherlands, West Germany, Ireland, and Luxembourg.

IMPEDIMENTS TO OPEN SKIES

There are many obstacles to open competition associated with Open Skies. One of them is the issue of public subsidies. It

was well known that the money-losing Anglo-French Concorde was viable only because of heavy subsidies by the British and French governments. Alitalia fell so far into the red one year that the Italian government simply converted its existing debt into equity, thus relieving the inefficient airline of its huge interest burden. But no airline was more favored by subsidies than the SAS because it is supported not by one but by the three governments of Denmark, Norway, and Sweden. Also, many airlines are encouraged by their governments to operate below cost to establish an identity in new markets. Ireland's Aer Lingus, for example, operated the North Atlantic routes at a loss, as its main function was to bring tourists to Ireland. And some carriers even receive free government goods and services.⁶

But the more serious impediment to free enterprise in international aviation is the prevalence of discriminatory practices. Listed below are some examples:

- Many foreign governments ensure that their flag carriers have the inside track. For example, the Portuguese government makes a list of Portuguese emigrants available to her national carrier, TAP. For a long time, Canada insisted that all immigrants travel to Canada on Canadian airlines. Brazilian laws provide incentives for shippers to use native

⁶ See Civil Aeronautics Board, Government Ownership, Subsidy, and Economic Assistance in International Commercial Aviation (Washington, 1975).

air carriers.

- Many foreign countries insist that foreign airlines must use their exclusive ground handling services which provide expensive and inefficient services in Italy, Argentina, Ecuador, Japan, Kenya, and Peru. At Tokyo's Narita Airport, for example, in the past only Japan Airlines had a dedicated and fully computerized cargo terminal. It has also been recorded that warehousing and customs requirements were at least at one time discriminatory in Belgium, Canada, France, West Germany, Italy, Mexico, Taiwan, Japan, South Korea, and the United Kingdom.
- In the area of reservation control, the airlines of countries such as France, Italy, and Germany deliberately place American carriers at a disadvantage by denying them full access to their computerized reservations systems. Worse still, in Japan, Belgium, Portugal, Italy, and Scandinavia, the national airlines not only own some of the travel agents (illegal in the United States), but they also control what the agents can see on their screens.
- Many governments charge excessive user fees at their international gateways to cross subsidize their smaller airports which are usually used only by their domestic airlines. Japan imposed a "noise charge" most heavily on transoceanic B747 aircraft although these wide bodied jumbo jets are quieter than the noisy narrow bodied jets used on

Japan's domestic network. In U.S. Congressional hearings, it was reported that American planes were charged \$1.53 a gallon for jet fuel in Israel while the national carrier was only charged \$1.00. And India once charged a fuel tax only on international charters because essentially she did not operate them.

- Finally, even if under discriminatory conditions, foreign carriers make a profit in some countries, they face currency conversion problems in Ghana, India, Kenya, Nigeria, Pakistan, and Taiwan. Sometimes there is a total blockage of remittances altogether, which caused Pan American to to completely withdraw from Zaire.

Continued dissatisfactions with the disproportionate amount of fifth freedom traffic carried by American air carriers has also acted as a brake towards the Open Skies concept. In this regard, Germany reached an agreement in 1993 with the United States spelled out in a Memorandum of Consultation, in which the US agreed to a two-year freeze on the number of flights to Germany to allow Lufthansa time to restructure and privatize. Several countries, including Japan and France, have indicated their intentions to renegotiate bilaterals with the US, citing similar complaints of imbalance in the carriage of fifth freedom traffic.

