



Number 4

October 1995

THE ASIA-PACIFIC  
AIRLINE INDUSTRY:  
ECONOMIC BOOM  
AND POLITICAL  
CONFLICT

SUMNER J. LA CROIX  
DAVID JONATHAN WOLFF

*The rapid growth of air traffic and related industries servicing Asia is straining existing facilities as well as threatening the framework of bilateral agreements that have governed Asia-Pacific aviation since the end of World War II. A U.S. call for free international trade in airline services is getting a wary reception from many Asian governments.*

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## SUMMARY

High rates of economic growth in Asia are spurring the rapid expansion of commercial aviation industries serving Asia and the Pacific. The number of passengers carried across the Pacific increased at an annual rate of 8.6 percent during 1982-92, compared with 5.4 percent on all other routes. And with 16 of the world's 25 busiest air routes, Asia's major airports are already near capacity. The region will soon account for the world's largest increase in aircraft purchasing, maintenance, and repair, generating tremendous revenues for firms that service the industry.

Although many Asia-Pacific nations are benefiting from the boom in air traffic, the continued expansion threatens the framework of bilateral agreements that have governed Asia-Pacific aviation since the end of World War II. Growth in the number of passengers, airlines, and routes has stimulated competition and intensified aviation disputes, thereby increasing tensions in the international relations of the region. Potentially, such tensions could fuel increased protectionism.

The United States has been actively campaigning for countries in Asia to adopt an "Open Skies" regime that would allow free international trade in airline services. Although liberalization would have positive effects, such as lower fares and more efficient airline management, some Asian governments worry that it could also lead to predatory pricing, a retreat from low-demand routes, and a tendency toward oligopoly. And many Asian airlines, which owe their profitability in part to restrictive bilateral treaties, are partially government-owned; therefore, governments may be reluctant to adopt new competitive arrangements that eliminate or reduce these profits.

Although free trade is usually superior to protected trade, it also generates losers—countries whose national airlines would shrink or even disappear in a liberalized regime. Unless losing countries receive some compensation, they are unlikely to support a free-trade regime. The Asia-Pacific Economic Cooperation (APEC) Working Group on Transportation could provide a forum for the formulation and discussion of new policies for international cooperation in aviation throughout the Asia-Pacific region.

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*Expansion of air transportation is critical to Asia's export-driven economies*

Asia's explosive economic growth has been accompanied by a rapid expansion and transformation of the region's airline industry. Between 1982 and 1992, the number of passengers carried across the Pacific increased at an annual rate of 8.6 percent, and the number of passengers traveling between Europe and the Asia-Pacific region increased at an annual rate of 11.4 percent. On all other scheduled international and domestic air routes, passenger traffic increased at an annual rate of only 5.4 percent.<sup>1</sup> The International Civil Aviation Organization (ICAO) predicts that Asia-Pacific air passenger growth rates will fall to lower levels (6–8 percent) over the next 20 years but will continue to outstrip air passenger growth rates in the rest of the world.<sup>2</sup>

For several reasons, air transportation is expected to play a larger role in this booming and geographically far-flung region than anywhere else in the world. First, the high population and income growth rates in many Asian countries will produce an astounding increase in the demand for air transportation services. The region already accounts for more than 50 percent of the world's population, and, by the end of the century, more than half of the 25 most populous cities in the world will be found in Asia. Second, vast distances separate many Asia-Pacific countries (see map on pages 20–21). About 60 percent of the air routes in the region are between cities that are at least 2,000 kilometers apart,<sup>3</sup> and a number of the countries in the region are islands or archipelagos with few alternatives to air passenger travel. Third, expansion of air transportation is critical to the region's export-driven economies.<sup>4</sup> Business demand for air travel has also been enhanced by the rapid increase in

direct foreign investment flows to Asia over the last 20 years.<sup>5</sup> Finally, leisure travel has become the main source of demand on most international routes. Tourism is the primary industry for a number of the Pacific Island nations and is growing in importance throughout the region. Between 1960 and 1992, the Asia-Pacific region's share of worldwide tourism revenues grew from 3 percent to 16 percent.<sup>6</sup> Rapidly rising per capita incomes in Asia hold promise for dramatic increases in intra-Asian tourism and air travel over the next decade.

This report provides a three-part overview of this important and rapidly growing industry. First, we identify and analyze major economic trends in the industry. Among these are increased demand for new aircraft and ancillary services, growth in airport infrastructure investment, privatization of Asian flag carriers, relaxation of entry and price regulations, and increased intra- and interregional cooperation.\* Next, we discuss how rapid expansion and transformation of the region's aviation industry have led to increased political controversy. Analysis of the bilateral system that currently characterizes international aviation services and of key bilateral disputes in the region illustrates this increased level of international tension. Finally, we consider the possibil-

\* The report focuses on major trends in the Asia-Pacific airline industry rather than the situation within each country in the region. The analysis also focuses on the provision of air passenger service, paying only passing attention to aircraft manufacture and the air cargo industry. Thus, all references to the "airline industry" pertain only to passenger air service. References to the "Asia-Pacific region" include the South Asian countries of India, Pakistan, Bangladesh, and Sri Lanka. Service to the Pacific islands (with the exception of Hawaii) is excluded from the analysis.

ity of improving the region's current international air service regime through the development of a multi-lateral regime that would better unify Asian markets. Such a system is needed if the region is to cope effectively with the dramatic developments affecting the Asia-Pacific aviation industry. The report concludes by presenting several proposals for a new Asia-Pacific aviation regime.

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### THE ASCENT OF ASIAN AIRLINES

Research on developments in Asia-Pacific aviation has documented several important factors affecting the current state of and prospects for the industry.

#### Losses, Cost-Cutting, and Consolidation in the Global Industry

The boom in the Asian airline industry has been remarkable given that most airlines in Japan, North Amer-

ica, Europe, and Australia experienced large cyclical losses in the early 1990s and have returned to profitability only since 1994. For example, in the early 1990s, Japanese airlines suffered large losses as a result of high operating costs, an appreciating currency, and the prolonged Japanese recession (Table 1). The downturn prompted Japanese airlines to initiate a series of cost-cutting measures, such as hiring expatriate crews, freezing salaries, holding bonuses to a record-low formula, and cutting back on perks. Despite its slow pace, the restructuring allowed Japan Airlines (JAL) to earn a ¥2.8 billion profit in fiscal year 1994, a major improvement from a ¥26.1 billion loss in fiscal year 1993,\* and All Nippon Airways (ANA) to rebound from its first loss in 27 years (¥2.9 billion) in fiscal year 1993 to a profit of ¥4.2 billion in fiscal year 1994.<sup>7</sup>

\* JAL's net profit stems from the sale of its 5 percent stake in Air New Zealand. JAL recorded an operating loss of ¥9.8 billion in FY1994.

*Cost-cutting measures by Japanese airlines have helped them return to profitability after disastrous losses in the early 1990s.*



**Table 1. Corporate financial results of selected Asian, European, and North American airlines: Fiscal years 1993 and 1994 (US\$ thousands)**

Airline	Operating profit/loss		Net income	
	1993	1994	1993	1994
<b>Asia-Pacific</b>				
Air India	u	u	63,500	20,310
All Nippon	u	u	-33,000	47,000
Cathay Pacific	294,500	333,331	293,974	306,153
Garuda	-88,870	27,770	-3,110	76,210
JAL	u	-110,000	-293,000	31,500
Korean	384,422	346,317	14,566	46,779
Malaysia	u	u	4,290	37,362
Qantas	24,346	223,332	-278,832	115,514
Singapore	583,000	629,000	533,000	586,000
Thai	-107,946	-4,191	40,360	123,561
<b>United States</b>				
American	374,000	586,000	-314,000	-7,000
Delta	-212,200	-217,000	-225,900	-159,000
Northwest	272,400	830,400	-115,300	295,500
United	295,000	513,000	-50,000	51,000
USAir	-149,106	-516,971	-418,797	-716,183
<b>Europe</b>				
Air France	u	u	-1,531,544	-247,940
British Airways	705,600	939,200	360,000	478,400
Lufthansa	u	u	-34,000	197,000

Source: Various airline reports.

u—unavailable.

The losses by Japanese airlines pale in comparison, however, to the massive losses incurred by U.S. airlines.<sup>8</sup> Between 1988 and 1992, the U.S. airline industry went from a US\$1.7 billion profit to a US\$10 billion loss, its worst performance since the 1930s.<sup>9</sup> The losses derived from several sources. With the unexpected downturn in travel after the Gulf War, many airlines were left with too many new planes and an overextended route network. New government regulatory actions added to their woes by requiring such costly add-ons as airport access control systems, installation of aircraft Traffic and Collision Avoidance Systems (TCAS), modifications to aging aircraft, and implementation of systems designed to meet cargo fire containment, wind shear, and noise-

abatement requirements. Increased airport landing fees and new taxes also contributed to higher costs during a time of stagnant demand. A sustained recovery in the U.S. economy since 1992, significant reductions in airline labor costs, and major route consolidation finally returned most U.S. global carriers to profitability in 1994 (Table 1). Asian airlines are now worried that American carriers, strengthened by their recent success in cutting operating costs, will become even more formidable competitors.

#### **Entry, Expansion, and Profits in Asia**

The strong performance of the Asian airline industry in the 1990s is particularly remarkable given the problems of the rest of the world's airlines. Despite the worldwide economic

slowdown in 1990-92, members of the Orient Airlines Association (OAA) reported US\$2.2 billion in profits over the same period;\* the financial condition of most Asian airlines remains strong (Table 1). This solid performance has occurred against a background of new routes, new entrants, and changes in passenger demand.

Several factors have stimulated the establishment of new routes and the entry of new carriers on existing routes (see box on page 6). First, strong income growth in East Asian and Southeast Asian countries has led to more international travel, prompting smaller domestic carriers to move into the international market in direct competition with established national flag carriers. Second, over the last decade, several Asian countries, such as Taiwan and South Korea, have gradually decreased restrictive regulations on foreign travel, and other countries, such as China, have started to allow overseas tourism travel. Third, privatization of national flag carriers and relaxation of domestic entry and pricing regulations have allowed smaller new airlines to gain a niche in several domestic markets. The new entrants are not burdened by the relatively high labor and capital costs of recently privatized national flag carriers, whose expenditures, while protected from competition, sometimes have more to do with politics and prestige than with efficiency.<sup>10</sup>

This expansion may at first seem somewhat surprising given that the region is home to hundreds of millions of people who cannot afford to fly. But, whereas only 6 percent of the people in the region are air travelers (com-

\* The only major international carriers in Asia that do not belong to the Manila-based OAA are China's airlines and the Japan Air System.

***Air traffic to  
and from Vietnam  
grew by 50 percent  
in 1994***

pared with 25 percent in Europe and 35 percent in the United States), the percentage of Asian travelers is growing and is expected to double by the year 2000.<sup>11</sup> Air passenger traffic to and from Taiwan, for example, increased by 29 percent in 1992.<sup>12</sup> In developed countries in the West, the number of kilometers flown by the population is often many times greater than the number of people in the country. The potential for air travel growth in the Asia-Pacific region, with its rapidly growing economies and huge populations, is tremendous (see Figure 1). According to a report by the Air Transport Action Group (ATAG), the largest increase in Asian air travel is likely to take place on routes crossing the South China Sea, that is, in Southeast Asia.<sup>13</sup> Among Asia-Pacific countries, Indonesia is expected to record the fastest annual growth in international arrivals during the 1990s, followed by Malaysia and

Australia. In South Asia, increased demand for air services is expected to result from India's recent efforts to open its economy to foreign investment and international trade. Similarly, strong growth in China should stimulate both international and domestic passenger flows. With the opening of diplomatic relations between the United States and Vietnam in July 1995, air traffic to and from Hanoi and Ho Chi Minh City should continue to increase, although 1994's 50-percent growth rate may be hard to match. Regional carriers should earn most of the increase in business as long as they are able to raise additional capital to purchase (or lease) new aircraft and to cope with the organizational stresses encountered by all rapidly growing firms.

