Journal of Air Transportation Vol. 8, No. 1 – 2003

WHO SOARS IN OPEN SKIES? A REVIEW OF THE IMPACTS OF ANTI-TRUST IMMUNITY, AND INTERNATIONAL MARKET DEREGULATION ON GLOBAL ALLIANCES, CONSUMERS, AND POLICY MAKERS

Andrew Stober
Center for Global Development
Washington DC

ABSTRACT

The past decade has seen a proliferation of global airline alliances. A significant shift in two government economic policies, international market deregulation (open skies) and the granting of anti-trust immunity to alliances has made these unions a reality. These policy shifts have affected the tripartite relationship between government, airlines, and consumers. This article reviews the analysis by the U.S. Department of Transportation (2000a), Brueckner (2001) and Oum (2001), and builds a link between open skies policy and findings of lower fares, higher revenues, higher profits, and service improvements. The article suggests that U.S. policy makers advanced the open skies agenda through foreign coalition building and multilateral agreements.

INTRODUCTION

The intersection of public policy and business is, arguably, nowhere greater than in international air transport. Since the late 1970s, it has been U.S. Department of Transportation (DOT) policy to pursue increasingly liberal agreements with foreign aviation partners. Such agreements are typified by open skies accords, which allow for the economically liberalized transport of passengers and cargo between the U.S., its partner countries and beyond. These agreements extricate traditional restrictions on frequency, capacity and gateways for airlines of the participating nations. The U.S. has signed 56 such agreements, constituting more than half of all U.S. bilateral aviation agreements (DOT, 2001). In the DOT's 1995 *Statement of United States International Air Transportation Policy* the commitment to open skies was reiterated and international alliances

Mr. Stober graduated magna cum laude from Northeastern University's College of Business Administration in June 2001. He was a 2000-2001 Transportation Club of New England Scholar. Mr. Stober has held analyst positions with Grove Associates and Royal Caribbean International. He is a program assistant at the Center for Global Development.

were endorsed as a means to achieve the goal of expanded international aviation. The DOT's Office of Aviation and International Affairs has recognized that modern airlines require "…a higher quality and quantity of supporting route authority than they have sought in the past" (DOT, 1995). The past decade has seen a proliferation of global airline alliances, largely motivated by increasing demand for worldwide service (GAO, 1995). Alliances take a variety of forms. The most common are isolated codeshare agreements and broad-based strategic alliances. The former have existed for many years and involve the creation of *on-line travel* by partner airlines selling a single ticket over a route where both airlines' aircraft are used. Each airline sets it own fares and, depending on the institutional arrangement, the carriers may share costs. Broad-based strategic alliances have experienced a recent surge in popularity. These alliances offer on-line service from and to many or all of their member airlines' destinations. For the carriers involved, these relationships may include schedule planning, revenue and cost sharing, and joint marketing efforts. The schedule and fare planning features of strategic alliances are available only to those alliances that receive immunity from antitrust laws. This immunity is granted by the DOT.

A convergence of two DOT policies, international market deregulation and the granting of antitrust immunity to strategic alliances, has made these unions a reality. The first section of this document provides a historical context for current policy. The second section provides an explanation of why airlines have formed alliances. Assessments of the impact of policy on airlines, consumers and public policy are offered in the third, fourth and fifth sections.

The implications of current trends on these constituents are important to understanding the holistic impact of current policy. For consumers, improved service and lower fares are of top priority. Shareholders covet improved earnings and higher share prices. U.S. public policy makers are committed to fostering a competitive marketplace where consumers receive good value and business thrives.

THE HISTORY OF INTERNATIONAL AIR TRANSPORTATION REGULATION

Introduction

Not long after the Wright brothers took flight in 1903, it became apparent that the world community would need parameters to guide this new mode of transport. The first multinational meeting on international air transport regulation convened under the aegis of French government in Paris in 1910. Scheduled international service between Paris and London commenced in 1919, and it became increasingly apparent that government

regulation of international air transport would be a complex mix of foreign and economic policies.

Chicago: Open Skies Round One and the Agreements

The interceding two decades saw significant advances in aviation technology and production. These developments made aviation an increasingly relevant component of foreign and economic relations. On November 1, 1944, representatives of 53 allied or neutral states gathered in Chicago to explore, as the U.S. government described it, "The principle to be followed in setting up a permanent international aeronautical body and a multilateral convention dealing with the field of air transport, air navigation, and aviation technical subjects." (De Murias, 1989, p. 45)

The U.S. called for the adoption of multilateral open skies. Free competition in civil international air transport was to be the hallmark of such an agreement. The chief American representative, Adolf Berle, called for what he coined an *open sky* charter (Sochor, 1991). Berle feared that any quota or limitations on civil aviation would lead to cartels that could oppress the rights of passengers and shippers to purchase service in a competitive marketplace.

Most nations believed Berle's proposal would allow Americans to command international aviation because of their dominant position. In response to this criticism, Berle offered to supply thousands of surplus warplanes to nations struggling to develop civil aviation (De Murias, 1989). *The Times* newspaper of London accused Berle and the U.S. of using a big stick in an effort to force acceptance of its position.

The Rise and Fall of the International Air Transport Association

Nine months after the close of the Chicago Convention, an act of Canadian Parliament incorporated the International Air Transport Association (IATA). The Association existed as a unique trade association in that it was established and supported by governments to accomplish a task, which under bilateral agreements was the function of governments. Taneja (1988) cites three reasons why the U.S. initially approved of IATA's activities. Since the U.S. had minimal power to establish international rates, it would not be in that country's interests to have foreign nations unilaterally establish rates for U.S. carriers. The organization offered a high degree of transparency and the right of refusal, so it could not be deemed a price fixing cartel. Finally, it allowed European carriers to keep fares at a level that guaranteed the development of their flag carriers.

In 1955, IATA received permanent antitrust immunity from the U.S. government. Throughout the 1960s and 1970s the organization authority continued to be recognized by a variety of foreign governments and commissions. On June 9, 1978, as domestic deregulation was taking hold,

the Civil Aeronautics Board (CAB) issued a show cause order as to why IATA should continue to receive antitrust immunity. As a result of the order immunity was continued for tariff coordination and conferences, but under a set of significantly more liberal conditions. At this point IATA was reorganized into a tiered organization, one tier acting as a trade association, the other tier in charge of tariff coordination. As explained later in this article, tariff coordination has played a significantly smaller role in the organization over the past two decades.