THE ENCIRCLEMENT STRATEGY

The Director of the Bureau of Pricing and Domestic Aviation at the now defunct Civil Aeronautics Board (CAB) had, in a memo dated 26 January 1979, outlined the Encirclement Strategy.⁷ He noted that pressure could be placed on Italy and France through whatever increased competition could be negotiated with Greece, Spain, Portugal, and Yugoslavia. Britain, on the other hand, could be pressured to concede to American demands by concluding liberal agreements with neighboring countries such as Belgium, The Netherlands, and Finland. All of these will serve to divert Italian, French and British-bound traffic to other European gateways served by cheaper scheduled services and inexpensive charters which were now governed by the liberalizing country-of-origin rules. The same Encirclement Strategy was used against Japan, using the liberal bilateral agreements concluded with South Korea, Singapore, and Thailand as leverage.

Subsequent and recent developments have shown that the Encirclement Strategy worked. Britain was forced into renegotiating Bermuda II and accepting more liberalizing terms,⁸ France was forced into coming around, Germany was induced to sign a more liberal bilateral because of concerns that KLM might make

⁷"Civil Aeronautics Memo by Michael E. Levine," *Aviation Daily* (March 8, 1979), pp. 1-7.

⁸ A number of liberal amendments to Bermuda II were signed between 1978 and 1982.

inroads into its US-Germany traffic, and Japan eventually had to accede to American demands for multiple carrier designations.

RECENT DEVELOPMENTS

Increased route and carrier liberalization in turn led to strategic global alliances, of which the major ones are:

- British Airways, Qantas, Air Russia, and US Air
- KLM and Northwest Airlines
- American Airlines and Canadian Airlines
- Air Canada and Continental Airlines
- Air France and Sabena
- SAS and British Midland
- Delta, Swissair, and Singapore Airlines
- United, Lufthansa, and Thai International
- American Airlines and Japan Airlines
- Japan Airlines and Lufthansa

The advantages of strategic alliances are in coordinated promotions and frequent-flier programs, code sharing to gain priority in computer reservation systems, coordinated flight schedules for improved networking, sharing of airport terminal space, and overall economies of scale. Global alliances are the result of liberalization in international aviation but they also promote Open Skies in that international corporate linkages and interests break down national barriers.

Another recent development is the complete or partial privatization of national flag carriers such as British Airways, Air Canada, Alitalia, SAS, Lufthansa, KLM, SABENA, and Qantas. Pakistan, Brazil, and South Africa are making efforts to privatize their flag carriers. Privatization of airlines does much to remove much of the incentive for governments to protect them, thus paving the way for open competition.

With privatization and deregulation comes consolidation. For example, Australia deregulated its domestic airline industry in 1990, soon privatized government owned Qantas and Australian, and then in 1992 the two airlines merged. Domestic mergers are often desirable to position the strengthened carrier to play a larger role in global alliances⁹ or to compete with other mega carriers. Partly for this reason, Air France was allowed to acquire UTA and Air Inter and British Airways was allowed to merge with British Caledonian. But consolidation reduces competition in domestic markets which makes liberalized bilaterals more attractive.

EXPORTING DEREGULATION AND OPEN SKIES

The overall success of airline deregulation in the United States since 1978 served as a model to other countries. In 1987 Canada deregulated airline operations in the southern half of the

⁹ Oum, Taylor, and Zhang (1995) make a strong case for this.

country, called for more liberal bilateral agreements, and was soon followed by Australia in 1990. Restrictions in bilateral agreements between European Community (EC) countries are being eliminated as part of the overall unification effort, tolerating delayed compliance by the less developed nations. The goal is towards full liberalization of international aviation within the European Community to further reduce national borders, looking forward to complete Open Skies in 1997. Member states of the European Free Trade Area (EFTA) have expressed interest in joining the EC Open Skies. The concept of a Single European Market (1992) as advocated by the EC Council of Ministers and the broader based ECAC offers the prospect of replacing bilateralism with regionalism, permitting the unrestricted carriage of sixth freedom traffic (for example, Lufthansa can pick up traffic in London and carry it to Rome via Frankfurt). As barriers to free trade are rapidly removed, the Europeans will move one step further and negotiate with other countries on a multilateral basis.¹⁰

The recent United States-Canada bilateral aviation agreement signed in 1995 permits American and Canadian airlines to serve all points in either country, with a three-year phase-in period for additional service by US carriers to Toronto, Montreal, and Vancouver expiring by 1998, and with fares subject to the double-

¹⁰ Such negotiations were approved for non EC countries such as Norway and Sweden.

disapproval standard (to be disallowed only if **both** countries agree to do so to prevent predatory or monopolistic pricing).¹¹ Note that a transborder Open Skies regime had already existed between the United States and Mexico.

