

Liberalization and Foreign Direct Investment in Asian Transport Systems: The Case of Aviation

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The aviation industry is critical for Asia to gain from participation in the global economy. The airline industry in developing Asia is generally dominated by state-owned enterprises, and the record of state ownership is poor. Foreign direct investment would provide the managerial and technical skills needed to improve productivity. Paradoxically, however, this is an industry that combines extensive cross-border activities with almost insurmountable obstacles to foreign investment. Airline alliances and marketing arrangements have emerged as an imperfect substitute to consolidation through (cross-border) mergers and acquisition. This paper sketches the main features of international air transport, focusing in particular on the bilateral and multilateral regimes; presents the main characteristics of the developing Asia market and the specific Association of Southeast Asian Nations and Asia-Pacific Economic Cooperation forum objectives in this domain; analyzes ongoing developments in selected countries, in particular in privatizing flag carriers in India and Thailand and consolidating airlines in People's Republic of China; and concludes by putting findings from the region in the wider context of experiences in other developing regions and regulatory development at the multilateral level, including at the World Trade Organization.

I. INTRODUCTION

It may be counterintuitive to consider aviation a key policy issue for developing countries, especially for low-income ones. As Li (1998, 140) notes, “the traditional wisdom that air transport is a luxury transport mode is still common in much of Asia.” This industry, however, is critical for the developing economies in the region to gain from participation in the global economy. It

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reduces the costs of trade, especially in high-value added supply chains such as electronics, perishable food, or cut flowers; attracts privatization-related investment; supports tourism; and more generally weaves together a modern society. The distances involved are large and alternative transport modes such as rail, road, and ports are inadequate and costly. Moreover, the existence of clear network economies makes the case for closer regional cooperation in general. In short, while the growth of civil aviation is partly contingent on the level of income, it lowers communication costs and facilitates access to global markets and foreign investment inflows. These effects are especially important for a number of low-density and land-locked developing countries.

These contributions are already evident in many economies in the region that have substantial aviation sectors. Although growth rates decelerated since the boom days of the 1990s, the Asian and Pacific region remains one of the world's most dynamic air transport markets (ICAO 2003). In 2001-2002, traffic growth in terms of both passenger-kilometers and total (freight and mail) ton-kilometers was the second highest in the world after the Middle East. As Table 1 reports, the People's Republic of China (PRC) is already the fourth largest freight market and the fifth largest passenger market; Hong Kong, China and Singapore are in the Top Ten list for international activities; and, perhaps the most surprising statistic, the ASEAN-5's (Association of Southeast Asian Nations members namely: Indonesia, Malaysia, Philippines, Singapore, and Thailand) combined countries would rank at second place after the United States (US) in terms of both passenger and cargo traffic. Table 2 provides some information about the top airlines in the region.

With few exceptions, the airline industry in developing Asia is dominated by state-owned enterprises. Although one such carrier, Singapore Airlines, has consistently been ranked as one of the world's best and most efficient, the record of state ownership in other airlines is poor.¹ Foreign investment in the sector is minimal, which is not an Asian exception (Backx et al. 2002). While foreign direct investment (FDI) would probably provide the managerial and technical skills needed to improve factor utilization, particularly in developing economies, extensive cross-border activities in this industry are combined with almost insurmountable obstacles to foreign direct investment. As Findlay et al. (1997, 21) noted,

Bilateral aviation agreements often require substantial ownership and control of a partner country's qualifying airlines by citizens of the partner country. Such rules of origin play a role similar to that of rules of origin in preferential trading arrangements, in that they

¹In the three months to June 2003, Singapore Airlines recorded its first ever quarterly loss, attributed mainly to the effects of severe acute respiratory syndrome (SARS).

LIBERALIZATION AND FOREIGN DIRECT INVESTMENT
IN ASIAN TRANSPORT SYSTEMS: THE CASE OF AVIATION 39

prevent third countries from obtaining the negotiated privileges through the back door. But they also hamper the free market by restricting the ability of airlines to consolidate with foreign carriers through equity transfers. To circumvent such barriers, airlines have had to enter into more indirect forms of cooperation, such as code sharing and joint marketing arrangement.

Table 1. **Basic Air Transport Statistics in Developing Asia**

Country	Total Operations				International Operations			
	Rank	2002	2001	% Change	Rank	2002	2001	% Change
Ton/kilometers Performed (millions)								
PRC	5	16 200	13 846	17	13	5 400	4 538	19
Singapore	7	14 140	12 625	12	5	14 140	12 625	12
Hong Kong, China	n/a	10 821	9 662	12	n/a	10 821	9 662	12
Thailand	13	6 241	5 726	9	11	5 913	5 327	11
Malaysia	17	5 342	5 237	2	14	4 920	4 824	2
India	23	3 077	2 849	8	27	1 839	1 687	9
Indonesia	30	1 879	1 978	-5	35	1 093	1 271	-14
Philippines	33	1 728	1 662	4	32	1 520	1 462	4
Pakistan	35	1 322	1 437	-8	34	1 141	1 240	-8
Sri Lanka	44	778	819	-5	41	778	819	-5
Vietnam	45	756	646	17	49	562	480	17
Bangladesh	46	692	597	16	43	684	595	15
Brunei Darussalam	52	496	451	10	51	496	451	10
Macao SAR	n/a	232	213	9	n/a	232	213	9
<i>Memorandum item</i>								
ASEAN-5	2	27 630	27 227	1	2	27 586	25 508	8
Passenger/kilometers Performed (millions)								
PRC	4	123908	105904	17	15	28 821	23 624	22
Singapore	8	75 620	70 019	8	6	75 620	70 019	8
Hong Kong, China	n/a	53 148	48 316	10	n/a	53 148	48 316	10
Thailand	15	48 337	43 943	10	12	45 084	40 616	11
Malaysia	17	36 897	35 822	3	14	32 191	30 953	4
India	20	27 929	25 623	9	24	15 504	13 843	12
Indonesia	27	18 149	15 920	14	32	10 298	9 808	5
Philippines	29	13 962	13 425	4	29	12 001	11 430	5
Pakistan	34	10 680	11 609	-8	33	9 089	9 879	-8
Sri Lanka	43	6 327	6 660	-5	39	6 327	6 660	-5
Vietnam	42	6 676	5 610	19	45	4 895	4 079	20
Bangladesh	48	4 661	4 397	6	46	4 583	4 324	6
Brunei Darussalam	54	3 715	3 607	3	51	3 715	3 607	3
Macao SAR	n/a	2 056	1 904	8	n/a	2 056	1 904	8
ASEAN-5	2	192965	179229	8	2	175194	162825	8

Notes: Most 2002 data are estimates, thus the ranking and the rate of growth may change when the final data become available. Source: ICAO (2003).

Table 2. Largest Airlines in Developing Asia

	Revenues (US\$ m)	Net Result (US\$ m)	Passengers (‘000)	RPK (millions)	FTK (millions)	State Ownership Stake	Alliance
Singapore Airlines	5 930	601	15 002	71 118	6 075	100	Star
Cathay Pacific	4 242	51	12 321	49 041	4 854	25	Oneworld
Thai Airways	2 977	235	18 729	48 513	1 824	93	Star
Malaysian	2 331	89	16 208	26 897	1 924	100	No
China Southern	2 177	69	21 493	28 940	1 006	63	No
China Airlines	2 114	90	8 136	26 806	4 600	71	No
EVA	1 867	76	4 186	17 777	3 278	0	No
China Eastern	1 580	10	11 533	18 206	1 023	62	No
Garuda	1 059	69	7 453	16 715	345	100	No
Pakistan IA	726	31	4 166	10 779	209	58	No
Air China	n.a.	n.a.	10 587	24 001	1 876	100	No
Indian Airlines	n.a.	n.a.	5 542	7 554	111	100	No
Vietnam AL	n.a.	n.a.	3 745	6 123	139		No
Air India	n.a.	n.a.	3 344	12 584	354	100	No
Philippine Airlines	n.a.	n.a.	2 441	11 219	209	4	No
SriLankan	n.a.	n.a.	1 741	6 327	203	51	No

Notes: RPK (revenue passenger kilometers) is a measure of airline passenger volume. It is calculated by multiplying the number of revenue passengers carried on each flight stage by the flight stage distance.