**Demand for New Aircraft and Ancillary Services** Because of the expected massive increases in demand for air

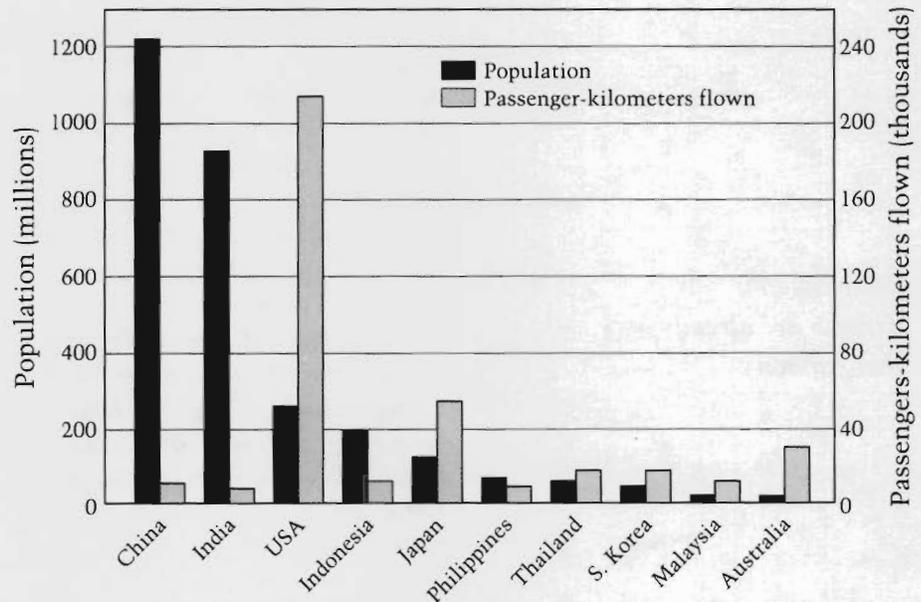
**New Airlines and Subsidiaries**

New Entrants	
Airline	Country
Asiana	South Korea
Eva	Taiwan
Mandarin	Taiwan
East-West	India
Jet Airways	India
Sempati	Indonesia
Aero-Asia	Pakistan
Hajvairy	Pakistan
New Subsidiaries	
Airline	Country
Dragonair	Hong Kong
Silkair	Singapore
Merpati	Indonesia

Some new carriers, such as Asiana and Sempati, compete with established carriers in providing international service on major trunk routes. Others, such as East-West Airlines, compete only on domestic routes.

Other "new" carriers, such as Dragonair, are owned by an established airline in their home country. For example, the parent company of Dragonair is Cathay Pacific. Most subsidiary carriers, such as the Garuda subsidiary Merpati, provide service from smaller cities to the major hub airports, where passengers then fly on trunk routes serviced by the parent carrier. Other subsidiaries, such as the Singapore International Airlines subsidiary Silkair, were set up to produce a "differentiated" product, in this case to serve resort destinations.

Figure 1. Estimated Asia-Pacific populations (1995) and airline traffic (1992)



Note: "Passenger-kilometers flown" is equal to the number of kilometers flown for all passengers whose flights originated in that country.

Source: Data derived from Population Reference Bureau (1995) and ICAO (1995: table 2-9).

travel in the region, a variety of new planes will be added to existing fleets of aircraft, and planes already serving the Pacific are likely to be flown more frequently and for longer periods of time. The Asia-Pacific region will therefore account for the world's largest increase in aircraft purchasing, maintenance, and repair, generating tremendous revenues for firms that service and supply the aviation industry. For example, Singapore International Airlines (SIA) expects to double its fleet of 90 aircraft over the next six years to cope with increased demand. From 1982 to 1992, Asia-Pacific carriers accounted for 24 percent of worldwide expenditures on commercial jets.<sup>14</sup> Boeing's commercial airplane group forecasts that Asian airlines will purchase an additional 3,340 planes at a cost of US\$280 billion over the next 15 years. Eventually, the larger Asia-Pacific airlines are also expected to provide the primary market for a new

generation of commercial aircraft—jumbo jets capable of holding 600 to 900 passengers, twice the capacity of current airliners.\*

Although increased sales will clearly benefit manufacturers in Europe and North America<sup>†</sup>—the dominant suppliers of commercial jet aircraft—they will also provide opportunities for joint development projects between Western and Asian aerospace companies. It is becoming increasingly evident that such cooperative ventures will characterize the development of future aircraft. For example, in May 1994, Boeing, Japan Aircraft Industry, and China National Aero-Technology Import and Export Cor-

\* In July 1995, Boeing and Airbus concluded that the world market for a 600-900 passenger jumbo jet was not yet sufficiently large to begin designing such an aircraft.

† Specifically, the European Airbus consortium and the Boeing and McDonnell Douglas companies in North America.

***Many Asian airports are already near capacity***

poration announced that they will cooperate in a joint study of market demand for a small jetliner in Asia. New Asian ventures (see box below), established without European and North American partners, are also trying to capture part of the expanding market. The joint development arrangements are attempts to use Asia's low-cost labor and preserve existing market shares. By locating manufacturing plants in high-growth Asian countries, foreign aircraft manufacturers provide subtle incentives for national carriers to continue buying their planes.

**Infrastructure Investment** The extent to which Asian countries can accommodate growth in civil aviation is limited by the region's airport infrastructure. Although the Asia-Pacific region contains 16 of the world's 25 busiest routes (Table 2), it only has five of the world's 25 busiest airports (Table 3); many are already near capac-

ity. Nine of the 25 busiest routes have Tokyo's Haneda or Narita airports as their source or destination. Even if regional airlines purchase larger aircraft, increase load factors, and allot less space to each passenger, most growth in capacity must come from an increased number of flights.<sup>15</sup> To handle more flights, countries are investing heavily in new airports, airport expansion, and related aviation infrastructure (see box on pages 12-13). A few major projects have recently been completed, more are under construction, and several massive projects are moving from the planning stages to construction.

Although the expansion of airports across Asia is long overdue, the current construction boom also raises some concerns. First, most construction projects are concentrated in larger "hub" cities. Most "spoke" airports in smaller cities have not been remodeled and will be unable to handle much more traffic from the hubs. The

**New Asian Ventures to Manufacture Aircraft**

Asian joint ventures to produce small- to medium-size aircraft are in the works. In March 1994, South Korea and China agreed to develop a new 100-seat passenger jet. Samsung Aerospace Industrial Company, South Korea's largest aircraft manufacturer, formed a consortium with 31 Korean firms in September 1994 to serve as the Korean partner in the joint venture. The two sides are planning to invest US\$1.2 billion to develop a prototype by 1998, although some observers believe the project will ultimately cost US\$3 billion-\$4 billion. China has urged Korea to allow Boeing to join the project to provide critical technology and know-how.

Indonesia's state-owned Industri Pesawat Terbang Nusantara (IPTN) is also developing and assembling a new commercial passenger aircraft, the N-250, a 70-seat twin-engine turboprop. The Indonesian government has already invested US\$1.6 billion in the project, which is viewed skeptically by some foreign analysts. Flight testing and certification are expected to take two years, with commercial production expected in 1998. In June 1995, IPTN announced plans to develop a US\$100-million assembly plant in Mobile, Alabama, in partnership with international companies.

next step in the process of upgrading airport infrastructure will be to expand and improve facilities at the smaller airports. Second, the rush by many cities in Southeast Asia and South China to build very large airports that could serve as regional hubs raises concerns about overinvestment and underutilized runways and terminals in some locations. Coordination among Asian governments could help to avoid excessive investment in hub airport capacity.

#### **Privatization of Asian Flag Carriers**

Flag carriers in Australia, Japan, Malaysia, New Zealand, the Philippines, Singapore, China, and Thailand are either wholly or partially owned by private parties. This regional trend is part of a worldwide movement toward privatization in the airline industry\* that is expected to increase airline efficiency and wean carriers from the national treasury. The movement is occurring at a critical time for Asia-Pacific civil aviation, when survival dictates that the region's airlines be more responsive to the demands of a changing marketplace. Privately operated carriers are perceived to be more flexible than state-owned airlines and in a better position to gain access to capital markets for the financing of fleet expansion programs.

Privatization, although proceeding slowly in Asia, is ultimately an infectious process. If a national airline privatizes and reduces its costs, it will be able to increase its share of passengers on authorized international routes. Over time, the increased competition will affect the bottom line of a second country's national carrier. That carrier and its home government then face several difficult choices. They can negotiate a change in the treaty governing the route and obtain more pro-

**Table 2. International scheduled passenger traffic: City pairs with highest traffic (year ending 30 June 1992)**

City pairs	No. of arriving and departing passengers (in thousands)
1 London ↔ Paris	3,403
2 London ↔ New York	2,249
3 Hong Kong ↔ Taipei	2,177
4 Honolulu ↔ Tokyo	2,128
5 Kuala Lumpur ↔ Singapore	2,112
6 Hong Kong ↔ Tokyo	2,103
7 Amsterdam ↔ London	1,731
8 Bangkok ↔ Hong Kong	1,730
9 Dublin ↔ London	1,678
10 Seoul ↔ Tokyo	1,650
11 Jakarta ↔ Singapore	1,408
12 New York ↔ Paris	1,281
13 Singapore ↔ Tokyo	1,247
14 Frankfurt ↔ London	1,235
15 Taipei ↔ Tokyo	1,100
16 Los Angeles ↔ Tokyo	1,097
17 Hong Kong ↔ Manila	1,096
18 Hong Kong ↔ Singapore	986
19 Bangkok ↔ Singapore	980
20 Brussels ↔ London	954
21 London ↔ Los Angeles	948
22 London ↔ Tokyo	936
23 Bangkok ↔ Tokyo	926
24 London ↔ Zurich	913
25 Guam Island ↔ Tokyo	903

Source: ICAO (1992:175).

tection for the national carrier. This option would have to be pursued with several countries, however, and, in the long run, would do little to improve the efficiency of the country's airlines. A second option is for the government to remain as the owner, but to cut costs. This choice is politically dangerous, as workers are likely to blame the government for wage cuts and job losses. Third, the carrier and its home government can sell the airline to

\* In 1991, two-thirds of Latin America's airlines were state-owned. By October 1994, only three state-owned airlines remained and they are in the process of being sold to private buyers.