The Japanese government has recently proposed the creation of a transborder Open Skies market for Japan, Korea, and China. In fact, Japan, Taiwan, Korea, and Hong Kong already have fairly liberal access to each other's market. Also, the Association of South-East Asian Nations (ASEAN) has been discussing the possibility of creating a liberalized air transport bloc in the region. It appears that with the exception of China which has traditionally pursued restrictive policies in bilateral negotiations, the Far East will follow the lead of the United States and Europe in the pursuit of Open Skies.

Today, the only parts of the world that have resisted Open Skies are South America (with the exception of Chile, Ecuador, and Panama), Africa, and the Middle East.

IMPACT ON IATA

When the Civil Aeronautics Board issued the "show cause" order in 1978, the International Air Transport Association (IATA) reacted strongly by accusing the United States of forcing

¹¹A similar closer Economic Relationship Agreement was signed between Australia and New Zealand creating a Single Aviation Market.

American anti-trust laws on to the rest of the world.

Nevertheless, after an internal study and several meetings, IATA agreed to restructure itself in 1979.

Soon after its inception in Havana in 1945, IATA assumed its role as a regulator of international air fares occasioned by Bermuda-type bilateral agreements. Three regional traffic conferences were created and generally met once every two years to establish international fares and rates. All fares had to be *unanimously* approved by both the participating member airlines as well as their respective governments before they could be enforced, again generally for two years. Agreements were published in the Manual of Traffic Conference Resolutions. Airlines that charged more or less than what was agreed were heavily fined.

The restructuring in 1979 resulted in IATA activities being grouped into trade association activities covering legal, technical, baggage, clearinghouse, and ticketing functions, and tariff coordinating activities for setting fares and rates. With respect to tariff coordinating functions, IATA does not generally regulate international fares in the North American and European markets, which are now governed mostly by multilateral agreements with broad zones of reasonableness and carrier-specific fares.¹² In Asia, three large non-IATA airlines (Singapore, Thai

¹² See Dresner (1981).

International, and Cathay Pacific) forced IATA member airlines such as Japan Airlines to respond in their territory with non-IATA-sanctioned or open rated fares to meet the competition. In the rest of the world, rate making traffic conferences have been replaced by smaller sub-group meetings. Fare agreements are for shorter periods, usually for six months, and often, unanimous consent is no longer required.¹³ Where competition from non-IATA airlines or charters is fierce, zones of reasonableness or even open rated fares have been adopted to allow member airlines to set competitive prices and to accommodate changing market conditions. Thus, for all intents and purposes, IATA is no longer the fare setting cartel it once was. Most of its functions today involve trade association activities.

CONCLUSION

Despite impediments, setbacks, and recalcitrant states, the United States has led the world inexorably towards an international regime of Open Skies with multiple carrier designations and unrestricted access to gateway cities without capacity constraints and free of discriminatory practices, and with the right to set competitive fares and rates to meet market

¹³ For a discussion of voting procedures at IATA tariff conferences, see Haanappel, Peter P.C. (1984), *Pricing and Capacity Determination in International Air Transport*, Deventer, The Netherlands: Kluwer.

demand for all six freedoms of the air traffic. Domestic deregulation, the creation of regional aviation blocs and multilateral negotiations, privatization and consolidation of airlines, and global alliances all contribute towards the deregulation of international aviation. But the ultimate goal of international Open Skies is the mutual granting of the rights of cabotage, allowing foreign airlines to operate flights serving domestic city pairs.