FTK (freight tons kilometers) is a measure of airline freight volume. It is calculated by multiplying freight carried on each flight stage by the flight stage distance.

Sources: *AAPA Statistical Report 2002* (Association of Asia-Pacific Airlines 2002); *World Airline Report 2003* (Air Transport World 2003).

This paper seeks to define the potential contribution of FDI to the growth of the aviation sectors in developing economies in the region, and in that process to economic development. The paper will also identify the policy barriers inhibiting that contribution from FDI and the ways in which those barriers might be removed.

The paper begins with a review of the main characteristics of the regulation of international air transport, focusing in particular on the bilateral and multilateral regimes. Section III then discusses policy trends in the region, and notes an important new shock in the market place, which is the emergence of low-fare carriers. Section IV shifts attention to developments in selected countries to examine changes in policy that either add to or diminish the contribution that might be made by foreign investors. In Section V, the move to privatize carriers in India and Thailand and to consolidate (state-owned) airlines in the PRC is examined. In all such cases FDI has been an option, but very little progress has been achieved. In the conclusions the findings from the region are put in the wider context of experiences in other developing regions and regulatory development at the multilateral level, including at the World Trade Organization (WTO).

II. MARKET LIBERALIZATION AND FDI IN THE GLOBAL TRANSPORT INDUSTRY

Civil aviation for the transport of passengers and merchandise has always constituted a *sui generis* market, with the possible exception of its pioneering days when entry was basically unrestricted. The core characteristics that distinguish civil aviation from other industries now include:

- (i) dominant state ownership, at least outside the US, and a higher degree of immunity from competition policy, partly on the grounds of national security and pride;
- (ii) pervasive controls on entry, capacity, and tariffs, on the grounds of the size of investment needed and the presence of network externalities;
- (iii) existence of an international regime with specific international organizations and institutions;
- (iv) high degree of vertical integration, with *de jure* or *de facto* control and ownership links between physical infrastructure and air and ground services.

In this section, some of the key features of the regulatory system and their implications for foreign ownership, and its interaction with the WTO processes, are identified.

A. Key Features of the Regulatory System

The process and form of agreements governing air service is fairly uniform. Under bilateral air service arrangements (BASAs), airlines from each country are nominated to operate on a given route on the basis of agreements on capacity and frequency. The agreements cover the terms of the designation of the carriers, the methods to set capacity on a route, and any regulation that applies to fares. The restrictions include limits on access to routes by airlines based in third countries. Generally, foreign carriers are not permitted to operate on domestic routes.² Competition is further restricted by commercial arrangements between airlines dealing with royalties, traffic compensation, traffic, and revenue pooling. Therefore, if one airline wants to put more seats into the market, both countries must agree. Generally this type of control seems easy to enforce. In practice,

²Further detail is provided by Doove et al. (2001) and Findlay and Nikomborirak (2003).

control over passenger fare and cargo tariff regulations is illusory because of the complexity of airline yield management programs, now an accepted practice to enhance revenues.

Over the last two decades, OECD countries have made substantial progress in liberalizing ownership and market access. Key milestones have been the pioneering US domestic deregulation of 1978, the Australia-New Zealand Single Aviation Market Arrangements established in 1996, and the European Single Aviation Market completed in 1997. Additionally, since 1992, over 85 “open skies” BASAs providing full market access without restrictions on designations, route rights, capacity, frequencies, code sharing, or tariffs have been concluded by approximately 70 countries—in 59 of these cases involving the United States.

Bilateral air service arrangements dominate the exchange of market access rights in Asia. However, there have been significant recent developments toward a more liberal set of arrangements in the region including the adoption of “open skies” policies by a number of economies. In these policies, capacity restrictions are removed and a more liberal position may be taken toward foreign ownership. The US version of open skies agreements generally retains restrictions on foreign ownership and on rights to operate domestic services (cabotage). A plurilateral open skies agreement was signed among a group of regional (APEC-member) economies in November 2000 (Findlay 2003);³ in 2000 a Memorandum of Understanding on Air Freight Services was signed by 10 ASEAN member states, which allows the designated airlines of each member state to operate all-cargo services of up to 100 tons weekly with no limitations on frequency or aircraft type, as a first step in the full liberalization of air freight services; in May 2003 Cambodia, Lao People’s Democratic Republic, Myanmar, and Viet Nam (CLMV) adopted a Multilateral Agreement on Air Transport in the CLMV Sub-Region, which formalized a 1998 arrangement.

B. Restrictions on Foreign Ownership

A key feature of these arrangements is the ownership restrictions on airlines operating international services. Typically the right to take up the market access available in the BASA depends on the designated airline being “substantially owned and controlled” by the nationals of the economy involved. Further

³The Asia Pacific Economic Co-operation forum (APEC) has endorsed the policy of developing “competitive air services” within the region by eliminating restrictions on air freight services and auxiliary airline commercial activities and allowing for multiple airline designation and the expansion of cooperative arrangements.

restrictions on the extent of foreign ownership apply at the national level, for example, caps on the extent of foreign ownership.⁴

Table 2 includes data on the extent of government ownership among airlines in the region. In very few carriers the level of private ownership exceeds 50 percent. The exceptions are Cathay Pacific, Eva Airways, and Philippine Airlines. The extent to which governments can sustain the operations of loss-making carriers is an important policy issue in these markets. As in other industries, what FDI exists has been due to privatization—in particular in Sri Lanka (see Box 1).

Box 1. Foreign Investment in Air Lanka

The most important example of FDI in Asian air transport is the 44 percent participation (30 percent upfront and 14 percent staggered over two years) in Air Lanka that Dubai-based Emirates Airline bought from the government in April 1998 for US\$70 million. Under the deal, Emirates was given management control of the company for 10 years, together with fuel concessions; an extension of a complete tax holiday up to March 2013; and the right to retain national carrier status. A new chief executive officer and the head of information technology were seconded from Emirates. Major programs have been the development of Bandaranaike International Airport in Colombo as a major passenger and cargo hub, the introduction of new management techniques and information technology equipment, and a rebranding program that included the adoption of a new name—SriLankan—in July 1999. The fleet was also modernized and is now wholly composed of Airbus aircraft.

While the company generated a profit from ancillary services such as cargo and catering, it was only in 2001-2002 that the airline business had a positive net income of US\$16.6 million. Part of the reason was a slow but steady upward creep in passenger numbers—both ethnic Sri Lankans and overseas tourists. The turnaround was all the more surprising, since it came just over a year after a devastating raid by rebel Tamil Tigers on Bandaranaike airport, in which the airline suffered damage costing US\$350 million. Domestic flights were also banned in 1996-2002 amid fears that the rebels would hijack a plane to carry out an attack. The airline also slashed costs, axing 1,500 jobs within weeks of the attack. At the same time, it moved to coordinate its remaining flights with those of Emirates.

Sources: SJ Associates (2001), BBC (2002), and Airlines International (2003).