#### ***Privatization in the airline industry is ultimately an infectious process***

Table 3. Top 25 airports in the world: Domestic and international passenger traffic

Airport [code]	Passengers handled		
	Terminal <sup>a</sup>	International	Domestic
1 Chicago O'Hare Int'l (ORD)	65,091,168	5,899,466	59,191,702
2 Dallas/Forth Worth Int'l (DFW)	49,654,730	2,105,427	47,549,303
3 Los Angeles Int'l (LAX)	47,844,794	11,945,032	35,899,762
4 Atlanta Hartsfield (ATL)	47,751,000	2,416,582	45,334,418
5 London Heathrow (LHR)	47,601,733	40,843,527	6,758,206
6 Tokyo Haneda (HND)	41,507,354	747,219	40,760,135
7 Denver Stapleton Int'l (DEN)	32,626,956	259,170	32,367,786
8 San Francisco Int'l (SFO)	32,042,186	4,608,777	27,433,409
9 Frankfurt Rhein (FRA)	31,930,903	25,290,239	6,640,664
10 Miami Int'l (MIA)	28,660,396	12,373,223	16,287,173
11 New York JFK (JFK)	26,796,036	14,821,136	11,974,900
12 Newark Int'l (EWR)	25,809,413	3,412,036	22,397,377
13 Paris Charles de Gaulle (CDG)	25,695,366	23,336,134	2,359,232
14 Paris Orly (ORY)	25,250,654	10,075,158	15,175,496
15 Hong Kong (HKG)	24,420,646	24,420,646	na
16 Detroit Metro Wayne County (DTW)	24,170,570	2,025,043	22,145,527
17 Boston Logan Int'l (BOS)	24,038,178	u	u
18 Phoenix Sky Harbour Int'l (PHX)	23,542,372	107,578	23,434,794
19 Minneapolis/St. Paul Int'l (MSP)	23,402,412	566,184	22,836,228
20 Osaka Int'l (OSA)	23,298,583	5,225,519	18,073,064
21 Seoul Kimpo Int'l (SEL)	22,633,606	10,327,303	12,306,303
22 Las Vegas McCarran Int'l (LAS)	22,492,156	561,436	21,930,720
23 Honolulu Int'l (HNL)	22,061,953	5,173,365	16,888,588
24 Orlando Int'l (MCO)	21,466,033	2,722,189	18,743,844
25 Amsterdam Schiphol (AMS)	20,770,350	20,658,100	112,250

Source: Airports Council International (1993); IATA (1994:14).

a. Sum of terminating passengers and transfer passengers. (Transfer passengers are counted twice, on arrival and on departure from the airport.)

na—not applicable.

u—unavailable.

**Many countries  
are moving to  
deregulate the civil  
aviation industry**

private parties who would have the incentive to cut costs and improve service quality. The last choice not only raises revenue for the government but also delinks it from politically damaging cost-reduction measures. Thus, the ongoing process of privatization in Asian flag carriers will likely continue at a measured pace over the next decade.

**Price-Entry Deregulation** A critical implication of the privatization of carriers in the region is that it sets the stage for relaxing regulations (price-entry policies) that restrict entry on

particular routes and promote high prices. Thus, in concert with the privatization movement, many countries in the Asia-Pacific region are moving to deregulate the civil aviation industry. Although regulatory policies vary widely within the region, there has clearly been an overall shift in recent years toward more liberal price-entry policies. The pace of deregulation for international routes has, however, varied considerably across countries, with differences centering on the competitive position of a country's airline industry, the existence of a large domestic passenger base, and the

*Hong Kong's Kai Tak International Airport, the fifteenth busiest airport in the world, operates on a single runway and has no room for expansion.*



potential to serve as a regional hub. Countries with a large, affluent base of origin/destination traffic, such as Japan, have tended to protect that profitable asset with strict international regulatory policies, whereas countries with a smaller base of origin/destination traffic, such as Singapore, have promoted their main airports as regional hubs and encouraged a more liberal competitive environment. The pace of deregulation for domestic routes has also varied, with India, China, Pakistan, Australia, and New Zealand undertaking notable reforms, and Japan, the Philippines, Indonesia, and Thailand lagging behind.

China's domestic liberalization has been rapid and turbulent. Five years ago, the government divested the

state-controlled Civil Aviation Administration of China (CAAC) of most regulatory responsibilities. Once the restrictions on competition were lifted, 35 new regional and provincial airlines entered the market, and more applications are pending. Passenger growth peaked at 32 percent in 1992, but has declined somewhat since then, the result of a high accident rate and the new freedom of Chinese travelers to choose foreign carriers for international travel. In 1994, China's Security Regulatory Commission announced that two state airlines, China Southern and China Eastern Airlines, had received Beijing's approval to float equity shares on foreign stock markets.

The rush of new carriers into China's market severely strained the

### Asia-Pacific Airport Infrastructure Projects

The extent to which the region can accommodate the projected growth in Asia-Pacific aviation is limited by the capacity of its airport infrastructure. The International Air Transport Association (IATA) reports that nearly half of the major airports in the region will have to begin turning flights away this year unless substantial improvements are made. To keep up, many of the countries in the region are therefore investing heavily in airport infrastructure.

**Japan** The Narita and Haneda airports are both critically short of space, and expansion plans are underway. The *New Kansai International Airport*, two miles offshore of Osaka, opened in 1994. It is designed to handle 30 million passengers a year. In all, Japan is spending US\$24 billion (1992-97) on its airport improvement program. In addition, the new Five-Year Airport Expansion Program Interim Report calls for construction of offshore airports near Tokyo and Nagoya.

**China** The People's Republic of China faces particularly serious infrastructure problems and has endorsed an ambitious plan to upgrade 100 of its airports. Seventeen new airports were under construction in the beginning of 1994, with nine additional projects initiated later that year. In South China, a new airport has opened in Macao, and others are underway in Shenzhen, Zhuhai, and Guangzhou. The latter, expected to open in 1999, will be the largest airport in China. A dispute between Beijing and the British governor of Hong Kong over financing for the proposed *Chek Lap Kok International Airport* was settled in 1994, and construction is now underway. Never in dispute was how critical the project is to Hong Kong's future as an international business center. The current facility, Kai Tak International Airport, operates on a single runway, must adhere to a noise curfew, and has no room for expansion. The new airport, off the north coast of Lantau, will have two runways and operate around the clock. It is expected to handle 80 million passengers per year. Across the Taiwan Straits, Taipei is planning a major airport expansion program to meet the dramatic increase in demand by Taiwan's air travelers.

**South Korea** The Republic of Korea's (ROK) *New Seoul Metropolitan Airport* is planned as a 14,000-acre complex on tidal flats in the Yellow Sea off Inchon. It may dwarf all other facilities in the region, handling 70 percent more passengers per year than are presently being serviced by Chicago's O'Hare Airport—currently the world's busiest. The facility, which will be located 31 miles from the center of Seoul, is envisioned as a major Northeast Asia hub and gateway for the ROK's burgeoning trade with China. It will eventually accommodate 100 million passengers per year and will cost US\$10 billion.

**ASEAN** The ASEAN countries are expected to spend US\$20 billion on airport construction and expansion over the next decade. **Malaysia** plans to complete its new \$3.5 billion *Kuala Lumpur International Airport* in time for the 1998 Commonwealth Games; **Thailand** is hoping its proposed *Nong Ngu Hao International Airport* will serve as a major hub for Asia-Pacific air travel,

quadrupling the current capacity of Bangkok's Don Muang Airport. The new facility is expected to handle 25 million passengers per year. The cost of the airport and supporting infrastructure will exceed US\$8 billion. **Indonesia** is preparing to construct three new airports in Medan and Padang in Sumatra and in central Lombok over the next three years. The **Philippines** plans to expand **Ninoy Aquino International Airport** in Manila, and to invest US\$3 billion in the conversion of Clark airfield into a second passenger and cargo facility. **Singapore** added a second terminal in 1990 to its **Changi International Airport**—the second busiest airport in Southeast Asia. It is now looking to develop facilities there into a one-stop engineering service center to provide the newer long-range aircraft with turnaround maintenance service. Even the newest ASEAN member, **Vietnam**, is planning to improve its Hanoi and Ho Chi Minh City airports and to build a new airport in Danang, for a combined cost of US\$500 million. These projects are likely to be financed primarily by foreign donors and the Asian Development Bank.

*Kansai International Airport, which opened in 1994, is the world's first offshore airport. Located two miles offshore of Osaka, Japan, the airport is designed to handle 30 million passengers a year.*



*Inadequate infrastructure and a shortage of experienced personnel have led to a wave of air disasters in China*

country's already-inadequate infrastructure and caused shortages of experienced personnel.\* The result was a wave of air disasters<sup>16</sup> that prompted Beijing to slow the pace of deregulation. In response to the recent air accidents, CAAC has upgraded its safety enforcement activities, major Chinese airlines have arranged for pilot training in the United States and other foreign countries, and smaller airlines have been limited to short flights within their home provinces. China's experience demonstrates that, although price-entry deregulation has many economic advantages, the success of newly liberalized regimes is tied to the upgrading of airport infrastructure and organization and to the vigorous enforcement of basic safety and personnel training policies.

Similar price-entry deregulation has occurred in India's small aviation industry. Only 10 million of India's nearly 900 million people flew in 1993. Until the 1990s the market was dominated by state-run Indian Airlines and its international sister, Air India.<sup>†</sup> Several recently established private carriers have been particularly successful in cutting into Indian Airlines' market share on routes connecting the major business centers of Bombay, Bangalore, and New Delhi. Among the most successful of the new players are East-West Airlines, Jet Airways India, Modiluft, Archana Airways, and Damania Airways. The increased competition has prompted Indian Airlines to markedly improve its in-flight and ground services. The government plans to partially privatize the two state companies in 1995.

In Australia, the October 1987 notice that the "Two Airline Policy" (TAP) would terminate in three years unleashed several years of turbulence in the airline industry. The TAP had

strictly regulated entry, capacity, and fares in domestic markets. The next three years saw a nationwide pilot strike, a new entrant to the domestic market, a fare war, and large losses by all domestic airlines. In February 1992, Prime Minister Keating's One Nation Statement announced the dismantling of the barrier between domestic and international aviation, thereby allowing competition with Qantas, the government-owned international airline. In May 1992, Qantas merged with Australian Airlines and began to provide domestic service. Qantas' entry via merger into the domestic market was countered by the entry of the second major domestic carrier, Ansett Australia, into the international market in 1993.<sup>17</sup> In that same year, the government sold 25 percent of Qantas' shares to British Airways and is currently planning to float an additional 24 percent of the equity. The new industry structure and a reviving economy are now lifting Australian airlines to profitability after several years of large losses.

**Lower Labor Costs** The expansion of Asian airlines has been accompanied by modernization of their fleets and the adoption of cutting-edge management techniques. As the differences among international airlines become less pronounced, the lower labor costs of most Asian carriers become more important to the industry. Labor costs, which typically amount to 30–35 percent of total operating costs for North American international airlines, comprise only 10–20 percent of

\* China's airlines will require approximately 600 new pilots per year, but its single aviation college graduates only 200 new pilots annually.

† India's national carrier had been protected against competition by a 1953 law declaring the state-run airlines a monopoly business.

total operating costs for many Asian carriers (with the exception of the Japanese airlines).<sup>18</sup> Although some Asian carriers are unionized, the unions are generally less powerful than their counterparts in the United States or Europe.\*

As labor costs have risen recently in some Asian countries, several airlines in the region have moved labor-intensive jobs to lower-wage countries. For example, to cut wage costs, Cathay Pacific is offering offshore basing to its primarily expatriate crews and has moved some of its accounting work to Guangzhou, China; Singapore International Airlines (SIA) is moving its data processing and computer software development to Bombay, India; and aircraft repair and maintenance firms are investing in the Indonesian island of Batam, just south of Singapore, in the hope of establishing a new, low-cost maintenance center near several major hubs.

**Increased Inter- and Intra-Regional Cooperation** Over the last five years, airlines in the region have negotiated several cooperative arrangements, pooling their resources to compete effectively against American carriers with sophisticated marketing campaigns. The creation of ABACUS, a computerized reservation system owned jointly by major Asian airlines, is an indication of this trend. Another is the launching of *Passages*, a frequent flyer program for business and first-class passengers initiated in 1993 by SIA, Malaysia Air System, and Cathay Pacific. Carriers from some of the smaller countries in the region, which have traditionally faced high inventory holding costs, are also trying to remain economically viable by sharing maintenance and training costs with other airlines. Two regional

trade associations, the Association of South Pacific Airlines (ASPA) and the Orient Airlines Association (OAA), are actively promoting such cost-sharing arrangements.