Although the American-Canadian Bilateral Agreement of 1995 did not go far enough in removing the traditional prohibition on cabotage, fearing foreign domination of domestic aviation, there are already steps taken in this direction. When Australia and New Zealand signed the Closer Economic Relationship Agreement, Air New Zealand was allowed to operate on Australian domestic routes beginning in 1993, essentially granting it the right of cabotage. Also, in 1997 when the European Community completely embraces Open Skies, all European airlines will enjoy the rights of cabotage within the community. Only then will the international skies be truly open.

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DRAFT: Comments Welcome

Modeling Intercontinental Demand: An Integration of Demand Analysis and Trade Theory

by

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Paper for presentation to ATRG Conference
Vancouver, June 25-27th 1997

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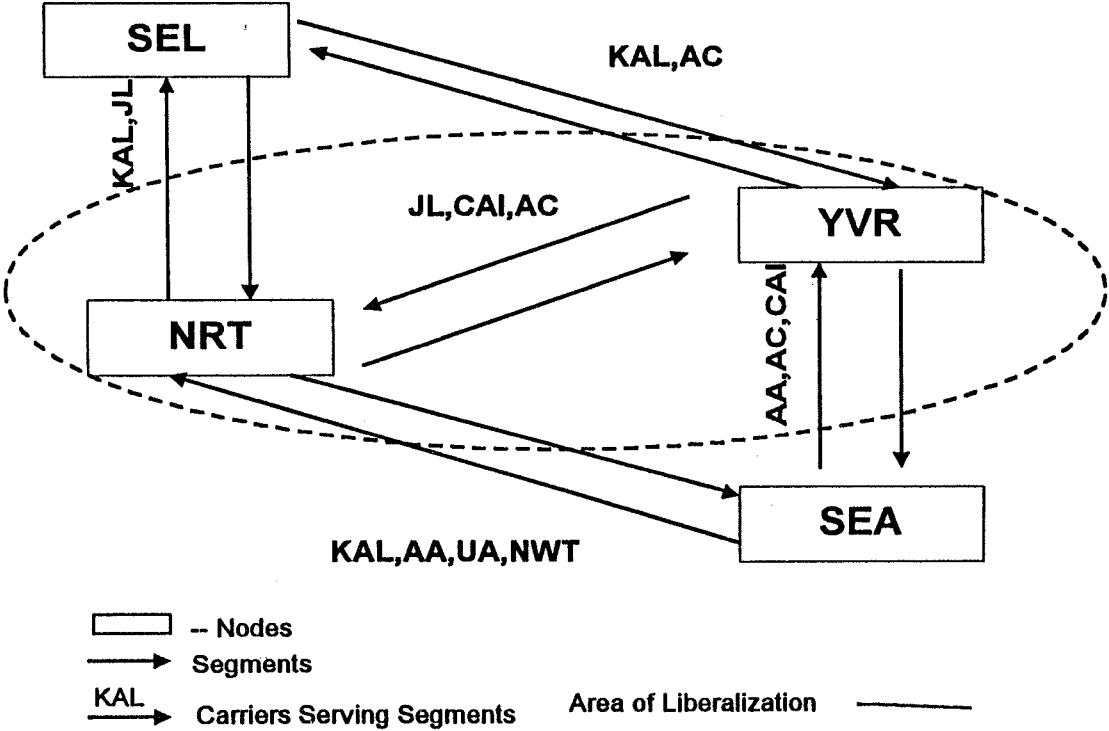
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Outline

- Objective of the modeling exercise - Context
 - measuring Gains from liberalization
 - understanding distribution of gains (losses)
 - understanding marginal gains (losses) from policy changes
- Alternative Approaches
 - Australian Model
 - Institute for International Economics
 - Transport Canada
- Key Elements of the Model
 - trade deflection
 - changes in choice
 - changes in quality
 - theory supplemented with empirical work
- Cost Side (time permitting)
- Summary & Assessment

Context- What is the problem we are trying to understand?