Restrictions on cooperation through ownership links have prompted the development of global alliances, through which airlines aim to achieve economies of density (lowering costs by consolidating passengers on larger aircraft) and to provide a more extensive range of services and destinations. They also seek to

⁴Chang and Williams (2001) provide further discussion of issues involved in changing these clauses.

provide feeder services for longer distance travel. Insofar as they are short-lived and unstable, however, airline alliances appear an imperfect substitute to consolidation through (cross-border) mergers and acquisition (Gudmundsson and Rhoades 2001). Unsure about the long-term survival of different arrangements, individual companies may be unwilling to accept the complexity and resource commitments that are necessary to minimize the risk of early termination of an alliance.

Examples of alliances include Oneworld (of which American Airlines and British Airways are the leading members, accounting for 16.8 percent of world traffic in July 2003); Star (embracing United Airlines, Lufthansa, and their partners, accounting for 23.8 percent of world traffic); and Skyteam (led by Air France and Delta, accounting for 21.2 percent).⁵ Although each of them counts at least an Asian partner—Korean Airlines in the case of Skyteam; Singapore and Thai in the case of Star—it is clear from Table 2 that most airlines in developing Asia are still “spinsters.” Asian airlines have also sought to extend the service they offer through code-sharing and franchising, deepened in some cases by cross shareholdings. In these, typically a smaller airline operates thinner (often regional) routes using the brand and marketing services of a larger airline that would not be able to profitably operate such routes itself. These sorts of alliances and franchising agreements may raise competition and consumer concerns.

Due to the constraints of international treaties, there have been very few examples of airlines effectively merging their operations. European airlines face fewer ownership restrictions on continental routes, although constraints remain on merging business on international routes. Difficulties in cross-border mergers, however, are well known in the international business literature and in one case—Swissair’s acquisition of Sabena in 1994-2000—both carriers were left bankrupt. A more recent example is the proposal in October 2003 to merge Air France and KLM. The two carriers will be owned by a joint holding company but will continue to operate as separate brands. The KLM operating company will be owned 51 percent by Dutch interests and so would protect the traffic rights that it now holds under Holland’s bilateral air service arrangements. These conditions mean that the scope for cutting costs is limited. The airlines may instead be betting on a successful outcome of the US-European Union negotiations on a transatlantic market that would introduce a more liberal set of ownership rules.⁶ Other such announcements might also be expected for this reason.

⁵Market share data in this sentence were reported in *The Economist* (2003b). Non-alliance members account for 38.2 percent of world traffic.

⁶Material in this paragraph is based on *The Economist* (2003a).

C. Air Transport in the World Trade Organization

Current air transport commitments under the General Agreements on Trade in Services (GATS) only apply to three ancillary services: aircraft repair and maintenance, selling and marketing, and computer reservation. An annex to the agreement excluded consideration under the GATS of traffic rights and services related to traffic rights.

Like the Agreement on Agriculture, the GATS contains a “built-in agenda” mandating WTO members to reopen market access negotiations on services on 1 January 2000. In 2001, the WTO resumed its mandated review of the Annex on Air Transport Services and adopted the guidelines, procedures, and work program for the negotiations on services, including a number of air transport and tourism proposals (ICAO 2002). Proposals for additions to the Annex on Air Transport Services submitted to the Council on Trade in Services (CTS) included multilateralization of ground-handling services, airport management services, leasing or rental services of aircraft without operator, and services auxiliary to all modes of transport when delivered in an air transport context. There may be strong interests among airlines to have ground services included in the Annex to try to create more competitive markets for their provision. Also private investors in airports, now more common, may prefer to widen the coverage of the Annex to include airport services. However, the current review remains stalled and may close soon. Another review would then begin in 2005. At the same time, there are general negotiations in progress⁷ and those economies with a strong interest might seek to return some specific air transport issues through those negotiations, for example, coverage of airport services and ground handling.

An important constraint on progress in the air transport negotiations has been the presence of another international organization with jurisdiction in the field. The International Civil Aviation Organisation (ICAO) has requested the WTO to develop a Memorandum of Understanding (MoU) to strengthen cooperation and help define their respective roles. In view of the lack of consensus on the development of the MoU, the subject was retained as a standing item on the agenda for a subsequent meeting. There has also been discussion in the WTO of a draft GATS Annex on Tourism. A proposal was discussed at the Council on Trade in Services that envisages access to air transport infrastructure and related services on a nondiscriminatory basis in addition to concerns for potential regulatory

⁷ At the fourth WTO Ministerial Conference held in Doha, objectives and timetables for the negotiations initiated in January 2000 were elaborated with a view to promoting the economic growth of all trading partners and the development of developing and least developed countries. It was also decided that WTO Members shall submit initial requests for specific commitments by 30 June 2002 and initial offers by 31 March 2003. However only 42 members had submitted offers by April 2004 (ICTSD 2004a). In the General Council decision of July 2004, a new deadline has been set for May 2005 (ICTSD 2004b).

overlap on certain aspects of air transport (for more details of the proposed annex, see World Trade Organization 2001).

D. Impact of Regulation

Research on the impact of regulation indicates that reform in this sector would be expected to lead to significant price reductions, which could also be taken as quality improvements to make the sorts of contributions to development we noted earlier. Doove et al. (2001) extended earlier OECD work (Gonenc and Nicoletti 2001) to calculate an index of restrictiveness associated with air transport policy in for each country. Policy aspects in the index included:

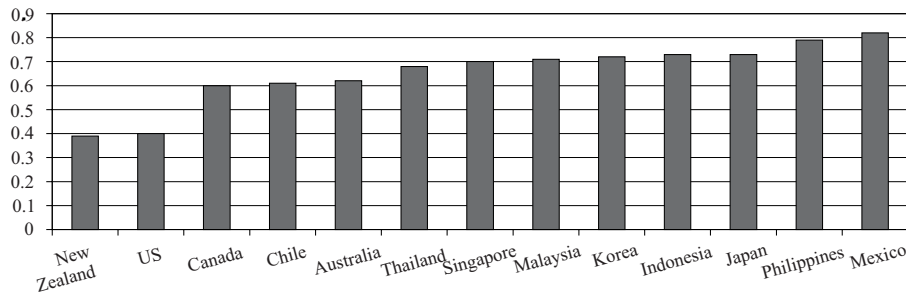
- (i) designation requirements (single, multiple, or no restriction)
- (ii) capacity regulation (predetermined, free determination, other formulas)
- (iii) price regulation (various formulas, no requirement)
- (iv) treatment of nonscheduled services

In the index calculation, each component accounted for between 22 and 27 percent of the score.⁸ Components were scored between zero and one, with lower scores corresponding to more liberal regimes. The weighted index value therefore also ranged between 0 and 1.

Figure 1 shows the index values for the Asian and Pacific economies. The figure illustrates, firstly, the wide variation in policy regimes in the region. The figure also illustrates the relatively restricted nature of the regimes. In comparison, apart from Switzerland, the index values for the European countries are all less than 0.4 (e.g., the United Kingdom index value is 0.30, for Ireland 0.21, and Portugal lowest at 0.14). Of the economies in Figure 1, only New Zealand and the US show a score of less than 0.4. Restrictions of the type captured in the index are estimated to have a significant impact on airfares. Discount level fares in the Asian and Pacific region are estimated to be 12 percent and 22 percent higher in the region because of the presence of the restrictions (Doove et al. 2001, Table 2.3).

⁸ These weights are derived from a factor analysis of the variation in the components of the index. See Gonenc and Nicoletti (2001). The scores of the degrees of restrictiveness are based on qualitative assessments by researchers.