Postwar Bilateral Agreements and the American Upper Hand

In 1946, the U.S. and U.K met in Bermuda to sign a bilateral aviation agreement. The gravity of the Bermuda Agreement, as it was known, was not to be underestimated, for it served as the model for all other bilateral agreements until its renegotiation in 1976. The Bermuda Agreement's provisions specifically outlined which routes and cities airlines could operate over and between. The British favored fare and tariff determination by nations, but as a conciliation to the Americans, the British allowed for the determination of fares and tariffs by IATA and to allow carriers to determine the frequency and capacity of their flights. The Bermuda Agreement also granted fifth freedom rights to both nations, allowing them to carry passengers from the U.K. or the U.S. to a third nation.

Bermuda II and Open Skies Round Two

In 1976, Great Britain announced the termination of the Bermuda Agreement. Britain's primary objection to the agreement was that U.S. carriers were able to transport a disproportionate share of traffic across the North Atlantic. The possibility of U.S.-U.K. routes being paralyzed pressured the U.S. to adopt the Bermuda II Agreement in 1977. Under Bermuda II, multiple carrier designations were virtually eliminated, capacity controls were put in place, and U.S. fifth freedom rights were sacrificed.

The Carter administration, frustrated by Bermuda II and commencing deregulation of the domestic market, returned to Berle's goal of an open skies policy. In early 1978, the DOT released "Policy for the Conduct of International Air Transport." The document was all but a renunciation of Bermuda II, declaring, "[America will seek] trade competitive opportunities, rather than restrictions and pursue our interest in expanded air transportation and reduced prices" (Toh, 1998). By the middle of the year CAB took the provocative step of issuing a show cause order to IATA. The order required IATA to defend the premise that its structure of international tariffs remained in the public interest and should continue to receive antitrust immunity. Congress passed and Carter signed the

International Air Transportation Competition Act (IATCA) the following year (Public Law 96-192).

The act was a far-reaching policy declaration. As shown in the *Goals for International Aviation Policy* section, the act calls for a "negotiating policy which emphasizes the greatest degree of competition that is compatible with a well-functioning international air transport system" (Public Law 96-192[s>1300], 1979). The act goes on specifically to direct the State and Transportation Departments to negotiate agreements and consult to the *maximum extent practicable* with the Commerce and Defense departments, as well as all other key players in the formulation of both broad policy goals and individual negotiations.

The Carter Administration witnessed limited reform during its single term. In 1977, when Carter took office, Pan Am and TWA were the only U.S. airlines to operate transatlantic service. Upon its departure in January 1981, Delta and Northwest had initiated passenger service on the North Atlantic route.

CURRENT REGULATION AND IMPLEMENTATION OF ANTITRUST IMMUNITY

The Open Skies Era: Open Skies Round Three

Since 1980, the DOT has aggressively pursued open skies agreements. The first such agreement was with the Netherlands in 1992. Today, the U.S. is engaged in 56 bilateral open skies agreements. At the 2000 Asia-Pacific Economic Cooperation (APEC) summit a one-of-a-kind multilateral open skies accord was signed by the U.S., Chile, Singapore, New Zealand, and Brunei (Office of the Press Secretary, 2000). Not all negotiations have met open skies objectives. Negotiations with the U.S.'s largest international aviation partner, the U.K., have failed to bring about open skies, as have negotiations with the largest Pacific partner, Japan. Other major trading partners with which the DOT has yet to reach open skies accords include China, Australia, Brazil, and Russia. DOT takes a carrot-and-stick approach to encouraging agreement. Incentives (carrots) are offered to countries willing to sign open skies agreements, particularly antitrust immunity of international alliances. At the same time, as a punishment (sticks), antitrust immunity for international alliances has been conditional on the signing of an open skies agreement. In the case of the Northwest/KLM Royal Dutch Airlines (NW/KLM) alliance, open skies originated prior to the development of the alliance. The 1996 agreement with Germany made clear to German authorities that if Lufthansa desired antitrust immunity for its existing alliance with United, an open skies accord was a prerequisite. Grants of antitrust immunity are phenomenally valuable to carriers, because it is not only a guarantee an absence of

government interference, but immunity also prevents private antitrust actions.

The Granting of Antitrust Immunity

Immunity is not granted simply for abiding by antitrust laws. To pursue and maintain the public interest, immunity is approved only after a competitive analysis is conducted and caveats to the immunity are prescribed.

Approval is granted based on an alliance's enhancing or negligible effect on competition and public benefits it could provide. To determine public benefits, the DOT performs an analysis of a proposed alliance's competitive effect. For instance, the competitive analysis of a proposed 1999 alliance between NW and Malaysian Airlines (MH) examined three markets: a) U.S., b) Far East-U.S. city pairs and c) Malaysia and direct U.S-Malaysia city pairs. The proposed alliance was not found to diminish competition in the U.S.-Far East market. The proposed alliance would control about a 19% market share, 4% less than the STAR Alliance's[1] share of this market (DOT, 2000b). The alliance partners are currently the only airlines of each nation to serve the U.S.-Malaysia market; despite this, the DOT found that their alliance would not enable either partner to engage in supra-competitive pricing. Since neither carrier provides non-stop service, it was felt that third-country airlines offering on-line connections would provide sufficient competition. The DOT is required by law to determine the effect on the public interest of all coordination agreements. The DOT perceives the public interest to promote open skies agreements and greater competition.

The most significant restrictions require that both carriers withdraw from any IATA tariff conference activities that affect or discuss any proposed through fares, rates or charges applicable between the U.S. and any country designating a carrier that has been or is subsequently granted antitrust immunity to participate in similar alliances (DOT, 2000b). This means a foreign carrier can no longer (if it already does) participate in IATA pricing agreements between the U.S. and any international points. The requirement is mandated to assure that the competition immunity it is expected to create is not undermined by price coordination. This policy serves to further weaken IATA's rate and tariff role worldwide.