Illustrating Four Country North Pacific Air Transportation Network and Canada-Japan Liberalization

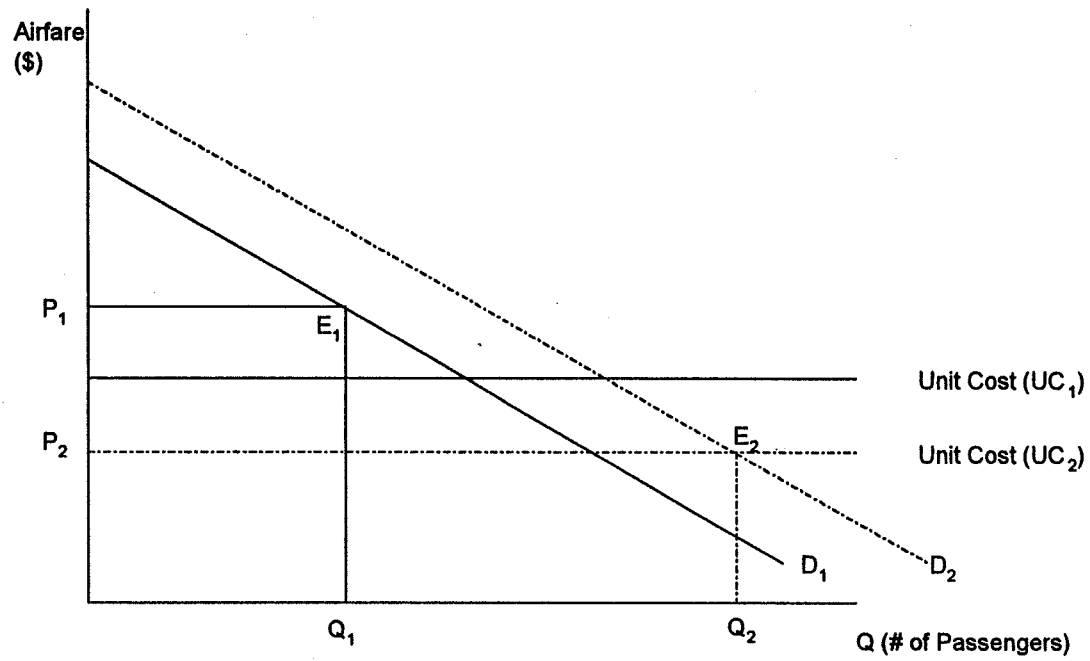


What are we trying to assess?

Categorization of International Air Transport Policy Regimes

	RESTRICTIVE	MODERATE	FACILITATING
MARKET ACCESS	-No 5th Freedoms -Single Point Access	-Limited 5th Freedoms -Multiple with Specific Access Points Restricted	-Full 5th Freedom Rights -Open Access to All Points
DESIGNATION	-Single Designation -No Foreign Ownership	-Multiple Designation with Restrictions -Limited Foreign Ownership	-Multiple Designation -No Ownership Restrictions
CAPACITY/ FREQUENCY CONTROLS	-Agreement Between Airlines -Predetermined (Quota)	-Increases Subject to Approval	-No Controls
TARIFFS	-Airline Agreement Mandatory	-Refer to IATA -Single Disapproval	-Double Disapproval

Welfare Analysis for Change in Bilateral Agreements



ALTERNATIVE APPROACHES

Australian Model

Summary of Annualized Estimates of Welfare Change (market responses to four liberalization scenarios)

	Annualized estimate of welfare change (\$ millions)				
	Stage 2	Stage 3	Stage 4a, 4b or	Stage 4c	
World welfare	23	46	21	0	-27
Australian welfare	2	-14	-20	-25	-31
Australia's airline	-14	-33	-33	-33	-33
Australian passengers	9	7	3	0	-5
Australian tourists	4	3	1	0	-2
Foreign welfare	22	60	41	25	4
Foreign airlines	-30	5	2	0	-2
New entrant	21	35	34	33	32
Foreign passengers	34	29	13	0	-18