Figure 1
Restriction Indices for air Transport, Selected APEC Economies



Liberalization will create opportunities for developing economies to enter this business. There are wide ranges between countries of costs of operation in air transport (Oum and Yu 1998) and developing economies can be internationally competitive in some or all parts of the business. Their areas of specialization are likely to evolve as they develop and as real wage rises. They may enter the industry providing back-office functions and gradually make the transition to more skill-intensive parts of the business, such as flying operations or engineering services. Their capacity to enter the market for air transport services, or the markets for inputs to air transport, will be accelerated by the capital and complementary inputs that foreign ownership provides. However, an interesting question in this context is whether the foreign capital is best provided by another airline or whether a portfolio investor could also provide valuable foreign investment. The case studies contain relevant material.⁹

E. Paths to Liberalization

There are different paths to reform in such a complex regulatory environment. One option is to focus on the liberalization of capacity controls, which is equivalent to removing restrictions on designated airlines on supplying services from their home base. Another is to concentrate on removing the restrictions on ownership, which is equivalent to liberalizing the conditions for designation, and permitting higher levels of foreign ownership.

Oum (1998) made a case for liberalization of capacity among Asian carriers by establishing their own open skies arrangements. United States carriers, Oum argued, benefited from the series of open skies agreements which the US had signed with a number of Asian economies and which gave US carriers more

⁹ Australian carrier Qantas has argued that the limits on foreign ownership (49 percent cap) increase its cost of capital.

flexibility in some cases to establish regional networks compared to their Asian competitors. This happens because the US carriers were able to combine their rights in the US open skies to fly beyond points in the Asian partner economies, whereas the agreements applying to services provided by carriers based on those economies on route between them might be restrictive. His suggestion was to dismantle the bilaterals that were restricting the building of an efficient intra-Asian network. As well as establishing a timetable for regional open skies, preliminary steps could include relaxing the ownership limits on second-level carriers; moving faster on charter, freight, and secondary airport services; and further multiple designation of carriers.

Loosening the rules of ownership, in a setting without capacity controls, relaxes a regulatory barrier to entry.¹⁰ Trading partners, however, must agree to accept the relaxation of the rule of origin. A change of this type is more likely to be adopted, therefore, in a cooperative approach to reform. A larger group of economies, for example, could accept designation of any airline based in any member economy, or of one owned and controlled by interests from any of the economies in the group. The outcome of the negotiations between Europe and the US on new arrangements across the Atlantic will provide a model of how this approach could be made to work outside the original group of economies that recognize each other's airlines.

An example of a mixed approach to liberalization is intra-Arab air services, where the Arab Civil Aviation Commission (ACAC) is gradually ending restrictions on market access for carriers of its Member States. The process provides for designation of more than one carrier with rights to operate on the routes to which the agreement applies. It also provides for carriers with modified national ownership and control criteria, and encourages code sharing as well as co-operation, particularly in ground handling. In Latin America, Ministers of Transport endorsed a common regional air transport services liberalization policy in November 2000 and the process of liberalization is in progress. In the Southern African Development Community, Chapter 9 of the Protocol on Transport, Communications and Meteorology deals with civil aviation (Goldstein 2003).

Even more substantial changes are proposed in the report of the ICAO meeting ("Consolidated Conclusions, Model Clauses, Recommendations and Declaration of Principles"), which reflects the positions put forward by the airlines themselves (as presented by the International Air Transport Association [IATA]) on liberalizing national ownership and control rules and separating commercial

¹⁰ Permitting more carriers to enter a market in which a capacity constraint applies could lead to a reallocation of capacity. The outcome would depend on the rules used for the allocation of the capacity available.

ownership from regulatory control.¹¹ The model clause on designation proposed by ICAO includes the following:

“Article X: Designation and Authorization

1. Each Party shall have the right to designate in writing to the other Party [an airline] [one or more airlines] [as many airlines as it wishes] to operate the agreed services [in accordance with this Agreement] and to withdraw or alter such designation.
2. On receipt of such a designation, and of application from the designated airline, in the form and manner prescribed for operating authorization [and technical permission,] each Party shall grant the appropriate operating authorization with minimum procedural delay, provided that:
 - (i) the designated airline has its principal place of business [and permanent residence] in the territory of the designating Party;
 - (ii) the Party designating the airline has and maintains effective regulatory control of the airline;
 - (iii) the Party designating the airline is in compliance with the provisions set forth in the Articles on Safety and Aviation Security; and
 - (iv) the designated airline is qualified to meet other conditions prescribed under the laws and regulations normally applied to the operation of international air transport services by the Party receiving the designation.

The criteria for establishing “principal place of business” include establishment, incorporation, extent of operations and physical facilities, payment of income tax, registration of aircraft, employment of nationals in management, and operations. These provisions are similar to those that apply to establishment of “origin” as applied in a preferential trade agreement incorporating services. The provisions are therefore not equivalent to those that might apply in free trade, where it would be expected that regulation would only refer to recognition of provisions on technical issues.

In the ICAO model clause, it is suggested that the technical regulation would include valid operating licenses, and meeting global safety and security standards. There is also reference to “financial health” and “assurance of service”, which can be interpreted as consumer protection issues, and are relevant in these forms for cross border supply of services.

¹¹The conference also endorsed the multilateral interline system and the existing slot allocation process.

F. Emergence of Low-fare Carriers

Asian air transport markets have seen the emergence of new low-fare airlines, which have become an important source of pressure for change and adjustment among the established operators. In OECD countries, the low-fare carriers offer more and more people access to air transport. In Asia, their potential contribution will be reinforced if it were possible to promote foreign participation in ownership and management and by loosening the ties on the design of their networks. Without commitments to adjust their own pricing and service packages and to cut their costs many traditional full service operators will face a rapidly deteriorating financial situation.

There is a range of models of emerging¹² low-fare carriers that tend to have in common a “star” network involving one aircraft type with high utilization rates (also requiring short turnaround times), low fares, and uniform and few service standards in the cabin. In some dimensions, such as on-time departures and baggage handling times, their quality of service can be relatively high. Their route networks might set them in closer competition with rail operators or road transport. Given the quality of cabin service, they are likely to be more competitive on shorter routes. They tend to make greater use of on-line ticketing. A low-cost carrier establishing on the basis of a “greenfield” business could also have lower labor costs compared to incumbent operators. Low-fare carriers tend to prefer to operate from regional or secondary airports. The traditional full service carrier in contrast tends to have more complex networks, involving hub and spoke structures, with a variety of cabin service standards and a range of aircraft types. They also offer other services such as frequent flyer plans and airport lounges (at no charge).

In the Asian and Pacific region, there are low-fare carriers in (among other cases) India, Japan,¹³ Malaysia, New Zealand, Philippines, and Thailand. Australia’s Virgin Blue and AirAsia, based in Malaysia, are among the success stories—the latter was the world’s first airline to let customers book reservations with a mobile phone text message. Some low-fare carriers have high market shares. Further details of the carriers operating in India and Thailand are presented in the case studies below.

Virgin Blue illustrates the advantage of foreign investment in this sector. It was established in September 2000 by the Virgin Group as a fully foreign-owned

¹² Rose (2004) reviews the evolution of the business model of a low-fare carrier.

¹³ Established Japanese domestic airlines reacted to the entry of Skymark Airlines by adopting pricing policies that the Fair Trade Commission subsequently considered predatory. In response to the merger between Japan Airlines and Japan Air System, the Fair Trade Commission also required both airlines to give up 12 slots at Tokyo’s crowded Haneda airport, the use of which has been requested by Skymark.

carrier operating the domestic Australian market. The owners brought with them the marketing techniques and operating methods of the low-cost carrier, which rapidly moved to 30 percent of the domestic market. Half the business was later sold to domestic investors and in December 2003 the owners floated 29 percent of the company on the stock market (the Virgin Group then held just over 25 percent). An international business (Virgin Pacific) has also been established, which is eligible for Australian traffic rights because of its level of domestic ownership.