Cooperation also cuts across regions. The worldwide trend toward "strategic alliances," in which competing firms negotiate cooperative agreements for certain activities, is clearly exhibited in multiple agreements among Asian, American, and European airlines. For example, SIA, Swissair, and Delta are experimenting with joint marketing and a schedule integration program that involves more than 300 destinations. Northwest Airlines and Air New Zealand have linked frequent flyer programs and have agreed to share airport facilities and sales support.

"Code-sharing" arrangements, in which a passenger is ticketed on one airline for a multflight trip but travels on flights operated by a second airline for part of the trip, are being implemented by virtually all major international airlines in the region. Successful code-sharing involves careful coordination of the two airlines' flight schedules so that they can "feed" each other passengers. SIA and Delta have code-sharing arrangements on Singapore's service to New York, enabling passengers to take connecting flights on Delta to other U.S. cities under a single flight designation on SIA. Thai Airways, Lufthansa, and United have worked out an arrangement in which passengers can fly to more than 500 destinations as though they were flying on a single airline.<sup>†</sup> The three

\* Low labor costs do not directly translate into competitive advantage, as they may also be an indicator of low labor productivity.

† The United-Thai Airways code-sharing agreement has not yet been approved by the two governments.

*Several Asia-Pacific airlines have moved labor-intensive jobs to lower-wage countries*

***Firms that reduce costs to compete in domestic markets also become more effective international competitors***

airlines have also agreed to share lounges and terminal facilities, pool frequent flyer programs, and cooperate in cargo services.\*

Limited equity investments by one code-sharing airline in a second code-sharing airline may be efficient devices to ensure that the incentives of the two airlines are closely aligned and that one airline does not use the arrangement to benefit at the expense of its partner.<sup>19</sup> Examples include cross-shareholding or equity stakes linking British Airways, Qantas, and USAir; SIA, Delta Air Lines, and Swissair; and KLM Royal Dutch Airlines and Northwest Airlines.<sup>†</sup>

The new alliances stem from particular advantages that accrue to large firms in the airline market. Among these are economies of scale. In many industries, large firms prosper from decreases in average costs as output increases. Similarly, in the airline market, air carriers benefit from economies of traffic density, when unit costs fall as more flights or more seats per flight are added to a given route, and from economies of firm size, when the network expands to service a larger number of cities.<sup>20</sup> However, studies of airline costs show that increases in network size and traffic density do not reduce average costs after a minimum level of traffic density is reached.<sup>21</sup> Despite the lack of long-term benefits from economies of scale, large airlines may nonetheless have an advantage over smaller airlines related to three demand-side forces.<sup>22</sup> First, information costs may induce a consumer to pick a large airline that flies to several destinations, rather than gather information on smaller airlines. Second, larger airlines often provide higher quality service—shorter waiting times for connections, a lower probability that

baggage will be lost or delayed, and a higher probability that connecting flights will be held for passengers on delayed flights from the same airline. Third, it is easier to accumulate frequent flyer points on a large airline that serves many destinations. Thus, whereas traditional economies of scale, which allow large firms to produce a given product at a lower average cost, are quickly exhausted, large firms still have an advantage due to their ability to produce higher quality products.

### **Summary**

Increased demand for air travel, an ongoing process of flag carrier privatization, and price-entry deregulation in the domestic markets of several major countries are all intensifying competition in both domestic and international air passenger markets in the Asia-Pacific region. Measures that increase competition in domestic air markets, such as those in place in the United States, Australia, India, and Pakistan, have potentially important effects on international air markets. Firms that have reduced costs to compete effectively in the domestic market also become more effective competitors in the international market. The cost reductions allow lower prices and better capacity utilization on international routes and often

\* Virgin Airlines (United Kingdom) and Malaysian Airlines have an extensive code-sharing arrangement that effectively ties their European and Asian networks. Asiana (South Korea) and Northwest have also implemented a code-sharing arrangement and have linked their frequent fliers programs.

† Two recent studies commissioned by the U.S. government have concluded that code-sharing arrangements generally benefit consumers. They increase revenue and traffic for the allied airlines, but this is partly at the expense of airlines without alliances. See Jennings [1995] for a summary.

impose losses on foreign airlines serving these markets. These foreign airlines are then faced with the choice of asking their home governments for increased protection on these restricted routes or undertaking the difficult task of reducing costs and improving service quality. The result is typically either bilateral friction between the governments of the two countries or labor unrest as the protected carrier moves to cut costs. The growing number of bilateral disputes in the region provides ample testimony that increased competition in the region's air passenger industry is stressing the political framework governing international civil aviation.

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#### BILATERAL RELATIONS

Since the end of World War II, the global aviation industry has operated on the premise that international routes are closed unless governments agree to open them. This has resulted in approximately 3,000 bilateral air-service agreements. These agreements typically specify the airlines permitted to fly a particular route and the frequency and capacity of those flights. For one country's airlines to gain access to a second country, the second country's airlines must be allowed similar access to the first country. The overall effect of the bilateral regime is to provide a limited degree of protection to the two countries' airlines serving each route. Since the number of flights offered by each airline serving a route is fixed by the bilateral agreement, the maximum number of passengers that one country's airline is allowed to carry is fixed or, in the language of international trade, subject to a quota. Although quotas are discouraged in other industries by the 1994

Uruguay Round World Trade Organization Agreement, the agreement does not cover air passenger service.\*

Meanwhile, passenger growth in the Asia-Pacific region has combined with congested airport facilities to place stress on bilateral aviation relations and open unexpected avenues of competition between growing Asian airlines and the more established airlines of Australia, Japan, North America, and Europe. The next two sections review the major issues in the ongoing disputes and consider the differing views of the participants. The third section discusses the future of bilateral agreements in Asia.

#### Fifth Freedom Rights

Huge losses experienced in the early 1990s by airlines based in Australia, Japan, and the United States have aggravated bilateral relations over commercial aviation issues. Recent disputes among these three countries over the interpretation of "Fifth Freedom Rights" provide the most notable examples. Fifth Freedom Rights (sometimes called "Beyond Rights") refer to the right of a carrier from one country to take on additional passengers or freight in a second country for a flight to a third country (see box on page 18). Fifth Freedom Rights are extensively used in Asia by European, North American, and Asian airlines. In 1994, airlines operated 493 Fifth Freedom routes weekly within Asia;

\* Until the 1970s, the international airlines also colluded on setting prices on most routes, with the International Air Transport Association (IATA) serving as a facilitator and watchdog for such arrangements. The arrangements began to break down in the 1970s as more intensive competition began on trans-Atlantic routes between the United States and Europe. IATA's current role in setting prices is much diminished, and on many routes it does not significantly affect market prices.

*Increased competition is placing stress on the political framework governing international civil aviation*

*Japan would like to repudiate its 1952 and 1959 aviation agreements with the United States*

Asian carriers operated 31 percent of these routes, U.S. carriers 30 percent, European carriers 19 percent, and other carriers 20 percent.<sup>23</sup> Within Asia, 25 to 50 percent of the flights flown between city pairs with Fifth Freedom service are Fifth Freedom flights.

Fifth Freedom routes operated by Asian carriers are concentrated in

Singapore, Taipei, Hong Kong, and Seoul. Asian carriers usually acquire Fifth Freedom rights within Asia by an exchange of aviation rights.

Fifth Freedom operations by U.S. airlines center on Tokyo, Seoul, and Taipei, all of which are used by U.S. airlines as "hubs." Passengers originating from different locations in Asia are "rebundled" at the hub onto flights

#### **Definitions of the Six Air Freedoms**

First Freedom	The right to fly over another country without landing. Relaxation of restrictions on First Freedom Rights by republics of the former Soviet Union has intensified competition between airlines in Europe and Asia as well as opened up routing options for aircraft flying to other destinations in Europe and Asia.
Second Freedom	The right to make a landing for technical reasons (e.g., refueling) in another country without disembarking or picking up new revenue traffic.
Third Freedom	The right to carry revenue traffic (passengers and freight) from an airline's own country to a second country with which the airline has an air services agreement.
Fourth Freedom	The right to carry revenue traffic to an airline's own country from a second country with which the airline has an air services agreement.
Fifth Freedom	The right of an airline from country A to carry revenue traffic between a second country B and a third country C (B to C, C to B).
Sixth Freedom	The right of a country to exercise two sets of Third and Fourth Freedom Rights (B to A and A to C) to carry revenue traffic from B to C.
Cabotage Rights	The right of an airline from one country to carry revenue traffic between two points within a second country. Cabotage rights are rarely granted.

The first five freedoms are negotiated in bilateral air-services agreements. Sixth Freedom Rights are seldom-used supplementary rights not formally recognized in air-services agreements. When they are used, supplementary rights are usually addressed through a Confidential Memorandum of Understanding between two or more countries.

bound for various U.S. destinations, and vice versa. Hub operations of U.S. airlines are concentrated in Tokyo, but congestion at Narita Airport has helped to promote Seoul and Taipei as alternative hub locations. Some countries, notably China, allow U.S. airlines to operate Fifth Freedom flights only with strict capacity limitations.

Fifth Freedom Rights for American carriers have recently come under concerted attack in Asia. An example is Hong Kong's policy on package delivery services. Federal Express has regularly petitioned Hong Kong for Fifth Freedom Rights to deliver cargo to other Asian countries, but, to protect Cathay Pacific's base, Hong Kong has repeatedly declined to grant these rights.\* Federal Express has responded by moving its hub operations to Subic Bay Airport in the Philippines. United Parcel Service (UPS), which used to serve Taiwan via Hong Kong, has begun direct flights to Taipei to bypass the restrictive policies of the Hong Kong aviation authorities. With the development of competing airports in Macao and Southern China, Hong Kong's policy of protecting Cathay Pacific's Hong Kong base may not be viable in the long run.

#### **Fifth Freedom Rights and the U.S.-Japan Aviation Treaty**

Fifth Freedom Rights with Japan have been particularly controversial (see box at right), in part because they stem from a 1952 aviation treaty (and a 1959 memorandum) that the Japanese would like to repudiate. The accord allows three carriers—Northwest, Federal Express, and United—to open virtually unlimited Fifth Freedom flights beyond Japanese international airports. The treaty specifies that these services must retain the traffic capacity between the starting

#### **Multilateral Aviation Disputes in Asia**

Fifth-Freedom service by U.S. carriers between Australia and Japan has generated a contentious dispute among the three countries. In 1992, two American carriers, United Airlines and Northwest Airlines, announced their intention to use Fifth Freedom Rights to fly from the United States to Osaka, pick up passengers, and then fly to Sydney or Kuala Lumpur. When the Japanese government refused to approve this arrangement, United Airlines filed a complaint with the U.S. Department of Transportation. Citing a broad interpretation of Fifth Freedom Rights, United contended that the 1952 U.S.-Japan bilateral aviation treaty, and the subsequent 1959 memorandum between the two governments, gave it the right to start new services from Japan to other destinations in the Asia-Pacific region. The 1959 document stated that applications for new services would be granted and then reviewed six months after operations start if the Japanese government had reservations about the changes. The Japanese government preferred a narrower interpretation of the Fifth Freedom clause, insisting that all new services must be individually approved and that the 1959 agreement would not be applied to new route applications.