Institute for International Economics

Possible Cost Savings To Users From Competitive
Aviation Service In 2010 And For The Period 1997-2010
(billions of dollars)

Country	Cost savings in 2010	Cumulative cost savings, 1997-2010
Australia	\$1.0	\$7
Canada	\$1.5	\$11
Hong Kong	\$2.2	\$15
Japan	\$9.4	\$66
Korea	\$3.9	\$27
Malaysia	\$1.0	\$7
Singapore	\$2.7	\$19
Total	\$21.7	\$152

Source: Hufbauer and Findlay (1996)

Key Elements of the Model

Changes in variety or choice

Follows literature of Armington (1966), Dixit and Stiglitz (1977)

- introducing preferences for differentiated products is to assume variety of goods
- Modeling of greater variety has followed the use of concave symmetric subutility functions such as $u_i(q_{i1}, q_{i2}, \dots, q_{in})$ where q_{il} is the quantity of variety l to be consumed out of expenditure category i
- useful form of utility function

$$u_i(q_{i1}, q_{i2}, \dots) \equiv \left(\sum_l q_{il}^{b_i} \right)^{1/b_i}, \quad b_i = \left(1 - \frac{1}{s_i} \right), \quad s_i > 1$$

$$u_i \left(\frac{E_i}{n_i p}, \dots \right) = (n_i)^{1/(\sigma_i - 1)} \frac{E_i}{p_i}$$

I.E. UTILITY INCREASES WITH VARIETY

Theory supplemented with empirical work

- top down versus bottom up approach
- Starting point - two stage budgeting process

Stage 1: consumers allocate expenditures between the aggregate “real travel on this OD” and all other goods.

Stage 2: allocation of “total real travel” across individual routes.

- Unit of analysis is the flight segment (consistency with demand and cost)
- Distinguish aggregate OD demand and route demand for OD pair

Air Transport Liberalization Model (Demand Side)

1. $Q^{OD} = f(P^{*OD}, other^{OD})$ Total Passenger Demand (over routes R)
2. $P^* = \psi(p_1^*, \dots, p_R^*)$ Real price index function (suppress OD)
3. $q^* = (q_1^*, \dots, q_R^*)$ quality adjusted route demands
4. $Q = \omega(q_1^*, \dots, q_R^*)$ real quantity index

Procedure:

1. derive total OD quality adjusted demand Q given the level of the price index P*
2. derive individual route demands from the price aggregator using Shepherd's Lemma and the second of the two-stage budgeting process.

5. Quality adjusted passenger demand on route r is:

$$q_r^* = \frac{\partial \psi(p^*)}{\partial p_r^*} Q \quad \text{given } P^* \text{ on route r, and } Q$$

Quality Adjusted to Actual Demand

$$q_r^* = a_r(x_r) q_r$$

6.

$$p_r^* = \frac{1}{a_r(x_r)} p_r$$

q_r^* , quality adjusted units of real service,

Consumers actually buy the physical quantity q_r at price p_r , but from a utility point of view purchase q_r^* at price p_r^* per unit of quality-adjusted demand.

7. Given linearity in q_r^* we have $p_r^* q_r^* = p_r q_r$
8. Hedonic price index on route r is: $p_r^* = p_r a_r(f_r, t_r, other_r)$
9. Actual passenger demand on route r is $q_r = a_r \frac{\partial \psi(p^*)}{\partial p_r^*} Q$
10. Total passenger demand across all routes $Q^{TOT} = \sum_r q_r$
11. Own price elasticity on route r is $\frac{\partial \log q_r}{\partial \log p_r} = \eta_r = \xi_{rr} + \eta^d s_r$, where
 $\xi_{rr} = \frac{\partial \log q_r^*}{\partial \log p_r^*} \Big|_{Q = \bar{Q}}$ and $\varepsilon_{rr} = -(1 - s_r) \sigma$ (if aggregator is CES)

Route Entry and Exit (deriving demand as r/carriers changes)

$$12. \quad P(p_1, \dots, p_r) = \left[\sum_{r=1}^R \delta_r p_r^{-\sigma} \right]^{-1/\sigma} \quad \text{where } \sigma = 1 - \rho, \text{ where } \rho \leq 1, \rho \neq 0$$

i.e. use Armington Aggregator for real price index and to adjust share coefficients to allocate new demand across routes consistent with observed carrier characters.