An examination of airline competition studies ownership interests in computer reservations systems (CRS). When an alliance agreement includes carriers that own shares in competing CRS, immunity is not afforded to this sphere of marketing, as it is likely to reduce competition. Consistent with other immunity agreements, foreign carriers are required to provide extensive origin and destination (O/D) data for all passenger itineraries that contain a U.S. point on an ongoing basis. U.S. carriers

already provide this data to DOT; all O/D information is treated in confidence by DOT. This information allows department officials to track the effects of alliances on market share and competition.

EVOLUTION OF ALLIANCES

As a mature industry with heavy capital investments and slim profit margins, both the domestic and international airline industries are ripe for consolidation. The spate of mergers, acquisitions and bankruptcies that followed domestic deregulation has evolved into a period of rationalization where the remaining large U.S. carriers have sought to strengthen their position by attempting to acquire (in full or part) competing firms, the most recent being the ill-fated United-US Airways partnership and the purchase of TWA by American Airlines. However, with regulators reluctant to approve mergers or acquisitions among domestic carriers, alliances have proven an attractive alternative for carriers like Continental, Northwest and America West. The alliances allow the carriers to please customers, satisfy stockholders and keep government regulators at bay.

Internationally, the airline industry is perhaps the only global industry to remain with exclusively national companies. Regulators do not even have the option to approve international mergers, because national ownership requirements prevent foreigners or foreign corporations from owning airlines based in another country. Current U.S. law is typical of most industrialized nations, limiting foreign ownership of airlines to a 25% stake. The tremendous international consolidation of pharmaceutical, telecommunication and maritime firms could serve as a model for airlines in the absence of such ownership requirements. However, since the removal of such restrictions is unlikely, airlines opt for alliances as a means of partially realizing the potential mergers offer.

The attraction for major U.S. airlines to enter such relationships is to access markets they could not afford to serve alone. Motivated by increasing international tourism and the globalization of business, the principle growth opportunity for U.S. airlines is in the international sector. Total passenger traffic between the U.S. and foreign destinations increased by 248% from 1980 through 2000; and from 39.5 million in 1980 to 137.3 million in 2000. IATA predicts 226 million passengers will fly in 2010.

U.S. airlines have enjoyed a growing share of the international market. In 1980, U.S. carriers carried 49% of the traffic between the U.S. and foreign destinations; by 1993 the figure had grown to 53%. Since 1993 the percentage of passengers carried by U.S. carriers has decreased slightly to 51%, likely precipitated by the carriage of passengers on codeshare flights. In the year 2000, only 8 of the top 50 U.S.-foreign markets experienced a reduction in passengers. Total growth in the top 50 markets was 7% from

1999 to 2000 (DOT, n.d.). Revenue share information is not available, but the U.S. share of revenues may actually be higher than the passenger carried share. It is important to note that domestic market growth pales in comparison to the growth possibilities in the international sector. The major U.S. carriers have aggressively pursued these international opportunities by founding alliance networks. Generally, such alliances do not create overlap and simply serve to extend a carrier's reach without negatively affecting competition.

Types of Alliances

The international alliance movement has evolved in the past decade to more than codesharing on a few flights with limited airlines to broad-based strategic alliances. Codesharing simply allows partner airlines to list flights operated by the other as its own. Strategic alliances allow partners to maximize their geographic scope, level of operating and marketing integration, and revenues. The first strategic global alliance was between NW and KLM . This broad-based alliance involved the full integration of each carrier's networks, market planning/pricing, promotion, administrative activities and other activities. The alliance touches such a variety of corporate functions that some industry experts have labeled it a de facto merger. For instance, KLM no longer has reservation offices in the U.S.; all reservation services are handled by NW, and vice versa in Europe. Oum (2001) finds that strategic alliances led to productivity gains on the average of 5%. The carriers almost immediately saw the fruits of their arrangement. In the first three years of their agreement, they experienced a 3.5% point jump in market share from 7.0% to 11.5% (GAO, 1995). By 1999, their market share of Atlantic flights has decreased to 9.0%; however, with their newest partners Alitalia and Continental, they control approximately 17.0% of the market. The increase in market share led to significant increases in revenues for both carriers, $100 million for KLM and between $125 and $175 million for NW (GAO, 1995). The revenue sharing formula is based on an agreed prorated formula accounting for the miles each airline flies on alliance routes. The alliance's effect on profits is unclear; that said, Oum found that strategic alliances improved partner airlines profitability by 1.4%.

Since the creation of the NW/KLM alliance, others have followed suit. Today, the top three U.S. carriers—United, Delta, and American—are all involved in global strategic alliances. In 1997, United was a founding member of the world's largest airline alliance, the STAR alliance. The OneWorld alliance was founded in 1998, with American Airlines as a charter member. Delta left the Atlantic Excellence alliance with Swiss Air and Sabena in early 1999 to create a global alliance called SkyTeam with Air France, Korean Air, and Aeromexico later that same year. These three

carriers have taken a relatively uniform approach to alliance development, with each alliance being founded by an American, European and Asian carrier. Each has grown since it founding and summary statistics for each carrier are shown in table 1.

Table 1. 1999 Major Alliance Statistics

Alliance	*Launch Date*	*# of Members*	*Passengers (ml)*	*Group Revenues (bn)*	*Global Market Share (pax)*
Wings	1989	2	71.6	$16.8	4.6%
STAR	1997	13	292.7	$69.6	18.8%
oneworld	1998	8	199.3	$50.0	12.8%
SkyTeam	1999	4	175	$5.4	11.2%

Source: O'Toole, Kevin. (2000, July) The Global Groupings. *Airline Business*. 50-51

A Non-Global Approach

For carriers not participating in strategic alliances, there are a number of alliance alternatives. After the demise of its equity alliance with British Airways, US Airways has chosen a regional alliance approach. Essentially, US Airways applies the commuter model to its international service. The carrier operates all transatlantic service on its own aircraft and connects to Deutche BA flights in Frankfurt and Munich. These Deutche BA flights serve regional centers in Germany on behalf of US Airways.

TWA adopted a hybrid approach in its alliances with Royal Jordanian and Kuwait Airways, offering service across the Atlantic to Amsterdam, Amman and Kuwait City with onward connections to regional business and cultural centers. TWA was traditionally the leading U.S. carrier to the Middle East and these alliances affirmed their position in the region.

