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PAPER

The State of Competition in the Air Transport Industry: A Scoping Exercise

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Published by:

Philippine Competition Commission
25/F Vertis North Corporate Center 1
North Avenue, Quezon City 1105

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I. INTRODUCTION

This study reviews the state of competition in the domestic air transport industry, specifically focusing on the airline passenger business. In reviewing the business and economic landscape of the industry, it considers factors such as the market structure of the domestic air transport industry, the economic incentives² that motivate the airline companies to behave in a certain way, and the regulations³ affecting the industry. The study turns to Williamson's (1975) idea that organizations review organizational costs and configures a governance structure that minimizes costs and maximizes revenues subject to the constraints of extant policy and regulatory framework. Because the airline transport industry is a complex mix of a competitive and regulated industry, it is important to determine how government regulations affect the level of competition in the industry (Gowrisankaran, 2002).

This study is a scoping exercise. It provides broad strokes of the current situation in the industry, including an assessment of the role of airports, more specifically the Ninoy Aquino International Airport (NAIA), in air transport service delivery; identifies potential anticompetition issues; and submits some recommendations for further detailed study.

At the outset, it is important to note the importance of getting cooperation from concerned government agencies and the industry players in the conduct of this study. The report does not have any information on the operations of Clark International Airport. At this point, it will be difficult to give a meaningful answer to the question to what extent does Clark impose a competitive constraint on NAIA? We were also unable to meet with the Department of Transportation and the Civil Aviation Authority of the Philippines (CAAP) to discuss air transport policy, regulation and planning. Thus, the suggestion to include an assessment on the

policies which relate to (i) the opening up of regional airports to international flights, (ii) reciprocity as to whether it hinders penetration of regional airports by foreign carriers; and (iii) the overall air transport policy objective of the government, will remain unaddressed. Despite this limitation, the report tries to provide a substantial analysis of the present situation of the industry and the competition-related issues faced by the industry, the public and government.

After a brief introduction, Section 2 presents an overview of the air transport industry and uses an aviation services market value chain as a neat frame for understanding how several entities collaborate and coordinate in producing the air transport services consumed by the buyer (passenger/cargo owner/shipper). A complete understanding of competition and competition-related issues in the air transport industry requires a study of the various components of the value chain. In this study, two such components, namely, airlines (main service provider) and the airports (a critical fixed asset in the production process) are considered. Section 3 summarizes the performance of the air transport industry after initial liberalization and deregulation efforts in the industry as gleaned from available literature. Section 4 discusses policy and regulations in the air transport industry and an initial review of air services agreement entered into by the country in order to identify potential barriers to a more competitive air transport market. Section 5 discusses the present situation in the air transport industry. Section 6 discusses the important role of airports in the air transport market with a focus on physical infrastructure and slot allocation. The final section summarizes our findings and provides some recommendations.

¹ The authors gratefully acknowledge the inputs of Irish Almeida in the section on policy and regulatory framework, the assistance of Ma. Kristina Ortiz with data and preparation of charts/figures, and of Paolo Tejano and Cara Latinazo, both of the Philippine Competition Commission in arranging and participating in meetings with various industry stakeholders. The authors would like to thank participants for their comments and suggestions on the initial draft of the paper during a presentation at the Philippine Competition Commission on August 1, 2018. Likewise, we acknowledge the invaluable inputs provided by individuals whom we interviewed in preparing this paper.

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² Defined as whatever motivates behavior in a certain way in contrast to preferences, that is 'wants', 'needs'. <https://study.com/academy/lesson/economic-incentives-definition-examples-quiz.html> (accessed January 6, 2018).

³ The Civil Aeronautics Board (CAB) is tasked with economic regulation while the Civil Aviation Authority of the Philippines (CAAP) is charged with regulation of technical and safety aspects of the industry.

II. THE IMPORTANCE OF THE AIR TRANSPORT INDUSTRY

The air transport industry provides the country with vital connectivity within the major islands of the archipelago and to the outside world. A well-functioning air transport industry correlates positively with a high level of growth (Perovic, 2013) and impacts the economy through growth in tourism, trade, investments, employment, and productivity (Rodolfo, 2017). The major purchasers of air transportation services are high value industries, indicating the air transport industry's important linkage to other sectors of the economy. Based on the Input-Output Tables of the Philippines, the wholesale and retail trade industry is the largest purchaser of air transportation services with 21.5 percent of all industry spending on aviation services. Telecommunications spending for aviation services was at 8.3 percent of all industry spending on aviation services (InterVistas, 2015).⁴ In 2014, Oxford Economics (2016) estimated foreign tourists spending in the Philippines at US\$4.7 billion; in addition, the Philippines exported US\$82.2 billion worth of goods and services. **Box 1** summarizes an estimate of the economic impacts of the Philippine air transport industry.

The aviation services value chain shown in **Figure 2.1** provides a neat starting point for understanding the air transport industry. The end-product is the service delivered as transport of passengers and/or cargo from designated points of origin to their points of destination. The passengers or cargo shippers/forwarders/owners are the buyers (customers) of the product. The airlines are the major service delivery units in the value chain and to efficiently accomplish the service delivery task various other units in the chain such as airport infrastructure and communications, should also efficiently perform their important roles in the chain.