Low-fare carriers are able to challenge incumbents when governments deregulate entry by locally owned firms. But a disadvantage of these carriers in Asia (other than perhaps the PRC) is the smaller geographic areas of economies compared to the US or Europe, which can limit the number of points served in their star-shaped networks (to duplicate the hub and spoke system of the full service carriers would undermine an important source of their competitiveness). As they grow, low-fare carriers will confront the regulatory constraints applying in international markets.

An executive of Virgin Blue has stressed the importance of efficiency in their success (Huttner 2003, 32):

Big carriers have this view: They think if you start taking away the meals and beating up your staff on wages, that's all it takes to be a budget carrier. It's much more than that—even with that, they still can't meet our efficiencies.

Ergas and Findlay (2003) review some of the impact of the entry of Virgin Blue into the Australian market. They conclude that entry leads to significantly lower prices but also a wide wedge between full economy and discount fares. The discounting induces substantial growth in traffic. The full service carriers do have advantages in terms of their network structures and their ability to generate feeder traffic for other parts of their networks. They also offer a range of differentiated services and can use their extensive yield management systems to set the appropriate prices for those services. The full service carrier, many observers expect, can survive on the basis of these features, subject to further efficiency gains, but at the same time the competitive threats from the low-fare carriers are not abating.

III. SELECTED CASE STUDIES

The preceding review of the policy environment in international aviation shows the extent to which foreign participation in those markets is currently impeded by a variety of barriers. However we have also noted how forces in the market place, especially originating among the low-cost carriers, are putting

pressures on the traditional full-service carriers to adjust through new strategies, including privatization. A higher level of foreign participation is clearly a key component of that adjustment. The purpose of the case studies below is to examine how these contradictory forces might be resolved and whether there are ways around the policy impediments now in place. Included in the case studies are the PRC and India, large markets where travel demand is growing rapidly; and Thailand, the second largest ASEAN market after Singapore where some of the above-mentioned market pressures are already evident.

A. People's Republic of China

Although the PRC's airline industry can trace its origin to 1920—and foreign capital did play a major role at the time (Allen and Donnithorne 1954, 142-3)—in the four decades after 1949 it functioned as a paramilitary organization within the Civil Aviation Administration of China (CAAC). Regulatory, managerial, and operational responsibilities for both airlines and airports were all tightly performed by the CAAC. Since the country embarked in economic reforms in 1979, business aspects were brought to bear on the industry, the regulator was separated from the operator, the CAAC monopoly was broken by establishing six separate national airlines, and both market entry and route entry were eased (Zhang 1998). Civil aviation has grown rapidly, not only compared to other world markets, but also way ahead of other domestic transport modes—its proportion of total passenger modes increasing from 1.7 percent in 1980 to 7.6 percent in the first six months of 2003 despite the SARS crisis.¹⁴ Total factor productivity also grew rather significantly, although the advance was mainly due to the addition of new capital (i.e., aircraft) and labor productivity slowed down markedly after 1996 (Zhang and Chen 2003).

Less restrictive BASAs, especially with the US, the slow emergence of an integrated air transport policy for the Greater PRC region, WTO membership, and the Beijing Olympics in 2008 are all likely to contribute to further market growth. According to Boeing's 2002 *China Current Market Outlook*, air traffic market is growing at 7.6 percent annually and is expected to be the largest commercial aviation market outside the US over the next 20 years, generating demand for more than 1,900 new jet airplanes worth US\$165 billion. So far the PRC authorities have taken a conservative approach toward international aviation policy, defending the market share of domestic carriers—even at the cost of seeing the emergence of supply bottlenecks. They have also designated only one local carrier and one foreign carrier on any given route, and “strongly insist[ing] that

¹⁴According to the National Bureau of Statistics of China (2004), aviation traffic volumes fell by 20 percent year-on-year in the six months to June 2003 against an 11 percent contraction for all modes.

commercial agreements be established before services could be launched” (Zhang and Chen 2003, 36). Moreover, to compensate at least in part to the fact that relatively few Chinese fly international routes, all government bodies strictly adhere to the “Fly Chinese” policy. All these sweeteners, however, have done little to increase the performance of the PRC companies to the international best practice, including in terms of safety and quality of services.

Against this background, authorities are pushing for consolidation of the still fragmented industry, in the expectation that emerging “super-carriers” will increase their productivity and negotiate on an equal footing with foreign airlines. The fundamental problem is not small-scale, but poor management and excessive government intervention. The merger plan was announced in May 2001; a review was conducted by the State Council; and three new groups (Beijing-based Air China, Shanghai-based China Eastern Airlines, and Guangzhou-based China Southern Airlines) were established in October 2002. The three groups will take over 14 minor carriers, with all of them except Zhejiang and Yunnan operating at least some regional cross-border flights. Among the 14 carriers are three that have municipal shareholders and operate independently of direct CAAC control, as well as six regional carriers that had previously formed their own alliance, the Sky Aviation Enterprise Group. China Aviation Fuel, China TravelSky, and China Aviation Supplies Import and Export were also set up as autonomous corporations in October 2002. The CAAC’s duty becomes that of maintaining a fair market environment and protecting consumers’ fundamental interests. Assets management is transferred to a special state-owned enterprises regulation department under the State Council.

The expectation was to integrate the financial structures by end-2003 and corporatize the carriers within three years. Analysts, however, doubt whether the new companies will be able to conclude the acquisition of the smaller carriers by December 2003 due to a shortage of funds (Lau 2003). More fundamentally, there is a risk that insofar as the new groupings are based on administrative preference and not market rules, the State Council’s decision may turn out to be unviable (Dennis 2001). Other major aviation policy initiatives are a bold test-case “open skies” arrangement for the resort island of Hainan and domestic airfare reform, providing companies with enhanced tariff flexibility. Finally, the new civil-military coordination principle gives priority to civil aviation to ensure optimal civil operations, while providing concurrent consideration for military flights. The principle further states that military and civil air traffic coordination must meet the requirements of other flight activities, such as general aviation and sport flights.

In May 1994 CAAC announced that it would allow foreign investors to enter joint ventures with, or buy stock of, domestic airlines. A ceiling was set at 35 percent of capital and 25 percent of voting stock. The first, and indeed the largest, investment was George Soros’ US\$25 million acquisition of a 25 percent

stake in Hainan Airlines in 1995.¹⁵ By virtue of its non-CAAC status, Hainan hires foreign pilots and flight attendants, enjoys freedom in aircraft procurement, and fills a market, mainly tourist flights and feeder routes from smaller cities, which is different from those of the big three. Hainan net profit nearly doubled in 2002, lifted by greater domestic travel and strong expansion. Net earnings rose by 81 percent to US\$21.9 million on revenue of US\$608 million. With around 9 percent of the domestic market, however, Hainan is dwarfed by the big three and it is gunning for size. Hainan has bought three regional airlines, establishing six hubs across the country, including Beijing, Lanzhou, and Xian. This broadened Hainan's network to 300 different routes even as 60 percent of its flights do not go to Hainan at all. It also operates two regular international routes and runs four weekly charter flights to Kuala Lumpur. Hainan also runs a six-aircraft corporate jet subsidiary in Beijing; set up Yangtze River Express, the country's second air-cargo operator; and owns a majority stake in the Haikou airport (Dolven 2002).¹⁶ In the earlier case of Air Lanka, as the foreign investor was another airline, competition policy issues could emerge. In the Hainan case, on the other hand, the question is what contribution a foreign non-airline investor can make in terms of productivity gains and competitive performance. *Prima facie*, the Hainan experience suggests that in the still relatively underdeveloped world of air transport in the PRC, nonairline investors can make a difference.