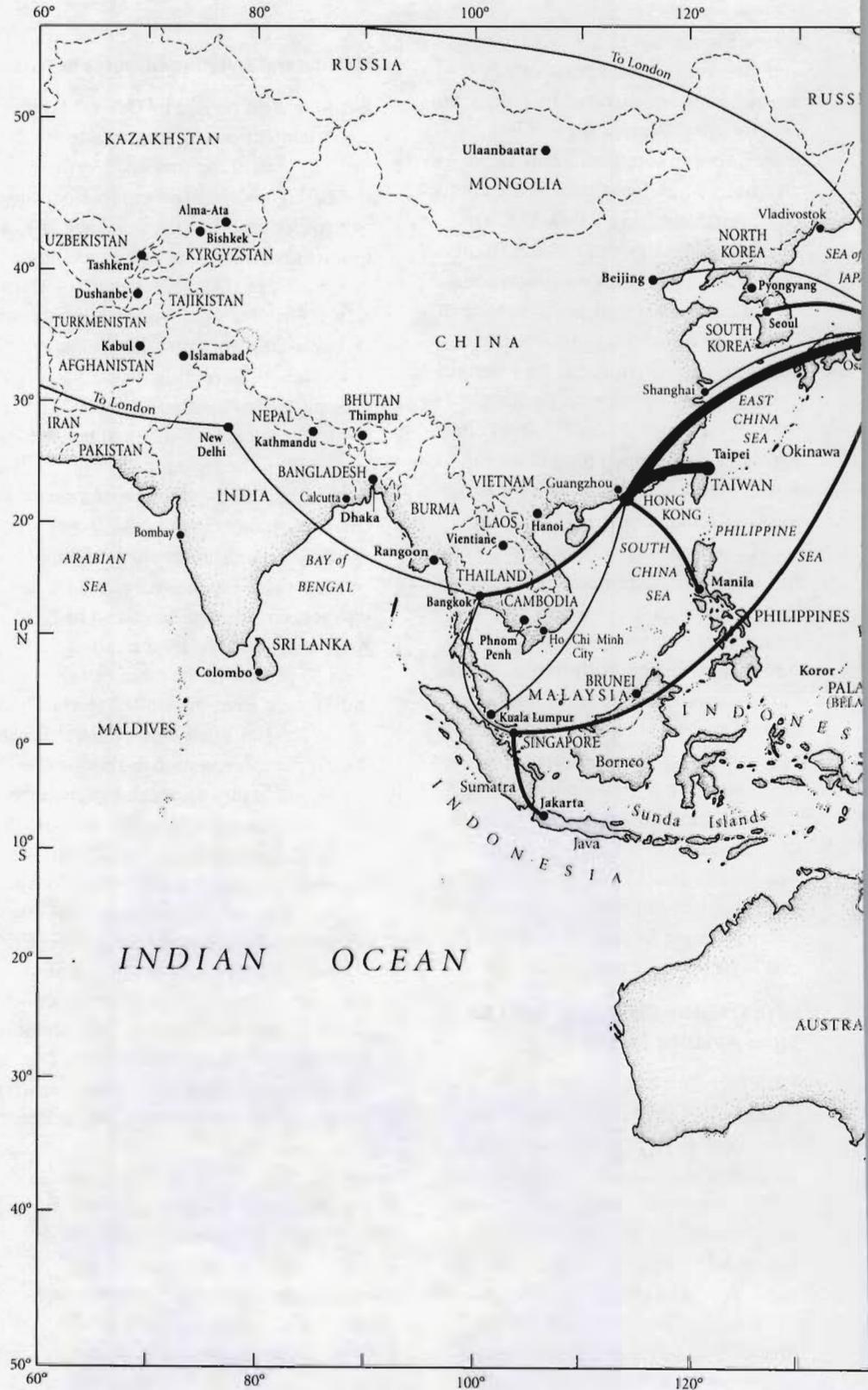
Northwest experienced similar treatment in 1991 when it applied to the Japanese government to extend its New York–Osaka route to Sydney. Citing Article 12 of the aviation treaty, Tokyo attached conditions stipulating that at least 50 percent of the passengers going on to Sydney had to have been on the initial flight from the United States. Tokyo cited the treaty's provision that the agreed services must retain the traffic capacity between the starting point and the ultimate destination as the "primary objective." Northwest opted to pursue a conciliatory approach by attempting to comply with the restrictions, blaming United for inflaming the situation by not agreeing to do the same.

In February 1993, the U.S. Department of Transportation ruled that Japan's actions were illegal and considered imposing sanctions. To protect its own market share on the routes to Japan, Australia vowed to revoke Northwest Airlines' right to operate three New York City–Osaka–Sydney flights per week, claiming that as many as 90 percent of the passengers joined the flight in Osaka in violation of Northwest's agreement that the passengers joining the flight in Japan would account for no more than 50 percent of the passengers. This dispute was largely settled in December 1993 when Australia and the United States agreed that startup capacity on the route could be the equivalent of three B747 services per week, with growth of at least one service annually.

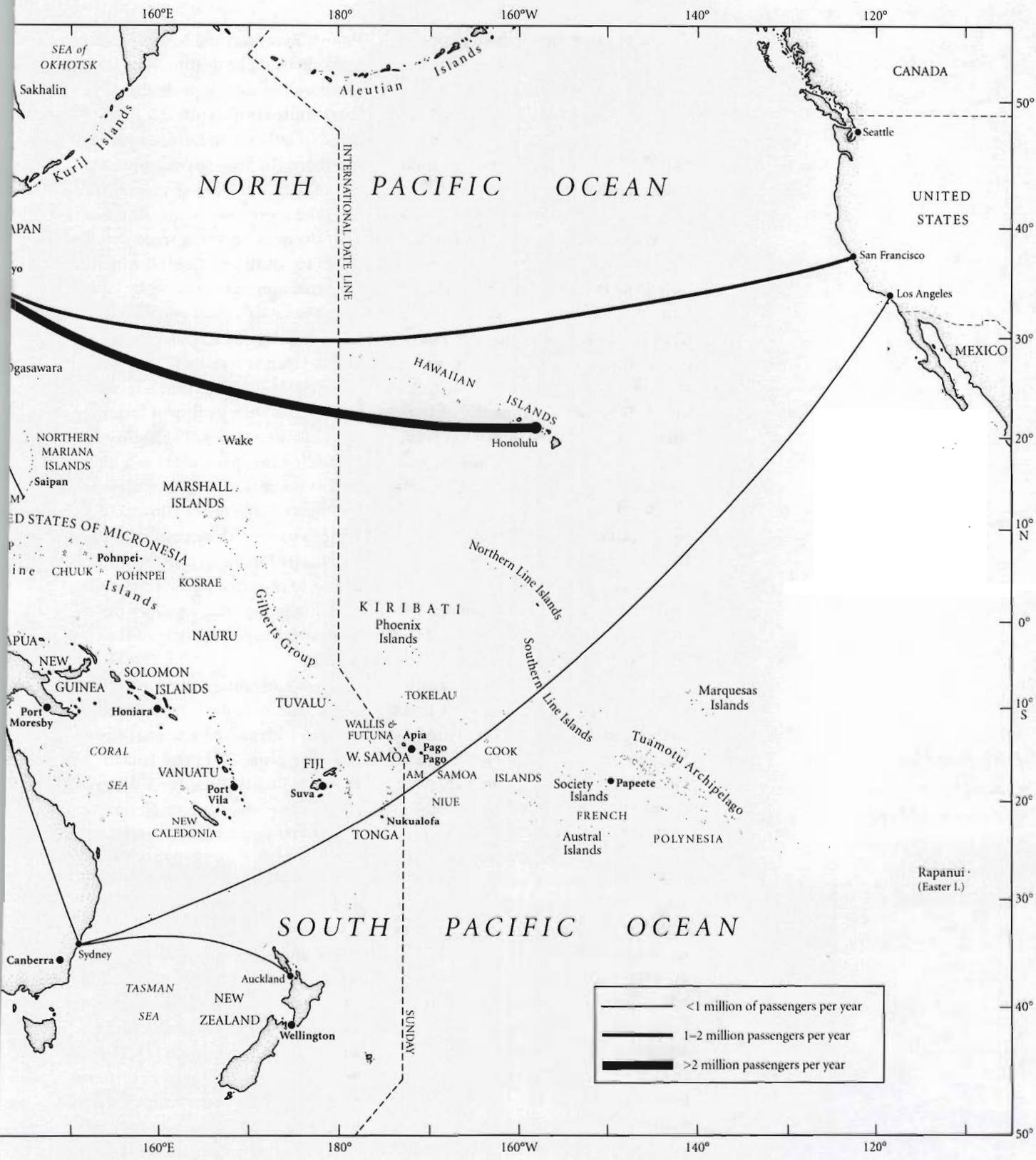
point and the ultimate destination as the "primary objective." Given the travel restrictions on Japanese residents and their low per capita income in the 1950s, few Japanese flew on Fifth Freedom flights. Since then, however, large increases in per capita income and the relaxation of travel restrictions have markedly increased

Japanese travel demand to the point where, by the 1990s, a substantial number of passengers on Fifth Freedom routes operated by U.S. airlines from Narita are Japanese nationals.

\* Moreover, Hong Kong has stated that airlines cannot add new routes or capacity after the Chek Lap Kok Airport is completed unless Cathay Pacific also desires to expand on similar lines.



The lines represent the volume of two-way traffic on major international routes in the Asia-Pacific region. The region contains 16 of the world's 25 busiest routes and five of the world's 25 busiest airports.



The Japanese airline industry consequently argues that the change in passenger composition has greatly increased the value of Fifth Freedom Rights granted to U.S. airlines and that the distribution of benefits is no longer equitable.<sup>24</sup>

American carriers currently fly 23 routes linking Japan with other countries in the region. By comparison, the only Japanese air service from the United States to a third country is JAL's twice-weekly route from Los Angeles to São Paulo, Brazil. Even on that route, JAL is limited to picking up 3,000 passengers annually in Los Angeles. The United States has previously approved Fifth Freedom Rights for JAL to provide service to European and South American cities, but all routes (except for São Paulo) have been discontinued. For example, in the 1970s JAL provided service from Tokyo's Narita Airport to London's Heathrow Airport by using Fifth Freedom flights from New York.

A central conclusion of our analysis, and the primary reason why Japan does not make full use of its Fifth Freedom Rights, is that Fifth Freedom routes from Japan are more valuable than Fifth Freedom routes from the United States. There are several reasons for this. First, Japanese airlines have higher operating costs than U.S. airlines and are unlikely to be able to compete effectively with U.S. airlines for business on Fifth Freedom routes originating in the United States. Second, Japanese airlines do not highly value Fifth Freedom Rights from U.S. airports because only two large countries, Canada and Mexico, are relatively close to the United States, and neither is likely to be receptive to expanded Fifth Freedom service from the United States. Furthermore, al-

though European and South American markets could be destinations for Fifth Freedom flights, the profitability of these routes is questionable. The route from Japan to Europe over Northern Russia—opened since the end of the Cold War—is more direct than the route over North America, and, although Japanese trade with and travel to South and Central America are expanding, the demand by Japanese tourists and businessmen for these flights is still relatively small. Third, Japan is a valuable gateway to Asia for U.S. airlines bringing passengers from a wide variety of locations in the United States. The ability to rebundle these passengers at a hub airport for onward flights to East and Southeast Asian cities allows U.S. airlines to operate more efficiently. A hub located in Japan also provides access to the large Japanese traveling public, a group with arguably the highest per capita income in the world.