Alliance Membership: A Means to an End

Alliances serve as a strategic means to achieve increased profitability (Oum & Yu, 1998). The dynamic nature of international air transportation means that in the absence of significant equity sharing membership may shift as fluidly as contracts allow. The 1990s were a period of frequent formation and dilution of alliances. This trend appears to have moderated with the turn of the millennium, but the growing pressure of a slowing global economy may spur a close examination of the bottom line benefits of alliances. With the understanding established in this section, the effects of alliance membership are discussed in the following sections. A detailed examination and summary of current research on the effects on consumers

immediately follows this section. Finally, a discussion of implications for public policy is presented.

THE EFFECT ON CONSUMERS

The proliferation of immunized alliances and expansion of open skies agreements has important implications for consumers. The implications are best divided into two categories: service and fares. Service considers markets offered (city pairs), flight frequency and the host of difficult-to-quantify conveniences that alliances provide. Fares are understood in the simpler context of changes in fares as a result of these trends.

Literature Review

In June 2000 (revised March 2001), University of Illinois professor Jan K. Brueckner published an assessment focusing on the effect codesharing, alliance formation and antitrust immunity has on fares. The assessment was titled "International Airfares in the Age of Alliances: The Effects of Codesharing and Antitrust Immunity." Brueckner's report used DOT data to show successively increasing decreases in fares with implementation of codesharing, alliance creation and antitrust immunity. A report by the DOT's Office of Aviation and International affairs, issued in October 2000, takes a more holistic look at the effect of alliances and open skies agreements on U.S.-European travel. The report found significant improvements in service and reductions in fares.

Among other formal assessments are three published by the DOT (1995, 2000b, 2001), one by the U.S. General Accounting Office (1995) , a half dozen or so academic articles, and a Canadian Transport Act Review report by Oum (2001) that summarizes the results of an extensive econometric study performed in 1999. The reports issued by DOT concern the Canadian open skies agreement and developments in the transatlantic market. All of the DOT reports praise the advances made in open skies agreements and antitrust immunity and find benefits for industry and consumers. The GAO report was released in 1995, and, though generally supportive, expresses concerns about the anticompetitive effects international alliances may have on the domestic industry. The academic articles approach the issue from a variety of economic and legal perspectives and, in general, are supportive of current trends.

Fares

Before a discussion of specific assessments, it is important to understand how international fares are constructed. The simplest fares are those on a single carrier; as discussed in the regulation section, in most circumstances the carrier is free to establish a fare it believes to be

economically viable. Fares for interline travel (travel involving multiple carriers) are heavily dependent on cooperation between the carriers. The level of cooperation is, of course, limited by antitrust laws. The traditional pricing structure relies on fares generated by IATA's fare conferences. The carriers meet under the auspices of IATA and establish interline fares for a multiplicity of international city-pairs. Total revenue is divided by the airlines providing the service on a distance-based prorate basis. With the decreasing importance and relevance of IATA's fare making authority, airlines have developed their own interline pricing scheme, called a *special prorate agreement*. The agreements have each carrier specify the revenue it requires to carry a passenger on its portion of the route; the ticketing carrier then charges the combined fare and divides the revenues accordingly. This arrangement serves as the foundation for most codesharing agreements. The final pricing option, cooperative pricing, is open exclusively to carriers that have been granted antitrust immunity. Cooperative pricing, as the name indicates, allows the carriers to share proprietary information and establish a joint fare for given city pairs. Alliances implementing cooperative pricing negotiate revenue and cost-sharing policies to meet the needs of the participating carriers.

Implications of Fare Structures

Each fare structure arrangement carries certain micro-economic implications; non-cooperative pricing does not maximize joint profit and leads to higher fares. By contrast, cooperative arrangements internalize negative externalities of a two-carrier trip and lead to lower fares (Brueckner, 2001). The IATA multilateral fare conference structure accentuates the diseconomies of the non-cooperative models. IATA unanimity rules allow each carrier a right of refusal on proposed fares, so fares are driven up to accommodate the costs of inefficient firms. The bilateral structure of special prorate agreements leads to fares lower than those formulated by IATA, but still possesses the negative externalities of non-cooperative arrangements. The establishment of joint fares, protected by immunity from antitrust prosecution, allows carriers to maximize joint profits, ultimately providing the lowest possible fare to consumers. While immunity arrangements could lead to collusive practices, they are granted because it is believed such activity will not occur.

Brueckner's Assessment

Brueckner's (2001) analysis concentrates on the effect codesharing and antitrust immunity have on international interline passenger fares. Utilizing DOT passenger O/T data, the paper discretely measures the effect of codesharing and antitrust immunity and then reconciles the effect when the policies are implemented in conjunction. The study's data is taken from the

third quarter of the 1999 Passenger Origin and Destination Survey. The survey represents a 10% sample of all airline tickets where at least one route segment is flown on a U.S. carrier. The data includes O/T airport, fares and number of passengers observed paying a given fare. Most importantly, the data shows both the ticketing and operating carrier, allowing for examination of codeshared operations. The original data set contained in excess of 750,000 records with at least one non-U.S. airport; however, after controlling for relevant data, the final analysis set contained 54,687 observations of itineraries in 17,518 city-pair markets. Brueckner studied a carrier variable, examining the 74 most frequently appearing carriers, the effect of alliances (using the four predominate alliances in 1999[2]) and the effect of immunity (among the carriers who enjoyed immunity in the third quarter of 1999[3]).

Findings. The study provides a number of interesting findings in regards to the behavior of alliance and immunized carriers. The percentage of codeshare operations among non-alliance, alliance, and alliance with immunity carriers is predictable. Only 23% of non-alliance itineraries involved codesharing. Codeshare itineraries for alliance carries without immunity were not substantially higher (28%). Immunized alliances carried the majority of their itineraries on codeshare operations (63%). The empirical fare findings are of particular interest to consumers. Brueckner finds that: a) fares are 8-17% lower on codeshare itineraries versus non-codeshare itineraries; b) fares are 13-21% lower on carriers with antitrust immunity versus those without; c) fares are 17-30% lower on immunized codeshare itineraries (codesharing and immunity are substitutes, in that the combined effect is less then the sum of the parts); and d) fares are 4% lower on alliance carriers versus non-alliance carriers.