There are reports that the PRC's first private airline, Yinglian Airlines, is proposed to be set up in 2004 based in Chengdu, Sichuan, although it is not yet clear if it will be established independently of other airlines in the region (China Southern, Sichuan Airlines, and Air China). The CAAC has also said that it is considering three license applications for the "budget sector" and is said to be encouraging foreign investment in the sector (*People's Daily* 2004).

In summary, the PRC has continued to adopt a very conservative position in its international aviation policy, including a resistance to foreign direct investment. Despite the PRC's success in attracting very large volumes of FDI in other parts of its economy, in air transport a conservative international position is consistent with previous assessments of the international competitiveness of the

¹⁵Through successive share placements (and like the reduction in holdings of the original foreign investors in Virgin Blue), Soros' stake has fallen to 14.8 percent. China Eastern and China Southern, as well as Beijing Capital International Airport, have also issued shares on international capital markets—New York for the airlines, and Hong Kong, China for the latter. In February 2003, four foreign companies (DHL, Exel, United Parcel Service, Nissin Corporation) also took a 5 percent stake in the China National Foreign Trade Transportation Group, better known as Sinotrans. The deal, concluded on the debut of the H-share listing of Sinotrans, makes DHL the largest strategic investor in the PRC's biggest freight forwarder.

¹⁶At the time of writing, Hainan is in preliminary talks with Malev about taking a stake in Hungary's airline, with which it already operates a joint service between Budapest and Beijing.

local airlines (Oum 1998). That position is likely to change as comparative advantage shifts with growth. The PRC has introduced reforms in the domestic system that have led to higher levels of competition in those markets, and more recently to proposals for low-fare carriers. The introduction of domestic competition would have effects that spill over to performance in international markets. At the same time, the government in the past has attempted to manage the consolidation of carriers rather than leave that reorganization to the market.

B. Thailand

From the airline's inception in 1960 Thai Airways has been a source of national pride, its "smooth as silk" motto helping wing Thailand's aura as an exotic and world-class tourist destination. Mismanagement and operational inefficiencies, though, became an increasing drag on the national flagship. Thai provided cozy sinecures and excessive benefits to senior air force officials. And while early management expertise was provided by Scandinavian Airlines System, which held a 30 percent stake in 1959-1977, the constraints imposed by Thailand's bureaucracy limited the airline's options. The government did not shy from intervening in business decisions: in 1989, for example, it made Thai switch engines from General Electric models to Pratt & Whitney ones, believing the latter company closer to the US administration and therefore more willing to assist Thailand in its trade disputes with Washington (Bowen and Leinbach 1997). Although Thai's input costs were 52.1 percent lower than at American Airlines, efficiency was also 42.9 percent worse (Oum and Yu 1998).

In the mid-1990s senior executives went on a buying binge, amassing a fleet of aircraft guided more by hubris than strategic vision. When the domestic currency sank, dollar-denominated debt doubled in value, Thai's operating cost per unit of revenue rose to among the highest in the region, and passenger traffic dropped by 40 percent in the second half of 1997 (*The Economist* 1998). Although Thai returned to profitability in 2000, poor financial management led to a 17.5 percent jump in operating expenses, driven by higher maintenance and fuel costs. The company also appeared to fall behind terms of in-flight services quality. Short on cash, Thai shelved a US\$100m upgrade scheme and thus lost the Asian business traveler, slipping down to a lower market segment. The entry of Singapore Airlines to the Star Alliance, of which Thai was a founding partner, also raised hackles.

Fixing the airline has become a tussle between two different models of reform: one that would require tying up with a foreign partner and another that seeks an in-house solution (Crispin 2001). The International Monetary Fund (IMF) rescue program prescribed that the government offload 23 percent of its 93 percent holding in Thai, earmarking a 10 percent stake for an outside strategic

partner.¹⁷ In March 2000 the government finally approved the sale of a 23 percent stake—13 percent to the public and employees and 10 percent to a foreign strategic partner. In the wake of the government's approval, transport minister Suthep Thaugsuban said the disposal would be completed before the end of the year (Regan 2000). The government of newly elected Prime Minister Thaksin Shinawatra shelved the IMF plan, opting to float shares only locally and handling organizational reform strictly in-house. Thai's home-grown reform plan, in effect, is the pilot project of the "Team Thailand" approach to modernizing the state sector.¹⁸ A new Chairman, Chai-Anan Samudavanija, a respected academic and reform champion, was appointed. Thai wished to slash its public utility role, particularly in serving cash-hemorrhaging domestic routes, to allocate resources instead to more profitable long-haul international flights, to streamline the fleet, and to contract out non-core businesses. To trim its bulging debt-equity ratio to 3:1, Thai proposed to revalue assets. One of the main components of the restructuring is diminishing the Air Force's role in Thai, a politically sensitive and difficult business as the Air Force still effectively manages every operational division of the organization. Organized labor is a bigger obstacle. In 1999, unions blocked plans to spin off Thai's maintenance and computer divisions to an outside investor and reduce the workforce through early retirement schemes.

Despite frequent changes in management—Virabongsa Ramangkura replaced Chai-Anan Samudavanija in 2001, only to lose the chairmanship to Thanong Bidaya (also vice-chair of the Prime Minister's Council of Economic Advisers) in June 2002—the gradualist strategy has been a qualified success. Thai made a net profit of Bt10.2 billion (US\$238 million) in 2002, compared with Bt1.9 billion the previous year, rising to Bt12.5 billion (US\$299 million) in 2003. Thai is moving to enlarge its fleet by 16 aircraft between 2004 and 2006. To lower the debt-equity ratio and help raise new finance, new shares were issued (and the government sold down its holding) in November 2003 at Bt50 per share, a slight discount on the market price. The government shareholding fell from 93 to 67.8 percent. Foreigners now account for 20 percent of the shares (up from 1 percent), though no foreign airline ownership is apparent (*Airwise News 2003*, Thai Airways 2004).

In parallel to Thai's restructuring, there has also been some progress in deregulating and liberalizing civil aviation. Given a supply constraint, the aim was to ease the investment burden off the government's shoulders and to provide more convenient and comfortable air transport services. Angel Airlines (8G) was

¹⁷ The initial plan was to allow foreign ownership of up to 49 percent, but this conflicts with Thai law dictating that nationals must own no less than 70 percent in the national carrier (Li 1998).

¹⁸ That approach in other economies, such as Malaysia and the Philippines, had not been successful. See *Far Eastern Economic Review* (2001).

licensed as a second flag carrier for regional routes in September 1997 and started operating one year later. It currently operates scheduled flights from Phuket and Bangkok to Hong Kong, China; Macau; and Osaka, and is planning to build up connections with People's Republic of China. Other new entrants include Orient Thai Airways and the high-frills, high-price Bangkok Airways, South Asia's most successful small airline.¹⁹ Following a reduction in some of its own secondary routes, Thai has also commenced code sharing with two domestic carriers, PB Air and Air Andaman, and is expected to conclude a similar agreement with Phuket Air. The government may grant Thai 50 percent control over the new Suwannaphumi airport, scheduled for completion in 2004, and recently approved Thai's plans to invest Bt13.74 billion (US\$321 million) in six projects, including a catering complex and aircraft maintenance facilities. In order to boost tourist traffic, the government also launched an investigation in view of licensing a no-frills air shuttle service linking Phuket and Langkawi. Prime Minister Thaksin also announced a US\$650 million plan to make the northern city of Chiang Mai an international aviation hub. The government opened talks with Singapore Airlines about establishing discount flights between Chiang Mai and Singapore.