Japan's advantageous position as a gateway to Asia provides Japanese airlines with some locational advantages. By using Third and Fourth Freedom Rights, Japanese airlines can provide passenger and cargo service from other Asian countries to the United States. Japanese airports can be used as hubs to rebundle passengers and cargo originating in different Asian cities to be sent to different U.S. cities, and vice versa. The rights to serve such routes, using two sets of Third and Fourth Freedom Rights, are informally called "Sixth Freedom Rights" (see box on page 18). They are not explicitly mentioned in bilateral agreements, but some countries refuse to allow foreign airlines to coordinate their flight schedules to facilitate such service because it cuts into the market

***Fifth Freedom routes from Japan are more valuable than Fifth Freedom routes from the United States***

*The Japanese traveling public has the highest per capita income in the world. (Shown: Tokyo's Haneda Airport during Golden Week, when many Japanese take their vacations. Golden Week, which begins April 29th, contains three holidays.)*



AP/WIDE WORLD PHOTOS

for the second and third country's airlines.

U.S. airlines have argued that the explicit Fifth Freedom Rights granted to U.S. carriers are balanced by the informal Sixth Freedom Rights granted to Japanese carriers. For example, in the absence of Fifth Freedom Rights, the benefits to a U.S. airline of flying between San Francisco and Tokyo are confined to extra profits gained from the additional point-to-point traffic. On the other hand, the benefits to a Japanese airline of flying between San Francisco and Tokyo include the extra profits gained from the additional point-to-point traffic as well as the ability to implement Sixth Freedom service between, for example, Bangkok and San Francisco. This implies that, all other things being equal, a Japanese airline will value a route to the United States more than a U.S. airline will value a route to Japan. The difference in value could be made up

by awarding Fifth Freedom Rights to U.S. airlines.

Although the U.S.-Japan aviation treaty may not be as one-sided as some Japanese airlines allege, it contains two key features that are clearly leftovers from the 1950s aviation era. First, it allows the United States to start new service unilaterally from Japan to Asian cities, such as Hanoi. Within the current framework of bilateral aviation accords, however, new service by one country's airlines is initiated only when the two countries can agree on an exchange with the second country, that is, by opening a new route to its airlines. Moreover, a recent dispute with Japan indicates that unilateral opening of air service by the United States is at an end. When Federal Express requested the addition of seven cargo flights from Narita and Kansai Airports to several Asian destinations, including its new hub at Subic Bay, the Japanese govern-

*American carriers need access to gateways in Asia and Europe, where growth in air travel is projected to outpace that in North America*

ment refused the request, leading to an increasingly tense dispute with the United States. The dispute was settled in July 1995 after Tokyo granted the desired routes to Federal Express and Washington granted new routes to the United States for Japanese cargo carriers. That agreement, in effect, marked the end of the unilateral opening of new services, now replaced by the international standard of exchange of flight rights.

The second outdated provision of the U.S.-Japan aviation treaty is that the restrictions on Japanese Fifth Freedom service in the United States are unduly protectionist. The requirement that Japanese airlines providing Fifth Freedom service from New York City must first stop in San Francisco serves only to impose additional costs on the service and to reduce the desirability of such flights to most passengers. The limitation on the number of passengers who can board in Los Angeles on Los Angeles-São Paulo flights is grossly inconsistent with the rights of U.S. airlines in Tokyo. In addition, given the low value of Fifth Freedom flights from the United States, the limitations on Fifth Freedom gateways provided to Japanese airlines serve little purpose.

#### **The Future of Bilateral Agreements in Asia**

American pressure for expanded Third, Fourth, and Fifth Freedom Rights stems from the increasing importance of foreign flights. In 1992, revenues from scheduled international flights of U.S. carriers reached 25 percent of their gross revenues, up from 16 percent in 1982.<sup>25</sup> To continue to prosper, American carriers need greater access to foreign gateways, particularly in Asia and Europe, because growth in air travel in both regions is projected

to outpace that in North America. From the perspective of American carriers, the Asia-Pacific region appears the most promising of all. Passenger flows between Asia and North America constitute the largest component of interregional traffic. In fact, the top two passenger flows in the world involving a city in Asia and a city in any other region are the Honolulu-Tokyo and Los Angeles-Tokyo routes.<sup>26</sup>

Despite the many challenges threatening the survival of some U.S. airlines, Asian carriers have reason to be nervous about American competition over trans-Pacific and intra-Asian service. With or without government assistance, U.S. airlines are beginning to return to profitability, with costs markedly reduced by radical cost-cutting measures taken over the last four years. In addition, new forms of airline organization that tie employee compensation to airline performance have emerged and could be successful in cutting costs further.\*

The growing international market has not only stressed U.S. bilateral relations with Japan but has also led to controversies with the governments of Thailand, Australia, Hong Kong, and the Philippines.<sup>†</sup> Although most of the disputes revolve around U.S. requests to open Fifth Freedom flights, some do not involve the United States. For example, Thailand and Australia have recently formed a study panel to investigate the effect that Qantas Fifth Freedom flights from Bangkok to Europe would have on Thai airlines. Most Asian countries are also irritated

\* The recent takeover of United by its employees is the most dramatic of these new forms of organization.

† U.S. aviation relations with the Philippines have been complicated by U.S. allegations that some Philippine airports are unsafe.

at the relatively liberal aviation policies of South Korea, Singapore, and Taiwan, which promote their airports as regional hubs. The other Asian countries have generally adopted policies to protect their national carriers and have recently used stronger protectionist rhetoric at international forums.

The fight over Fifth Freedom Rights highlights the protectionist nature of the current international civil aviation system. The interests of commercial and private consumers of aviation services are not given primary consideration in bilateral negotiations. Instead, emphasis is placed on a "fair" division of the economic profits generated by air cargo and air passenger services. The "sorry mishmash of bilateral service agreements whose complexity increases with every international destination included on a flight" is indicative of the core problem in the Asian aviation industry: governments continue to insist that their national carriers retain a significant share of international aviation service to and from their countries.<sup>27</sup> If this policy had been adopted in every industry, current levels of world trade and investment would never have been reached. In other industries, arrangements similar to Fifth Freedom Rights exist as a matter of course: an enterprise will ship partially processed goods from its home country to a second country, value is added in a subsidiary in the second country, and the goods are then shipped to a third country.

Several trends point, however, to a better environment for future liberalization of air services. National flag carriers are being privatized, albeit very slowly. Some countries, Taiwan and Singapore in particular, have unilaterally liberalized air services to

take advantage of their geographic location, thereby placing pressure on protectionist countries. More unilateral liberalization could also occur as Asian economies continue to grow and the demand for air services changes. Nonetheless, unilateral liberalization is unlikely to sweep the region anytime soon.

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### MOVING BEYOND THE BILATERAL REGIME

Asia-Pacific aviation is still governed by bilateral treaties that restrict competition and divide the profits from higher than competitive prices between two countries' airlines. A few promising trends suggest, however, that the region may be on the threshold of a new era. Among these are the slow spread of domestic deregulation and privatization of national carriers that are gradually producing market conditions consistent with a more liberal multilateral aviation regime. Still, many Asian countries are opposed to further liberalization and are suspicious of U.S. efforts to promote a multilateral regime. This section presents differing viewpoints on liberalization, reviews the potential for a regional multilateral regime, and discusses the benefits of incorporating negotiations on aviation into the ongoing trade negotiations conducted within the World Trade Organization (WTO).

#### U.S. Views on Aviation Liberalization

In August 1993, the National Commission to Ensure a Strong Competitive Airline Industry issued a report to the U.S. President and Congress entitled *Change, Challenge and Competition*. The report reiterated that "U.S. negotiating efforts [should] focus on

creating a multi-national operating environment for airlines free of discrimination and restrictions," and that "liberal, multi-national agreements be negotiated that encompass provisions for passenger and cargo services; charters; cross-border investment and ownership; comparable traffic rights; fifth/sixth freedom traffic rights; fair market access and doing business opportunities; system capacity; government subsidies, and customs and immigration facilities."<sup>28</sup> To set an example, the Commission also recommended that "The Federal Aviation Act be amended to allow the U.S. to negotiate bilateral agreements that permit foreign investors to hold up to 49 percent voting equity in U.S. airlines, providing those bilateral agreements are liberal and contain equivalent opportunities for U.S. airlines; the foreign investor is not government owned; there are reciprocal investment rights for U.S. airlines, and the investment will advance the national interest and the development of a liberal global regime for air services."<sup>29</sup>

U.S. Secretary of Transportation Federico Peña incorporated many of the Commission's ideas into his November 1994 statement on international aviation policy. The statement calls for an examination of "the feasibility of achieving multilateral air service agreements among trading partners. Although such negotiations may be more complex and difficult because of the number of parties involved, they should be undertaken when they present a reasonable prospect for further liberalization."<sup>30</sup> The statement also advocated unrestricted Fifth Freedom Rights; the lifting of regulations on carrier pricing, flight frequency, and flight capacity; the elimination of government subsidies; and reduced foreign investment barriers.

*Asian carriers have reason to be nervous about American competition*

The statement's focus on liberalization is counterbalanced, however, by a focus on strategic issues. For example, the statement notes that "We will offer liberal agreements to a country or group of countries *if it can be justified economically or strategically*" (emphasis added).<sup>31</sup> In other words, a liberal agreement will be offered only if the United States expects that its airlines will gain. This strategic emphasis in U.S. policy is a mistake, as it encourages other countries to also act strategically and to agree on liberal aviation policies only when their airlines also gain. Rather than a blueprint for international reform, the U.S. international aviation policy looks like the nationalistic policy of one country. A major improvement over the current U.S. policy would be the extension of liberalization offers to all countries on equal terms.

**Asian Views on Aviation Liberalization**

With the end of the Cold War and the ensuing shift in national priorities, domestic economic concerns have come to the forefront of relations between the United States and its Pacific allies. The lessening of security concerns resulting from the dissolution of the Soviet Union and the growth of Asian economies to rival those in the West have significantly altered the former patron-client nature of bilateral relations between the United States and many countries in the region and has given a number of Asian countries more flexibility in challenging long-standing arrangements with the United States. Two examples are Thailand's renunciation of its bilateral aviation agreement with the United States and the decision of the Philippines to use the airfield at the former U.S. military base at Subic Bay to develop new air

service to and from Taiwan. Another source of concern for the United States is that its recent bilateral disputes with Japan are feeding a growing desire by Tokyo to renegotiate the post-occupation aviation treaty. There is mounting evidence that Japan may now be far less willing to maintain the agreement merely to avoid damaging its larger relationship with the United States. In May 1995, JAL's Vice President for Corporate Planning announced that JAL favored cancellation of the Japan-U.S. bilateral treaty before initiating new negotiations.<sup>32</sup>

A number of Asian governments are, however, wary of the dangers of increased liberalization in Asian markets.<sup>33</sup> Malaysian Transport Minister Dr. Ling Liong Sik has cautioned that multilateralism cannot be implemented in Asia until there are some experiments with more limited liberalization. Akiyoshi Kitada, the Japanese delegate to the 1994 Conference of Director-Generals of Civil Aviation, has stressed that, although liberalization could have some positive effects, such as lower fares and more efficient airline management, it could also lead to predatory pricing, a retreat from low-demand routes, and a tendency toward oligopoly. The South Korean government has indicated that it will not consider joining a multilateral regime until its airline industry can compete effectively within such a framework. Pressure in the Philippine Congress is also mounting for Manila to renounce its bilateral agreement with the United States. Viewed as one-sided, it allows unlimited U.S. access to destinations in the Philippines and unrestricted U.S. Fifth Freedom Rights by October 1996 while allowing Philippine Air Lines access to only nine U.S. cities.<sup>34</sup>

Discussions on multilateral liberal-

ization at the November 1994 International Civil Aviation Organization (ICAO) conference on worldwide air transport reinforced these views.<sup>35</sup> The U.S. delegation proposed that member countries adopt a liberal multilateral international aviation regime, known as an "Open Skies" policy, but Japan and most of the African countries, with many Asian countries in agreement, vigorously opposed the U.S. proposal, arguing that there is a "need to rebalance the existing bilateral agreements before liberalizing further."<sup>36</sup> The United States impeded progress on the issue through "its insistence on arguing against the need for safeguards or a dispute resolution mechanism in a liberal regime—a need recognized by virtually all member states."<sup>37</sup> The result was a rejection of the Open Skies proposal. Participating countries instead asked ICAO to "do additional work on a number of issues and to focus on safeguards and safety nets against unfair competition as a prerequisite to any liberalization of market access."<sup>\*</sup> The delegates concluded that a liberal multilateral agreement is unlikely in the near future and that "liberalization on a regional and subregional level is a more imminent prospect."