Oum's Assessment

Oum (2001) analyzes the effect of alliances on productivity, price and profitability. He uses data from 1986 to 1995 from a panel of 22 international airlines. He does not delineate between immunized and non-immunized alliances and the data set draws largely on figures prior to widespread international deregulation of the industry. The econometric analysis distinguishes between strategic and tactical alliances. The differences in alliance scope drive three major findings:

1. Strategic alliances enable partner airlines to achieve an average of 5.0% gain in total factor productivity and 1.4% increase in profitability while being able to lower their prices to consumers an average of 5.5%.

2. Improved productivity during the post-alliance period is an important source of increased profitability for partner airlines as well as a means to enhancing a carrier' ability to reduce prices.

3. Tactical alliances do not have statistically significant effects on partner airlines' productivity, pricing or profitability.

The Open Skies Connection

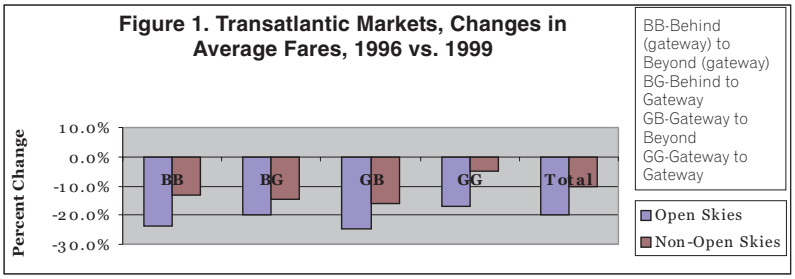
Codesharing and antitrust immunity are the most significant reducers of international airline passengers' fares. Table 2 illustrates the connection between the existence of open skies agreements, the granting of antitrust immunity to alliances, and levels of codesharing between alliance carriers. The top six alliances in terms of itineraries traveled are all immunized and involve foreign carriers whose nations have signed open skies agreements with the U.S. Discounting the Continental-Alitalia and United-Ansett pairings, the top six alliances in terms of percentage of codeshare itineraries comprise the same characteristics as the alliances with corresponding volume data.

DOT's (2000a) study, "International Aviation Developments (Second Report): Transatlantic Deregulation: The Alliance Network Effect" confirms this connection. The study found fare reductions in excess of 20%

Table 2. Compiled by Author using DOT Data

Carriers	*OSA Foreign Flag Nation*	*Immunity*	*#Intineraries*	*Codeshare Itin.*
Northwest-KLM	Yes	Yes	7,671	60.3%
United-Lufthansa	Yes	Yes	4,771	37.7%
United-Air Canada	Yes	Yes	3,575	67.0%
American-Canadian	Yes	Yes	2,591	93.4%
Delta-Swissair	Yes	Yes	1,683	77.2%
Delta-Sabena	Yes	Yes	1,511	86.9%
American-British Air	NO	NO	1,412	0.0%
United-SAS	Yes	Yes	642	34.9%
American-Qantas	NO	NO	458	57.4%
United-Air New Zealand	Yes	NO	390	36.2%
Delta-Austrian	Yes	Yes	379	81.8%
Continental-Alitalia	NO	NO	369	74.0%
United-Ansett Australia	NO	NO	334	73.1%
United-Varig	NO	NO	253	28.5%
American-Cathay Pacific	NO	NO	203	0.0%
United-Thai	NO	NO	151	6.0%

between countries with which the U.S. shares open skies agreements. The most dramatic fare reductions are for service from interior U.S. points to airports beyond European hubs and from U.S. gateways to points beyond European hubs, 24% and 25%, respectively.



Source: Reproduction of U.S. DOT Chart from International Aviation Developments.

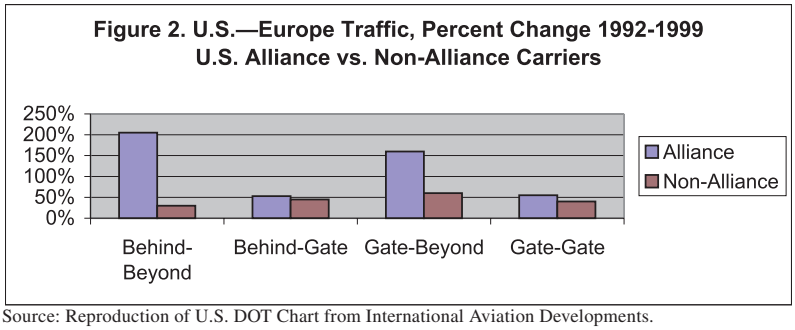
Figure 1 demonstrates that open skies agreements have also affected nations not participating in the schemes, as open skies alliance traffic competes via hubs onto non-open skies states. As can be expected, the influence is least in the gateway-to-gateway market, as consumers are accustomed to non-stop service. Brueckner's (2001) findings combined with this information, present a strong case for the pursuit of open skies agreements and the granting of antitrust immunity to global alliances.

Service

DOT's report also illuminates the positive effects on service open skies agreements and international alliances are having in North-Atlantic travel (DOT, 2000a). The proliferation of open skies bilateral agreements with European partners has created a more service-competitive transatlantic structure. These agreements, in combination with grants of antitrust immunity to alliances, have provided carriers the operating flexibility necessary to improve and expand services. Improved services have included both coordinating schedules for connecting flights from behind and beyond points and an increase in capacity from gateway-to-gateway markets. This growth has not been limited to alliance carriers. The open skies agreements have allowed U.S. carriers, particularly Continental Airlines, to provide head-to-head competition to the larger alliance carriers. In the past five years, Continental has developed its Newark, New Jersey, hub to serve 17 European destinations, challenging alliance hubs in four European cities.