Two important more recent developments have occurred in the low-fare sector. Malaysian low-fare operator AirAsia has formed a Thai operation that is owned 49 percent by the parent company and 51 percent (therefore meeting local rules on foreign ownership) by Shin Corp, a company founded by Prime Minister Shinawatra. In February 2004, the airline started flying from Bangkok direct to Singapore's Changi Airport (previously AirAsia had not used Changi Airport but had flown from nearby Senai Airport in Malaysia) and is now also serving routes within Thailand. Orient Airlines established a low fare subsidiary called One-Two-GO in December 2003 to operate on domestic routes (Orient flies on international routes to Hong Kong, China and Korea). Even more recently, Thai Airways has set up its own low-fare carrier called Nok Air. Thai Airways will hold 39 percent with a number of other Thai investors, including the local 7-Eleven company that will provide sales outlets. It will lease aircraft from Thai Airways and fly overlapping domestic routes starting from June 2004 (Thai Airways 2004).

In summary, recent developments in Thai policy have included the multiple designation of international carriers and the encouragement of new entrants into

¹⁹Its passenger numbers almost quadrupled in the eight years to 2001 and profits rose to US\$2.7 million in 2001, one third higher than the previous year. Foreign tourists make up over 90 percent of Bangkok Airways' customers. While most Asian airlines design their route maps around bulk traffic between big cities, Bangkok Airways uses small planes to take tourists exactly where they want to go. It has devised a circular route, for example, to usher sightseers through four big attractions in Cambodia, Laos, Thailand, and Vietnam, without stopping in a single capital city. In tourist destinations where there were no airports, such as Sukhothai or Ko Samui, a Thai beach resort, the airline has built one itself. See *The Economist* (2002).

the domestic network, which has led to a surge of interest in low-fare operations. There have been a number of attempts to reorganize the financial structure of Thai Airways, including partial privatization. The initial preference was for an “in-house” solution but at the end of 2003 the extent of foreign participation (at least via portfolio investment) has increased. Other important issues in the future will be linkages between the airline and the provision of airport services at the major Thai hub.

C. India

Air India was set up by J.R.D. Tata, who ran it successfully until it was nationalized in 1953. In the 1960s the “Maharaja”, as the national flag-carrier was affectionately known, was flying to 32 destinations (it now flies to 46 destinations) and making profits. In 1992 it posted profits of US\$729 million, but then accumulated losses of nearly US\$2 billion in 1995-1999. Problems included overstaffing and an ageing fleet caused by arcane policy regulations. First, the Contract Labour (Regulation and Abolition) Act 1970 and the Industrial Disputes Act 1947 prevented the company from outsourcing its non-core activities and reducing workforce per aircraft. Second, Air India and Indian Airlines (the state-owned domestic carrier) are obliged to buy aviation turbine fuel from the government at prices that are a third higher than the international norm, and to pay a special tax that goes toward subsidizing domestic oil products such as kerosene (*Financial Express* 2001). Finally, the annual Haj pilgrimage flights and the use of two Air India planes (one aircraft is kept as a stand-by) for the Prime Minister’s visits abroad are never compensated on commercial terms. In the case of Indian Airlines, it has to fly loss-making routes at low fares without receiving corresponding universal services subsidies—fares for the Northeast, in particular, are 35 percent lower than the actual cost of the service, causing the airline to lose €30m per annum (*Business India* 2001).

Domestic liberalization took off in 1986, with the launch of scheduled services by new start-up carriers from 1992.²⁰ A number of foreign investors took an interest, but they have all failed—not least because the law states that foreign ownership of up to 40 percent is only permitted to investors whose main business is not in air transport. Modiluft closed after failing to meet financial obligations to lessors and its technical partner, Lufthansa. In 1996-1998, Tata and SIA tried to launch a domestic carrier, but the civil aviation minister had publicly stated his opposition on numerous occasions (*Airline Business* 1998). Finally, Kuwait Airways and Gulf Air, which each held 40 percent of Jet Airways’ stock, were

²⁰It was only in 1994, however, that the Air Corporation Act of 1953 was amended, allowing the new companies to market their services as full-fledged airlines (and not as air taxi operators) and openly advertise their timetables.

forced to sell out to a nonresident Indian. Jet Airways, for its part, has been a great business success, becoming the largest domestic airline in August 2000 and expanding its fleet through leasing (*Business India* 2002). Jet and another private airline, Air Sahara, have more than half of the domestic market. Jet has requested authorization to fly from Chennai to Kuala Lumpur using India's untapped aviation rights. AirDeccan, a low-fare carrier based in Bangalore, was launched in late 2002. There are reports of two or more low-fare carriers starting soon (*Business Line* 2004).

The government set up a commission in February 1995 to make a comprehensive examination of the reasons for the losses of Air India and Indian Airlines. The December 1996 report recommended a two-phase strategy, to reduce government equity and inject fresh funds to acquire new aircraft. According to the terms of the policy announced in May 2000 to offload 60 percent of capital, a local strategic investor was being sought for a 40 percent stake, with the remaining 20 percent earmarked to retail investors and employees. The strategic investor might form a joint venture with a foreign airline but the latter would only be allowed to own a maximum of 26 percent of Air India. Under the shareholder's agreement, the chairman, managing director, and five board members were to be appointed by the strategic partner, with three directors being government appointees and four professionals. Although many Asian and European carriers were expected to make bids, only two bids were presented in May 2001, by the Tata Group with SIA and by Ashok Leyland, backed by the Hinduja brothers. The latter, however, was soon disqualified on the grounds of national security. The Communist Party expressed concerns at the possibility that Air India may be controlled by a foreign state-owned enterprise, while the Congress Party, the main opposition party, opposed privatization if there was only one bidder. Surprised by the intensity of political, union, and media opposition, SIA withdrew its planned bid on 2 September 2001 and, facing competing heavy investment in telecommunications and hotels, Tata took this as an ideal opportunity to pull out in December 2001. As the Hinduja had also bid for Indian Airlines, after government banned the sole remaining contender on economic grounds, the Cabinet Committee on Disinvestment decided in July 2001 to postpone both carriers' sales indefinitely.

While Indian Airlines remains a loss-maker, Air India just managed to come out of the red in 2001 after incurring losses for six consecutive years. Although the Ministry of Civil Aviation has maintained that fleet acquisition could not go hand in hand with the disinvestment process, capital shortages are hindering the state-owned carriers. In cargo, for instance, Air India's 40 percent network contraction saw its market share drop to 13 percent in 2001 (Matthews 2001). At London Heathrow, moreover, Air India has only been allocated slots for 11 of the 16 flights to which it is legally entitled. The paradox is that, as one quarter of the airline's revenue comes from the United Kingdom and the US, unless transatlantic

traffic expands there is no justification for upgrading its ageing fleet. In September 2003, a committee set up to examine the plan to purchase 18 short-range single-aisle aircraft and 17 300-seaters rejected the request, arguing that Air India, because of years of neglect, no longer has the business class base to support the purchase of 777s or A340s.