The positions of Asian governments at the ICAO conference reflect two obstacles to multilateral liberalization. First, Asian airlines have generally been profitable, in part because of restrictive bilateral treaties. Because many Asian carriers are still partially government-owned, governments may be reluctant to adopt new competitive arrangements that eliminate or reduce these profits. Enhanced competition will reduce flag carriers' profits and possibly lead to layoffs or wage cuts at the government firms. The far-reaching liberalization experi-

### Europe's Multilateral Aviation Experiment

A multilateral aviation arrangement has been developed in Western Europe in tandem with the formation of the European Union (EU). Can this multilateral aviation experiment provide a model for the Asia-Pacific airline industry?

In 1993, the EU began to allow one country's airlines to pick up passengers in a second country and fly to a third country, i.e., to extend unlimited Fifth Freedom Rights within the EU to EU-based airlines. Limited cabotage rights (the right of one EU country's airline to carry revenue traffic between two cities within a second EU country) have also been initiated and will expand further in 1997. In addition, EU airlines are now free to set fares unilaterally on intra-EU flights. Although change has been gradual, EU airlines are beginning to assert their new freedoms more aggressively. The most significant move to date has been the start of British Airways service to Paris, Munich, Copenhagen, and Stockholm. Other European carriers, such as SAS and Lufthansa, are following suit in unilaterally opening new routes.

The multilateral experiment is likely to affect the European civil aviation industry in a number of significant ways. Some mergers and acquisitions will no doubt follow as larger carriers seek to expand into markets previously closed to them. In other cases, the trend toward cooperative arrangements is likely to continue, particularly where carriers with relatively small home markets—KLM (Netherlands), SAS (Scandinavia), and Swissair—can make use of strategic cooperation agreements to remain viable in the global network. Such alliances also serve to improve profitability while safeguarding nationalistic identities.

The transition to an open aviation market has been rocky, as red ink is still flowing at nearly all European airlines. In addition, only five of the 15 largest European airlines have been privatized. A 1994 EU "Wise Men Committee" report on the European aviation industry recommended curtailing state aid to ailing national carriers and allowing competitive forces to reorganize the industry in an efficient fashion. The state-owned carriers in France and Greece have pursued the alternative course of petitioning for multibillion-dollar aid injections from their governments. The new subsidies (which are being contested in the European Court), as well as recent attempts by the Italian and French governments to deny access to airports serving Paris and Milan, demonstrate that the transition to a competitive market in 1997 will continue to be difficult.

ment in Europe (see box) has already been hampered by government ownership of 10 of Europe's 15 largest carriers. As increased competition has reduced the profits of a number of European flag carriers, including Air France, TAP Air Portugal, and Olympic Air-

ways, European governments have shown great reluctance to proceed

\* Reports on the potential for regional, subregional, and global liberalization are due in 1996 from the Organisation for Economic Cooperation and Development and the United Nations Development Fund.

***Satellite-based navigation systems can reduce the need for additional investments in runway capacity***

with the European Union's phased-in liberalization. A second obstacle centers on enforcement. European countries or airlines can appeal to the European Court and the European Commission if other countries are not implementing Europe's aviation agreement properly. Asia has no institutions of even a remotely comparable scope.

In sum, an Asia-Pacific experiment with multilateral aviation arrangements is unlikely to be implemented anytime soon. The 1994 ICAO conference illustrates the difficulty of negotiating more liberalized trade in negotiations involving just one industry. Within such a framework, it is almost impossible to compensate losing countries whose national airlines will shrink or even disappear in a liberalized regime. Unless losing countries receive some compensation, they are unlikely to support such a regime. The next section discusses the necessity of bundling negotiations over the world aviation regime into the WTO framework. We begin, however, by considering the role of APEC in coordinating other important aspects of air services in the region.

**Asia-Pacific Economic Cooperation (APEC) and Civil Aviation**

APEC has emerged in this decade as a viable mechanism within which Asia-Pacific governments can discuss economic policies\* and could provide a suitable forum for the formulation and discussion of a menu of new policies for international cooperation in aviation throughout the Asia-Pacific region. APEC already has an active Working Group on Transportation, which has been charged with studying and recommending ways to improve infrastructure, facilitate movement of passengers and freight, collect and

exchange data, and enhance safety and security.

The region is already moving toward marked expansion of primary airport capacities (see box on pages 12-13) to alleviate the congestion on many airline trunk routes in East Asia and between Asia and North America. Upgrading secondary gateways and linking them directly to other secondary gateways will be necessary to meet the diversification and development needs of the region's aviation market. Investments in airport capacity are not independent; expansion of facilities at one end of a route makes little difference if facilities at the other end cannot handle additional traffic. The value of airport investments in the region can be maximized only if countries coordinate their investments. To that end, APEC's Working Group on Transportation has initiated a "Congestion Points Study" designed to identify key congestion points, coordinate industry roundtable discussions on the issue, and discuss cooperative mechanisms for addressing bottlenecks.<sup>38</sup>

An alternative to additional investment in tarmac would be to implement a satellite-based navigation system, such as the Future Air Navigation System (FANS), the Global Positioning System (GPS), or the Global Navigation Satellite System (GNSS),<sup>†</sup> which precisely tracks air-

\* APEC's 18 member economies are the United States, Canada, New Zealand, Australia, South Korea, Japan, Taiwan, China, Hong Kong, the Philippines, Thailand, Malaysia, Singapore, Indonesia, Brunei, Chile, Mexico, and Papua New Guinea.

† GPS is the only system currently in place. It is comprised of 24 satellites operating on six orbital planes at a height of 10,900 nautical miles. Other countries have been hesitant to adopt GPS as it is a U.S. military system, and the U.S. military has reserved rights to its use in certain circumstances.

craft locations in the air and on the ground. By reducing the amount of runway time required for an aircraft to land or take off, these systems can reduce costs and increase runway capacity, without jeopardizing safety. Given the high land and capital costs of expanding existing airports in urban areas, adoption of a satellite navigation system in the Asia-Pacific region is critical. The United States has decided to implement GPS as its prime navigation system by 1997, and Australia, New Zealand, and the South Pacific Islands are set to implement FANS over the next year. However, most Asian governments are not yet committed to the rapid introduction of a satellite system. APEC's Working Group on Transportation stands out as the best regional forum available for encouraging countries to implement a region-wide satellite navigation system.

Studying the gains from multilateral liberalization in Asia-Pacific aviation should also be high on the agenda of the Working Group on Transporta-

tion. A solid report that evaluates the effects, both positive and negative, of multilateral liberalization could alert policymakers to the potential gains from such cooperation. Ultimately, APEC could also provide a forum for negotiation of an aviation agreement. Because the organization currently lacks the institutional infrastructure for monitoring and enforcement, a regional agreement would need to create new mechanisms for such purposes or be structured as self-enforcing. Member countries have not yet been able to agree, however, on the future direction of APEC. In the short run, therefore, the organization will not have sufficiently developed enforcement and monitoring mechanisms to be the vehicle for such a fundamental reform.

At the 1994 APEC conference in Bogor, Indonesian delegates urged individual APEC countries to develop trade liberalization measures that could be implemented unilaterally. Purging the U.S.-Japan aviation treaty of its outdated provisions could be a

*Upgrading secondary airports will be necessary to meet the diversification and development needs of the Asia-Pacific aviation market. Shown: Langkawi Airport in Malaysia.*



***Unilateral liberalization of Fifth Freedom Rights would impose few costs on U.S. airlines***

focus of U.S. unilateral measures.

First, Washington could eliminate the burdensome requirement that Japanese airlines must stop in San Francisco on Fifth Freedom flights to Europe. Second, Washington could allow Japanese airlines to operate Fifth Freedom flights from any U.S. international airport to any third country in Europe, Central America, or South America. Although such service cannot begin without the third country's approval, a policy of unlimited Fifth Freedom Rights to Japanese carriers would be more consistent with the U.S. policy of encouraging competition on international routes. These unilateral liberalizations of Fifth Freedom Rights would impose few costs on U.S. airlines but would help to create a level playing field for Japanese airlines.

**From Restricted Bilateral to Open Skies Arrangements?**

The first Open Skies aviation agreement was signed by the Netherlands and the United States in September 1992. It allows for deregulation of pricing and route capacity, expanded route flexibility, Fifth Freedom operations, a double-disapproval fare structure (which allows a fare to be offered unless both governments veto it), code-sharing opportunities, and enhanced access to computerized reservation systems.\* In 1995, the United States signed Open Skies agreements with nine other small European countries, thereby greatly expanding U.S. airlines' access to the European market and placing pressure on the larger European states to reconsider their air policies. Whether or not traffic diversion to Open Skies countries will force them to reconsider their bilateral agreements with the United States is still an open question.

A similar strategy in Asia would face the same questions. To date, no Open Skies treaties have been negotiated in Asia. In Europe, the larger countries resisted liberalized service agreements because their airlines have higher operating costs than those of U.S. carriers. In the Asia-Pacific region, Japanese carriers tend to have higher operating costs per tonne-kilometer available than U.S. carriers (JAL = \$.52 compared with American Airlines = \$.39).<sup>39</sup> In an Asia-Pacific aviation market in which carriers are free to enter and exit and to set prices, Japanese carriers could suffer major losses in market shares and are likely to continue to oppose such Open Skies arrangements.

It is possible that the United States will follow the pattern set in Europe and negotiate Open Skies treaties with smaller Asian countries, in particular Singapore. In this scenario, China, Japan, and some ASEAN countries would probably resist U.S. pressure to liberalize and continue with the current system of restricted bilateral agreements. Until air-service negotiations can be structured to provide compensation to losing countries, liberalization of air service in Asia is likely to continue to be negotiated on a country-by-country basis. Providing compensation may best be achieved by linking air-service negotiations with other trade negotiations. Countries that lose under a liberalized air-service regime could then be provided with concessions on other trade issues. As discussed below, the best forum for this type of "linkage" may

\* Although the agreement breaks new ground in permitting "the greatest flexibility" for airlines to do business, it also contains several conditions. For example, access is limited to several major U.S. airports.

be the trade negotiations conducted under the auspices of the World Trade Organization (WTO).

Asian opposition to U.S. Open Skies proposals has, however, not stopped three countries—Thailand, Malaysia, and Indonesia—from entering into a memorandum of understanding to set up Asia-Pacific's first multilateral aviation regime in the "Growth Triangle" districts of each country. The Growth Triangle encompasses Southern Thailand, the Malaysian peninsula, and Sumatra. Each country has designated three cities from which two airlines from each country can start air service. No Fifth Freedom or cabotage flights are currently allowed.<sup>40</sup> Whereas the Growth Triangle Pact is a multilateral venture, its provisions are still relatively restrictive and represent only a small step forward from traditional bilateral pacts.