Case Study: The North-Atlantic Market

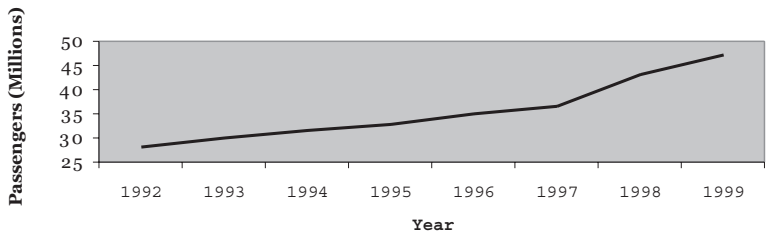
Passenger growth in the North-Atlantic market has been significant, nearly doubling between 1992 and 1999. In 1992, the U.S. signed its first open skies agreement with the Netherlands. Between 1992 and 1999, 15 agreements were signed with European trading partners (DOT, 2000a). While the strong economic conditions of the period undoubtedly claim some credit for passenger growth, the deregulated environment created by open skies and the increased frequencies provided by alliance carriers are primarily responsible for the growth. The good economy fails to explain the incongruent growth experienced in interior markets; Figure 2 details that this growth is indisputably attributable to the introduction of alliances, behind-beyond and gateway-beyond growth are overwhelmingly driven by alliances.



Source: Reproduction of U.S. DOT Chart from International Aviation Developments.

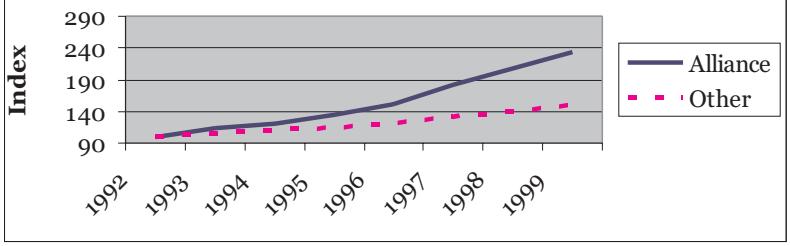
Figure 3 demonstrates the dramatic increases in transatlantic traffic. Figure 4 illustrates how the increase in passenger volume can largely be attributed to the creation of alliances under the open skies and immunity policies. Further, Figure 4 exhibits that growth is promoted by alliances. The consummation of alliance agreements by United and Delta in 1995 marked the first considerable uptick in growth. The growth accelerated rapidly with the granting of antitrust immunity in 1996. The non-alliance traffic growth post-1996 is particularly significant; because it affirms that alliance growth is not caused by travel diverted from non-alliance airlines, but in fact represents new traffic. The growth in traffic by non-alliance carriers post-1996 is largely related to Continental's expansion and testimony to the competitive vigor deregulation has brought to the market place.

Figure 3. Total Passengers U.S.—Europe, 1992-1999



Source: Reproduction of U.S. DOT Chart from International Aviation Developments.

Figure 4. Total Passengers U.S.—Europe 1992-1999 Strategic Alliance Carriers vs. Other Indexed: 1992 = 100



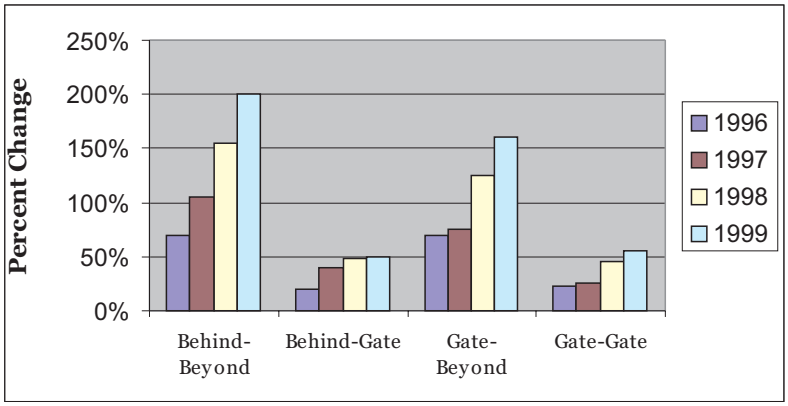
Source: Reproduction of U.S. DOT Chart from International Aviation Developments.

The Impact of Service Expansion

The service expansions promoted by alliances have been of tremendous benefit to historically underserved cities. The power of linking large multinational networks, such as those of NW and KLM or United and Lufthansa, allows convenient affordably priced service to be available between interior points in North America and interior points in Europe. The predominance of alliances has created competitive service from many interior cities. For instance, all four major alliances publish fares and offer double-connection service between Austin, Texas, and Prague, Czech Republic. While the number of passengers carried on such a route may be few, the collective effect of thousands of new city pair markets should not be underestimated. The DOT found the greatest percentage growth in traffic has occurred in such markets. One study (DOT, 2000a) found that

Birmingham, Alabama, experienced a 39% increase in traffic to major European cities; to smaller European cities, traffic more than doubled. Figure 5 illustrates that most expansive growth has occurred in these non-gateway markets.

Figure 5. U.S.—Europe Traffic, U.S. Alliance Carrier Traffic by Market Sector, Percent Change from 1992



Source: Reproduction of U.S. DOT Chart from International Aviation Developments.

International aviation policy can have discernable effects on local economies. Alabama is in a better position than ever to compete with surrounding states with major international gateways, such as Georgia, for the U.S. operations of multi-national corporations. The local effects expand beyond the U.S. to our partners in open skies agreements. The growth in traffic to interior European destinations has encouraged the development of European hubs, largely as result of U.S. generated traffic. The growth is both in terms of destinations served from hubs, as well as new banks of flights to existing destinations. This growth here and abroad creates jobs and strengthens local economies.

THE EFFECT ON PUBLIC POLICY

Introduction

In the past year the government's attention to the airline industry has focused on security. Prior to the attacks on the World Trade Center and Pentagon in September 2001, the domestic airline industry was under scrutiny from a variety of U.S. public policy makers. The government agencies and bodies involved in oversight included the DOT, the Federal

Aviation Administration (FAA), the DOT's Office of the Inspector General, the Justice Department's Anti-Trust Division, Congress, and the State Attorneys General. All of these organizations express a commitment to fostering a competitive marketplace, where consumers receive good value and business thrives. As the industry recovers and reorganizes it is likely this attention will return.

The priorities of public policy makers are meaningfully different from those of consumers or shareholders. The focus of public policy is to ensure that a functioning pro-competitive market exists. The government provides the infrastructure required for the industry to operate (e.g., airports and Air Traffic Control) and safety regulations and oversight to inspire consumer confidence. In the past, economic regulation was also a responsibility. Domestic and international deregulations have largely eliminated this task. However, public policy leaders remain accountable for the concrete and steel essentials, as well as, the maintenance of economic components of a competitive market.