Unable to fly to at least 19 of the 96 countries with which India has BASAs, Air India has signed different kinds of commercial arrangements that include block space agreement, code sharing, and revenue pooling. The Ministry is also inclined toward incorporating Air India in Star Alliance. Lufthansa, one of its founding members, is keen to extend its operations in Southern India (adding Cochin and Hyderabad to Chennai and Bangalore) and Star Alliance is reportedly keen on sourcing more information technology services from India. Lufthansa has in turn promised to provide an additional prime slot to Air India in Frankfurt. The direct interest taken by the Minister in the alliance decision, however, bears testimony to the obstacles that private, and foreign in particular, investors may have in investing in Air India. A new management committee structure has delegated a large number of executive responsibilities to a three-member committee comprised of the civil aviation secretary and the joint secretary and financial advisor in the ministry (who are not full-time directors of Air India) and the airline's managing director. Moreover, until recently the managing director only had a succession of short-term contracts, as opposed to an open-ended tenure. With such an incentive structure, a public sector executive is unable to show leadership and take quick decisions.

Civil aviation policy was reviewed by the Naresh Chandra Committee, which reported in December 2003. It proposed (reiterating earlier proposals) that the foreign equity limit be lifted to 49 percent and that foreign airlines be allowed to invest within this cap. It also proposed that international markets should be liberalized in two phases, the first in which private airlines in India be allowed to compete on routes to and from India, and the second in which "the government should seek more liberal arrangements under the bilaterals and enhance full access to wider market segments by joining a regional or a plurilateral group of countries with a similar agenda of liberalization" (Ministry of Civil Aviation 2003, 67). More recently, the government announced that it had approved the proposal for private carriers to fly to six other countries in South Asia, the first being Sri Lanka (approval from the other five was not yet obtained). In return, a number of restrictions on Sri Lankan (see Box 1) operations to India were relaxed, all of which will add to the competitive pressure on the government owned airlines.

Another important recent development is the Civil Aviation Ministry's decision to allow the private carriers, Jet Airways and Air Sahara, to continue carrying out their own ground-handling activities. Earlier, for security concerns the Union government had decided to restrict ground handling to Indian Airlines, Air India, and Airports Authority of India. Various foreign investors such as SIA,

Lufthansa, and Swissport have come up with proposals for partnership with Air India in its proposed ground handling subsidiary. Permitting the domestic carriers to self-handle ground services, while disallowing international carriers, would be arbitrary and create operational problems.²¹ An additional impediment in India to cheaper operations is airport charges, which were also stressed by the Naresh Chandra Committee. These charges are 40 percent higher than in Southeast Asia and 50 percent higher than in the Middle East, the civil aviation ministry is planning to allow the establishment of small airports that will not offer cargo or cold storage facilities, where parking times will be shorter, and charges lower than their bigger brethren.

Policy on ground handling is further complicated by a decision to privatize the Mumbai and Delhi airports (up to 74 percent to a private owner or a consortium). The Airports Authority of India would hold the balance and it is reported that the private operator would have the right to conduct ground handling services at the two airports. It is not clear whether the market for these services would be competitive. The Naresh Chandra Committee proposed to extend the airport privatization program.

In summary, attempts to privatize the airlines in India have stalled, and along with it foreign participation. Airlines in India concentrate on commercial agreements with other international carriers. However the private airlines at least within domestic routes have been growing rapidly and recently they have been given more rights to fly internationally. The introduction of private ownership of the airport infrastructure has served to highlight the issue of restrictions on the right to provide ground handling services.

IV. CONCLUSION

The Asian air transport system remains under pressure for change.²² Key drivers include the demand side shocks associated with the 11 September 2001 events, the global economic slowdown, and SARS. On the supply side is the new competition from the low-cost carriers. While significant shifts in demand are a key feature of this industry, the supply side shock represents a significant and sustained change in industry structure. These pressures are now particularly acute—according to the IATA Director General the “air transport industry is going through its worst crisis since the Wright Brothers flew one hundred years ago. All continents are affected in one way or another by this crisis” (Bisignani 2003). Not all carriers are losing money, however, and the IATA Director

²¹As noted earlier, ground handling services are not included in the list of services related to air transport to which the GATS applies.

²²These trends were discussed at the Pacific Economic Cooperation Council meeting on regional air transport issues, held 5-6 September 2003 in Singapore.

General (Huttner 2003) continues to note the regional variations in financial performance and that traffic growth in Asia has been relatively high. In other regions, according to IATA, the financial situation of the carriers is more generally a problem and the global industry in 2001 and 2002 lost US\$31 billion. As the rest of the world responds to these losses, new pressures for change will emerge in this region.

This paper has analyzed recent ownership trends in the air transport industry in developing Asia against the background of global regulatory trends. Although showing better financial performance than airlines in the North Atlantic, Asian carriers are also suffering from various exogenous shocks. The liberalization drive that has gained momentum since the mid-1990s, which is exemplified by more liberal BASAs, the emergence of low-cost carriers, and increasing competition between regional hubs, should be maintained.

As stressed in this paper, a pillar of the regulatory system is its rules on ownership and the restriction on foreign participation in particular. The case studies presented above show how change has occurred within national markets, and sometimes in international markets through the designation of new carriers, but that ownership rule restricts the adjustment options available. The rules on foreign participation may come under greater pressure to change as traditional full service carriers look for further finance while they work to respond to demand shocks and threats from competitors. Governments are unlikely to be able to fund the responses. Restrictions on ownership raise the cost of funds to the carriers involved and limit the scope for developing economies to capture the benefits of their comparative advantage in this service.

These rules discourage those economies from reducing protection for their carriers. Without the option of pursuing foreign investment to support the competitive performance of their airlines, investors, i.e., governments in all but a very few cases, rely instead on a combination of protection and budgetary support. Proposals for reform of ownership rules have been tabled by ICAO and options for routes to move to those new rules are worth further attention.

The studies of these issues in the aviation sectors of India, PRC, and Thailand highlighted a number of key points. First, greater competition has developed within domestic markets, including from privately owned airlines and especially from low-fare carriers. Domestic deregulation tends to precede market opening to foreign participation, but in the process reduces the capacity of incumbents with international networks to earn rents in their domestic routes. In the longer term, the emergence of new private carriers is likely to lead to further pressure for reform on international policy, for example the removal of any restrictions on their own participation in international networks.

Second, higher levels of foreign participation in airline operations would provide funding and management capacity that would support the adjustment process required in the incumbent carriers. There are however limits to this

process according to the current international regulatory practice. The rise in foreign participation tends to be slow in traditional full-service carriers, but tends to occur more quickly (up to regulatory limits) in newly established low-fare carriers. The adjustment process may therefore take the form of the replacement of traditional incumbents by the new business models or variants of those models. Even though foreign investors hold a minority share in the low-fare carriers, they may have more confidence in the alignment of business interests with their other private sector partners working within the new business model. However, the “cookie cutter” approach of establishing separate businesses in different countries in order to meet regulatory requirements of each host economy is wasteful.

Third, the reform in the aviation markets tends to highlight remaining regulatory issues in markets for essential facilities to air transport, especially airport services. This attention includes not only the provision of ground handling but also an argument for a shift to greater private participation in airport investment and management. The trend in this direction in other developed and emerging economies, and the emergence of new private operators seeking investment opportunities, will lead to more attention to FDI policy in this activity as well, which will in turn require new regulatory capacity (for example, to respond to concerns about the abuse of market power by airport operators). However, a greater role for the private investment in airports, including via FDI, alongside new regulatory arrangements in that sector, will support the movement to regulatory reform in air transport services, since it will help remove what might otherwise become a new bottleneck.

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LIBERALIZATION AND FOREIGN DIRECT INVESTMENT
IN ASIAN TRANSPORT SYSTEMS: THE CASE OF AVIATION 65

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