The Growth Triangle pact raises the possibility that liberalization of aviation service may occur via a proliferation of small, multilateral aviation agreements within Asia. Since some countries' opposition to liberalization stems from a fear of domination by U.S. carriers, the pact could be a harbinger of regional multilateral aviation agreements that do not include the United States. Such pacts will be difficult to negotiate, however, because cost differences among Asian airlines would produce the same problems as a pact that includes the United States. Unless a method of compensating losing countries is devised, liberal regional aviation agreements in Asia will not be viable. In sum, a regional multilateral aviation pact, with or without the United States, is unlikely to be implemented in the near future.

*Some countries' opposition to liberalization stems from a fear of domination by U.S. carriers*

### **Asia-Pacific Aviation and the WTO**

The Uruguay Round of the GATT negotiations (concluded in December 1993) achieved significant reductions in tariff and nontariff barriers to trade.\* The new WTO Agreement achieved significant breakthroughs, including major reductions in tariff and nontariff barriers to trade, new rules for trade-related intellectual property, and a widening of WTO's scope to include trade in some services. International air services were, however, specifically excluded from the new WTO provisions and will continue to be regulated (outside of Europe) by bilateral aviation agreements. In addition, the Uruguay Round did not address the issue of closed domestic aviation markets. With the exception of New Zealand, all domestic markets in the Asia-Pacific region, including the large U.S., Japanese, and Chinese markets, are closed to participation by foreign carriers.†

Despite government protests to the contrary, nothing in the economic structure or organization of the international airline industry warrants the protection of domestic airlines in either international or domestic markets. Economic theory provides no justification for excluding air passenger services from a future WTO agreement.‡

\* GATT is the General Agreement on Tariffs and Trade. The GATT Secretariat is being replaced in 1995 by a new organization, the World Trade Organization (WTO).

† Most countries allow limited foreign investment in domestic carriers, but do not allow foreigners to own a controlling share in the country's carriers.

‡ This analysis draws heavily from the discussion in Kasper (1988) despite the different conclusions drawn in this paper concerning the feasibility of including airline services in a future WTO agreement.

*Economic theory provides no justification for excluding air passenger services from future World Trade Organization agreements*

Although the policy distance from the current protectionist bilateral regime to an open worldwide multilateral regime is clearly enormous, the Uruguay Round dismantled a protectionist trading system of equal complexity and political sensitivity—the Multifibre Agreement regulating trade in textiles. Given that the conclusion of the next round of WTO trade negotiations is at least 10 years away, there is sufficient time for policymakers and industry analysts to consider the general framework within which the principles of the WTO could be applied to civil aviation; for interested parties to formulate and critique specific policy proposals; for the media to publicize the proposals and to alert the public of the potential for lower prices and expanded international air service; and for international civil aviation organizations, airlines, and governments to make preparations for policy implementation. A WTO resolution on the current protectionist air traffic regime should be grounded in the fundamental principles of the WTO: opening of domestic markets, transparency, tariffication, and nondiscrimination in trade.

**Opening of Domestic Markets** In its report, the U.S. National Commission was enthusiastic about U.S. entry into new multilateral international air service arrangements.<sup>41</sup> The report is, however, noticeably silent as to whether the recommendation applies to the huge U.S. domestic market. In November 1994, the U.S. Department of Transportation issued a policy paper on international air transportation, which contained no proposals for opening the closed U.S. market.<sup>42</sup> China and Japan are also not discuss-

ing this issue, although China is allowing limited foreign investment in its airlines. Unless large countries begin to consider opening their domestic markets to foreign carriers, objections to international liberalization abound. If there are "economies of scope" with respect to domestic service and international service, i.e., if the cost of providing international service falls as more domestic service is produced, then airlines from large countries with closed markets will have cost advantages on international routes.

National security concerns over access by foreign airlines to domestic aviation markets are usually cited as the rationale behind the ban. Most countries want to maintain sufficient capacity in domestically owned airlines to ensure airlift capacity during a civil or military emergency. Such security concerns, although obviously vital, can be addressed with relatively straightforward policy measures. First, a country's government could require foreign airlines to register a fixed percentage of their planes in that country. These planes could be requisitioned in an emergency. Second, few governments have treaty commitments that require long-haul capability to send troops overseas. Most countries with treaty obligations, such as the industrialized democracies, are likely to retain significant domestic capacity even if foreign carriers significantly penetrate the market. As long as domestic carriers are not reduced to a trivial market share, enough domestic capacity is likely to be retained to fulfill military obligations. For example, the U.S. airlift of troops to Saudi Arabia during the Gulf War required only a fraction of the U.S. air-passenger capacity.



BOEING COMMERCIAL AIRPLANE GROUP

*Asia-Pacific airlines are expected to provide an important market for Boeing's 777, the world's newest jumbo jet.*

More important, a country may not be pleased if an airline from an unfriendly country attains a substantial share of its aviation market. This consideration could, however, be overcome by regularly reviewing the licenses of airlines allowed to fly domestic routes. Airlines from unfriendly countries would be decertified or more intensely regulated. Citizenship requirements for all employees, with the exception of senior management, of foreign service corporations (banking, insurance, etc.) would also help to alleviate security concerns.

**Transparency and Tariffication** A central principle of the WTO process is transparency. To encourage trans-

parency, the WTO stresses the conversion of nontariff trade barriers into tariff barriers.\* Once nontariff barriers to trade have been converted into tariffs, negotiations between countries concerning the reciprocal reduction of tariff barriers can proceed under the WTO framework.

Trade barriers in aviation are clearly not characterized by transparency. Whereas the bilateral system of aviation agreements is relatively easy to understand, the treaty system obscures the way in which restrictive

\* Measuring the effective rate of protection is still a problem whenever tariffs cover intermediate goods and raw materials. Nonetheless, it is easier to measure the cost of a tariff barrier than the cost of a nontariff barrier.

*Asia-Pacific  
commercial  
aviation will likely  
remain a mix of  
transnational  
agreements*

arrangements affect airline prices. Such effects would become immediately apparent if countries had to impose tariffs to prevent foreign penetration of air-service markets. There is no reason why quotas in civil aviation could not be converted into tariffs on the price charged to ticket holders on foreign airlines. The tariffs could be set as a percentage of the ticket price or the cargo value.

The switch from a system of negotiated, limited-access quotas to open-access tariffs is important primarily because it would set the stage for the transition to a free market in aviation services. First, it would allow a ceiling to be placed on market imperfections. In many other industries, governments have agreed that they will not raise tariffs but will only consider reducing them. Converting restrictions in airline markets into tariffs and then binding the tariff structure would constitute an important first step toward free trade in airline services and set a foundation for future negotiations.

Second, setting tariffs on airline services would allow these services to be bundled with other goods and services in WTO negotiations. This is important, as some countries' airline industries will lose when the air-service market is liberalized. When the airline industry is grouped with other industries in trade negotiations, however, losses in one industry may be outweighed by gains in other industries. Daniel Kasper has correctly noted that this negotiating framework rewards countries with extensive trade barriers, as the barriers are converted into valuable bargaining chips.<sup>43</sup> Nonetheless, the process also provides a feasible mechanism for moving toward a free-trade regime.

**National Treatment** For tariffication to be successful, governments must be held to the WTO principles of nondiscrimination and national treatment in the airline industry. These two principles assert that two firms from different foreign countries will receive the same treatment from a government and that a foreign firm will receive the same treatment from the government as a domestic firm. The two principles are particularly important in the aviation industry because air service requires not only permission to fly to a country but also arrangements to use complementary services at the country's airports.

The need for guarantees of national treatment is best illustrated by the problem of foreign airline access to domestic airports. Many Asia-Pacific airports are already near capacity, and others reach capacity during peak operating hours. Thus, lower tariffs would not necessarily increase the number of flights to a country because its airports could not handle the additional capacity. Governments could take the path of deregulating international air service but continue to use mechanisms to allocate landing and take-off slots that favor domestic firms, i.e., grandfathered allocations of slots.

Of course, nondiscriminatory slot allocation mechanisms do exist. Airport authorities could, for example, allocate landing slots at airports by auction. An auction would ensure that airlines offering the most desirable price/quality combination to consumers would be awarded the slot. This would provide additional incentives for domestic and foreign airlines to lower operating costs and to offer a competitive product mix. Moreover, the amount of revenue raised from

slot auctions would provide a signal concerning the value of additional airport capacity. Whatever the merits of the auction allocation system, WTO must ensure that the slot allocation mechanism is compatible with national treatment and nondiscrimination so that restrictive slot allocation mechanisms do not merely replace the current restrictive system of bilateral treaties.

## CONCLUSION

This report has provided an overview of the current status of aviation in the Asia-Pacific region, analyzed the political and economic issues behind the region's increasingly numerous aviation disputes, and discussed the potential for regional cooperation in developing a new institutional framework for the region's air passenger industry. Our research shows that, over the past two decades, high rates of economic growth in Asia have spurred the rapid expansion of commercial aviation industries servicing the region. Many Asia-Pacific countries have benefited from this boom, but the continued expansion is now leading to the breakdown of the framework of bilateral agreements that have governed Asia-Pacific aviation since the end of World War II. Expansion in the number of passengers, airlines, and routes has stimulated competition and intensified aviation disputes, thereby increasing tensions in the international relations of the region. Potentially, such tensions could fuel increased protectionism.

Proponents of an Open Skies policy argue that liberalization of the current system would produce even greater economic benefits. However, whereas

free trade is usually superior to protected trade, it also generates losers. Until a method is devised for compensating the losers, Open Skies proposals are unlikely to fly. An objective and in-depth analysis of the impact of an Open Skies regime on the airlines of developing countries is critically needed before such proposals are likely to be considered seriously.

In the near term, it is likely that Asia-Pacific commercial aviation will remain a somewhat turbulent mix of transnational agreements and ultranational confrontations. With fair and effective international leadership, however, we believe that mutually beneficial negotiation of an Open Skies regime, most probably through WTO trade negotiations, is ultimately possible.

In preparing for the future, it would be wise to learn from the lessons of the past. The history of the U.S. airline industry clearly demonstrates that deregulation of fares and routes does not mean the end of government involvement. Even in a deregulated multilateral aviation regime, many governments will continue to provide airport infrastructure, allocate airport slots and routes, review mergers, scrutinize foreign ownership applications, and set and enforce safety regulations. Price-entry deregulation cannot fully succeed unless it is coupled with appropriate government policies and adequate infrastructure investments.

Our analysis leads to three specific policy recommendations that stem from this recognition of the continued role of government in the aviation industry.

1. APEC should act to facilitate:
  - Regional coordination of infrastructure investment, thereby avoiding

costly duplication of regional hub facilities

- Regional implementation of the FANS or GPS satellite navigation system, thereby saving national governments billions of dollars
- Regional implementation of auctions to allocate airport landing and takeoff slots during peak times
- Regional price-entry deregulation.

Two reports on global liberalization are due in 1996 from the Organisation for Economic Cooperation and Development (OECD) and the United Nations Development Programme (UNDP). APEC should use these reports as a foundation for further, more detailed research on the feasibility of a more liberal aviation regime in the Asia-Pacific region.

2. Asian governments should continue to privatize national flag carriers to facilitate lower-cost airline operations and enhanced access to international capital markets. Until airlines are under private ownership, a liberal aviation regime cannot succeed in the region.

3. Researchers in the aviation industry, academia, and government should develop detailed proposals for including airline services in the next WTO agreement.

The clear challenge for both the airline industry and governments in the Asia-Pacific region is to recognize the proper role for each party and thereby facilitate an efficient and ongoing response to changing passenger demands, new technologies, and increasing competition.

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3. ICAO (1986: 3).
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