The important international successes, addressed in earlier sections, occurred while the public's attention focused on domestic customer service failures and anticompetitive threats. Today, the mass media's attention focuses on security and the sustainability of the industry. The consumer and business benefits of open skies and immunized alliances require that the momentum of past success in these areas must continue to be cultivated. Rodney Slater, former secretary of transportation in the Clinton administration told the WINGS Club weeks before his departure from the post, "I strongly believe that in the 21st century, aviation will be the engine of growth for the world that the Eisenhower Interstate Highway system was for America during the latter half of the 20th century" (Slater, 2001).

A collection of important international markets with which the U.S. does not share an open skies agreement exists; the list includes Japan, U.K., Spain, China, Brazil, and Russia. The work of the Bush administration in the early 1990s to develop open skies agreements, and the efforts of the Clinton administration in spreading the policy to nearly every corner of the globe, left the present administration with the task of signing these final deals and moving the nations airline industry and international aviation relationships into the era of globalization.

Each of the remaining nations presents special challenges. The U.K. and Japan as the U.S.'s largest aviation trading partners cannot be ignored, despite the unique challenges they bring to the negotiating table. I propose a two-pronged approach to building pressure for these and other nations to sign open skies agreements: internal pressure and noninvolvement in multilateral agreements. Internal pressure must be developed by working with business and political interest within each nation to convince them to sign these agreements, in collaboration with the perceived and quantifiable

effects of noninvolvement in surrounding multilateral agreements. The remainder of the section explores how this policy can be implemented.

Foreign Coalition Building

Pressure from the airline of a foreign nation is typically crucial to winning open skies concessions from a restrictive government. This proved true in reaching an accord with Germany, where Lufthansa's desire for antitrust immunity led the German authorities to agree to open skies. This approach may be taken a step further by not only convincing carriers to place pressure on their government's regulators, but by building energy from the entire business community for open skies. The State Department's role as lead negotiator on aviation agreements will be of benefit in the pursuit of such a strategy. A convincing case must be presented to opinion leaders in nations with whom we do not have agreements by U.S. embassies, the DOT Office of Aviation and International Affairs, the Department of Commerce and business associations.

Implementation

The DOT, in conjunction with the State Department and the Commerce Department, should organize an effort to persuade the business communities of foreign partners to influence their governments to agree to open skies. Secretary Slater provided significant leadership in this arena, touring Europe, Africa and Asia to secure agreements. Including the foreign trade expertise of the Commerce Department to the overall negotiating strategy is crucial to the success of this approach. Media efforts, trade missions and commercial links will be the tools used to build interior pressure for open skies. Media efforts, such as opinion pieces placed in the national business press of target nations, can play a key role in influencing target audiences. In addition to media efforts, multi-national corporations with offices in target countries may be called upon to join efforts to persuade foreign partners. The role of these companies will be to lobby other businesses to support open skies. Multinational business leaders may not feel comfortable lobbying foreign governments on such a tangential issue; however, building support in the wider business community is a realistic task for multinationals. The Commerce Department will be a good resource in developing contacts with these companies, considering the department's current support of U.S. business overseas. U.S. embassies overseas will organize lobbying efforts targeted at local political leaders. The support of local and regional airports and aviation authorities will bring authority and legitimacy to the cause.

Who Will Implement?

The DOT and the State Department, in consultation with the Commerce Department, will handle target nation selection. After a nation is selected, the Commerce and State Departments will take the lead in initiating and developing support within the business and political communities. DOT will focus on lobbying the aviation community, namely the transport ministry, as well as, airline and airport executives. These efforts, more than the multilateral strategy, are likely to require a commitment of additional resources to DOT and the Commerce Department.

Opposition

The airlines that oppose these agreements are typically government-owned inefficient operations that fear they can not compete with the highly efficient American carriers. The recent movement toward broad-based strategic alliances and the desire to attain antitrust immunity for such alliances is certainly a source of leverage. The U.S. has not yet pro-actively marketed anti-trust immunity to the international community. Bringing in the holdout nations may require taking a proactive stance.

Multilateral Approach

In November 2000, at the Asia-Pacific Economic Cooperation (APEC) summit, then Secretary Slater signed the first-ever multilateral aviation agreement. The agreement between the U.S., Brunei, Singapore, New Zealand and Chile should serve as the launch of a new global strategy. The ability of multilateral agreements to place pressure on regional neighbors should not be underestimated. The APEC negotiations were observed by Australia and Japan, an occurrence that does not typically take place in bilateral negotiations.

In the 1970s and 1980s, the U.S. attempted to persuade recalcitrant nations to adopt its position through what, at the time, was labeled by industry observers as *divide and conquer* (De Murias, 1989). In this strategy, liberal agreements were negotiated with neighboring nations to advance U.S. goals with third countries. Overall, the strategy found limited success. However, with nearly global acceptance of the principles of open skies, the pressure provided by multilaterals may make the difference in negotiations with nations reluctant to ratify open skies accords.

Implementation

We have successfully reached bilateral open skies agreements with nearly every country in Europe, and the European Union has adopted internal deregulation. The multilateral signed in Brunei is open to signage by any other nation. The nations the U.S. currently has open skies

agreements with, particularly European nations, should be encouraged to join this agreement. Another option is to pursue a single multilateral agreement between our existing European open skies partners and us. This single agreement could be joined by non-signatory European nations as they decide to participate.

As with the APEC agreement, a key feature of any new multilateral agreement should be expanded access to equity financing. The agreement liberalizes the traditional ownership requirement, thus enhancing foreign carriers' access to outside investment. The greatest success of this policy will probably not be found in the UK, as the issues preventing an agreement there are so complex. A main point of contention would no doubt continue to be landing rights at London's Heathrow airport. However, negotiating as a single multilateral unit, the U.S. position may be strengthened. A multilateral agreement could, however, successfully encourage Spain to fully liberalize their agreements with the U.S.

Domestic Resistance

The flight attendants' unions provide the strongest domestic resistance to multilateral agreements. They are concerned with the equity provisions in the agreement that could allow U.S. airlines to purchase foreign carriers and operate them on the international routes to the U.S., replacing flights worked by U.S. flight attendants. This issue could be difficult, as the flight attendants are likely to receive the full support of the U.S. labor community.