13. An example of route expansion:

$$P^*(2) = \psi(1,1) = \alpha (\delta(1)^\rho + \delta(1)^\rho)^{1/\rho} = \alpha (2\delta)^{1/\rho} \quad R=2. \quad A_1(x) = A_2(x_0=1)$$

$$P^*(3) = \psi(1,1,1) = \alpha (\delta(1)^\rho + \delta(1)^\rho + \delta(1)^\rho)^{1/\rho} = \alpha (3\delta)^{1/\rho} \quad R=3$$

if $\sigma=2$ $P^*(3) = 0.444$; i.e. R(2) to R(3) = 56% ↓ in real price

14. Demand for individual route is given by

$$q_r = h_r \delta_r z_r^{\rho-1} \alpha \left(\sum_{r=1}^R \delta_r z_r^\rho \right)^{1/\rho-1} f(P^*)$$

Summary of Demand Model

$$Q^* = f(P^*)$$

$$P^* = \left[\sum_{r=1}^R \delta_r p_r^{*- \sigma} \right]^{-1/\sigma}$$

$$q_r^* = \delta_r \left(\frac{p_r^*}{P^*} \right)^{-\sigma} Q^*$$

$$q_r = \frac{\delta_r}{a_r} \left(\frac{p_r^*}{P^*} \right)^{-\sigma} Q^* \quad \text{Individual Demand (observable units)}$$

A. Use to calculate consumer welfare and demand

consequences of (1) Δ route choices,

(2) Δ in quality,

(3) Δ in fares

B. Deals with inter-route substitution in network context.

C. process of calculation of demand on route r (given list of prices on all routes):

- compute value of aggregate price index (equation 12)
- calculate real quantity index Q^*
- calculate individual route demands (equation

D. In consumer equilibrium, total expenditures in OD

$$\text{market} = E = \sum_{r=1}^R p_r q_r$$

Summary of Market Simulations

<i>Scenario Description:</i>	Restrictive to Moderate (Price Regulated, Frequency Competition)		Restrictive to Moderate (Price Competition, Frequency Regulation)		Moderate to Open	
<i>Welfare Changes</i>	Scenario 1		Scenario 2		Scenario 3	
	Without Entry	With Entry	Without Entry	With Entry	Without Entry	Entry
Overall Assessment	inconclusive	high	medium	high	medium	high
<i>Consumer Benefits</i>						
Aggregate	small	large	medium/large	large	large	large
as a % of route expenditure	< 5%	> 25%	20-30%	16-35%	≈ 30%	≈ 50%
per passenger (% of base ticket price)	< 1%	≈ 20%	≈ 15%	13-20%	≈ 20%	≈ 20%
Consumer Benefits to Canada	20%	30%	30%	30%	equal	equal
Consumer Benefits to others	80%	70%	70%	70%	equal	equal
<i>Producer Benefits</i>						
Producer profit (loss) Canada	(large decrease)	medium to large increase	(small decrease)	large increase	small increase	large increase
Producer Profit (loss) Others	small increase	small increase	small increase	small increase	large decrease	small (loss)
Producer Benefits (Loss) Canada	(large proportion)	large proportion	(large proportion)	large proportion	large proportion	large proportion
Producer Benefits (Loss) others	large proportion	small proportion	large proportion	small proportion	(large proportion)	(large proportion)
<i>Aggregate Measures</i>						
Aggregate Net Welfare Gain (loss)	loss (small)	gain (large)	gain (small)	gain (large)	loss (medium)	gain (large)

Source: Gillen, Harris and Oum (1996)

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