The equity provisions are critical to the success of multilaterals, but labor resistance could derail signatures. To respond to these concerns, the DOT could monitor the U.S. ownership of foreign carriers and could require them to report ownership in excess of 25%. The percentage is based on the maximum allowed percentage of foreign ownership of a U.S. carrier. Unions have expressed the desire for such monitoring (Coleman, 2000). Further, it should be stressed to the labor community that the airline industry, unlike the shipping industry, is not likely to adopt a flag of convenience strategy.

International Resistance

This approach may prove a difficult sell to the international community. The European Union appears to be the perfect body to participate in a multilateral agreement. In fact, the U.K. and Ireland are the only E.U. members to publicly oppose the creation of a Transatlantic Common Aviation Area. However, for the foreseeable future, the opposition of the U.K. and Ireland precludes the development of such a multilateral. The Scandinavian nations may be good start for a U.S.-Europe multilateral, as we have open skies agreements with each nation and they represent a combination of E.U. and non-E.U. member states.

The role of unions is important in European politics. The typically contentious airline labor unions support our initiatives as they create union jobs. The International Association of Airline Pilots, to which most pilots unions belong, supports deregulation and open skies. The concerns of U.S. flight attendants' unions should be less with a European multilateral, as carriers of each nation do not stand to benefit from moving operations between the two continents.

CONCLUSION

Open Skies, At Last? Immunity, Forever?

Nearly a century ago, when Adolf Berle first mused of open skies, it seemed that there might never be an international political climate to support his philosophy. In a number of important ways, it appears that just such a climate has formed and the clouds of regulation are drifting away. Though aviation clauses are conspicuously absent from the World Trade Organization and open skies among the North American Free Trade Agreement partners remains limited by ownership and cabotage restrictions, the past two decades have seen a steady movement toward international deregulation.

Airline industry globalization within this deregulated paradigm has created positive synergies for industry and the flying public. Industry benefits from greater passengers volumes and higher yields. The creation of competing global networks expands service and drives down prices for consumers.

Foreign ownership restrictions are the principal obstacle to truly open skies. For now, it appears the world is absent the political will to make international mergers a reality. Potential mergers between E.U.-based carriers can be likened more to the consolidation of the U.S. market than to true international mergers. The political reality makes the role of antitrust immunity in the new international regulatory environment important. Given existing ownership limits, immunity from civil and criminal antitrust regulation provides the most competitive industry paradigm.

ENDNOTES

1. The STAR Alliance is a partnership of U.S. and Asian airlines, including United Airlines, All Nippon (ANA), Singapore Airlines, and Thai Airlines.

2. The four alliances at the time were: a) WINGS consisting of Northwest, KLM, Alitalia and Continental; b) STAR consisting of United, Lufthansa, SAS, Air Canada, Varig, Thai Airways, Ansett Australia and Air New Zealand; c) ONEWORLD consisting of American, British Airways, Canadian, Qantas and Cathay Pacific; and ATLANTIC EXCELLENCE consisting of Delta, Swiss Air, Sabena and Austrian Airlines. Atlantic Excellence dissolved in late 1999.

3. The partnerships with immunity are Northwest/KLM, United Airlines/Lufthansa, United Airlines/SAS, United Airlines/Air Canada, American Airlines/Canadian Airlines, and all Atlantic Excellence partnerships.

REFERENCES

Brueckner, J. K. (2001, March). *International airfares in the age of alliances: The effects of codesharing and antitrust immunity*. Champaign, IL: University of Illinois.

Coleman, Z. (2000, December 14). Five-Nation pact on Open Skies could founder on U.S. position. *Wall Street Journal*, Sec. International.

De Murias, Ramon. (1989). *The economic regulation of international air transport*. Jefferson, North Carolina: McFarland.

DOT. (n.d.). *U.S. international air passenger and freight statistics*. U.S. Department of Transportation. http://ostpxweb.ost.dot.gov/aviation

DOT. (1978). *Policy for the conduct of international air transport*. Washington DC: U.S. Department of Transportation.

DOT. (1995) Statement of U.S. international air transportation policy. *Federal Registrar 60* (85). Washington DC: U.S. Department of Transportation www.dot.gov/general/policy/transpol.txt

DOT. (October, 2000a) *International aviation developments second report: Trans-Atlantic deregulation the alliance network effect*. Washington DC: U.S. Department of Transportation, Office of Aviation and International Affairs.

DOT. (October, 2000b) *Order granting approval and antitrust immunity for a coordination agreement* (Order 2000-10-12 Docket OST-2000-6791-8). Washington DC: U.S. Department of Transportation, Office of the Secretary.

DOT. (2001). *List of U.S. bilateral aviation agreements*. Washington DC: U.S. Department of Transportation, Office of Aviation and International Affairs.

GAO. (April 6, 1995). *International aviation: Airline alliances produce benefits, but effect on competition is uncertain*. (GAO/RCED-95-99). Washington DC: U.S. General Accounting Office.

Office of the Press Secretary, The White House. (2000, November). *Fact sheet: Multilateral open skies aviation agreement*. Washington DC: The White House. http://www.state.gov/www/issues/economic/001115_fswh_apec_skies.html

Oum, T.H.. (2001). The key aspects of global strategic alliances and the impacts on the future of Air Canada and other Canadian carriers. *Report to the Canada Transportation Act Review Panel*.
http://www.reviewcta-examenltc.gc.ca/CTAReview/CTAReview/english/reports/oum.pdf

Oum, T.H.. & Yu, C.. (1998). *Winning airlines: Productivity and cost-competitiveness of the world's major airlines*. Boston: Kluwer Academic Publishers.

Public Law 96-192[S.1300] International Air Transportation Competition Act of 1979

Slater, R. (2001, Janaury 16). "WINGS Club Address." New York.

Sochor, Eugene. (1991). *The politics of international aviation*. Iowa City: University of Iowa Press.

Taneja, N. K. (1988). *The international airline industry: Trends, issues and challenges*. Lexington, MA: Lexington Books.

Toh, Rex S. (1998). Toward an international open skies regime: Advances, impediments and impacts. *Jounal of Air Transportation World Wide 3* (1). p. 61-71