The component units of the value chain have to coordinate and perform well to deliver the product. It involves an

Box 1. The economic impacts of the Philippine air transport industry

In 2017, the Philippine air transport industry directly generated Php 32.7 billion of gross value added (GVA) in real terms, equivalent to 12.4% of the GVA of the transportation and storage sector, and 0.21% of GDP. Among the transportation industries, air transport ranked second to land transport in terms of GVA contribution. IATA (2016) reported that the air transport's share to Philippine GDP in 2014 was roughly 3.5% due to its direct, indirect, induced and catalytic effects. The Philippine air transport industry supported 1.4 million jobs including 69,800 direct air jobs and 1.2 million jobs from the wider economic benefits- tourism, productivity and trade. By 2035, the industry is expected to generate 3.4 million jobs and contribute US\$ 23 billion to Philippine GDP.

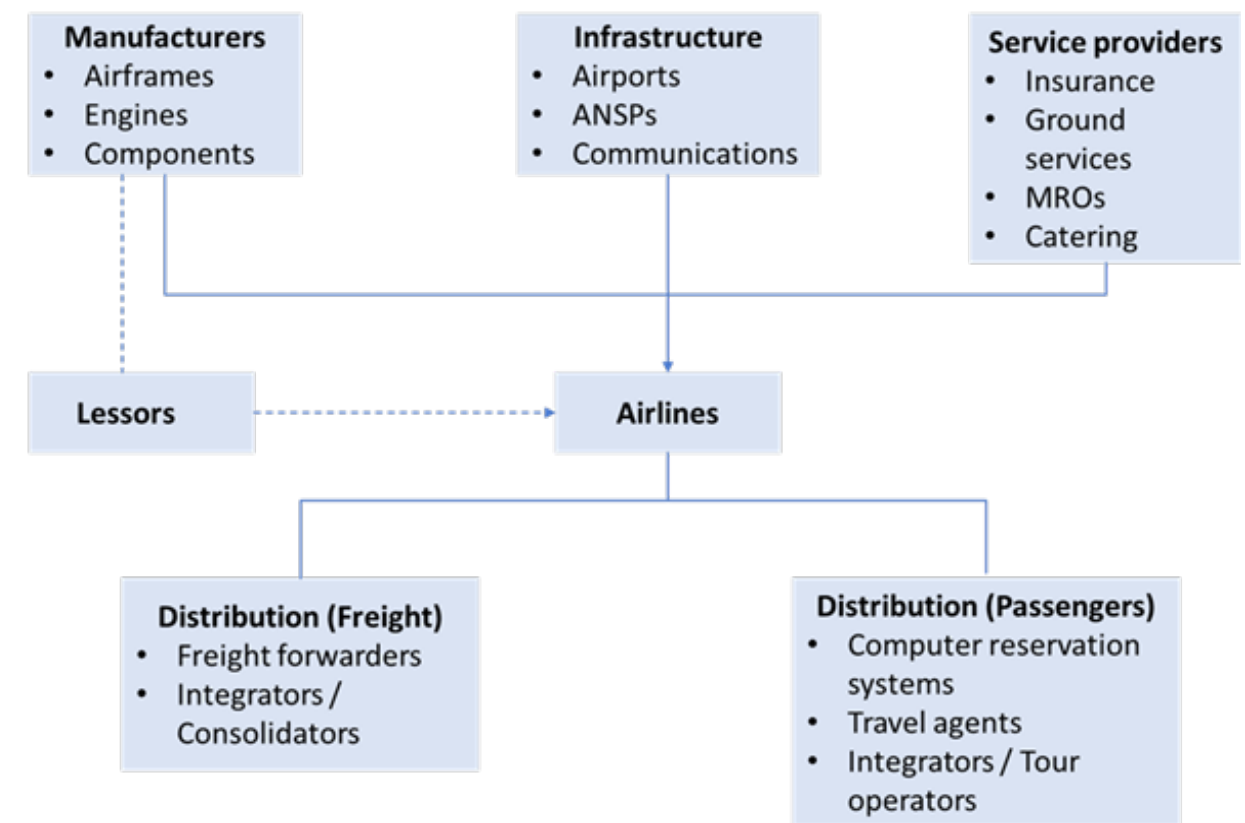
Air transport is a vital support to the tourism industry. In 2017, the Philippine Statistics Authority, drawing from the Philippine Tourism Satellite Accounts, reported that the industry contributed Php 1.93 trillion to the Philippine economy, equivalent to 12.2% of GDP. The employment in tourism accounted for 13.1% of national employment. Air transport moved 99% of the 6.6 million international tourists who spent Php 448.6 billion during their stay in the country. Adding airline receipts amounting to an estimated Php 68.6 billion, international tourism ranked as the 4th largest export revenue earner of the Philippines, next to electronics and semi-conductors, overseas remittances, and information technology and business process management. While the share to total trade volume is a meager 0.5%, air transport moved at least 52.5% of the dollar value of merchandise trade shipments in 2017. Air transport supported the mobility of overseas Filipino workers and their families, who contributed around US\$ 28 billion to the economy in 2017.

In terms of multiplier effects, based on the 2006 Input-Output Tables of the Philippine Statistics Authority, every peso increase in the final demand by consumers, government or shippers for air transport services translates to an additional Php 2.49 to the Philippine economy.

Source: Rodolfo (2017) as updated by the authors

intricate exploitation of connectedness of marketing and sales (e.g., computer/central reservations systems, travel agents), inbound and outbound logistics (e.g., aircraft manufacturers, air carriers), supporting operations (e.g., ground handlers, airport infrastructure), and even financing in the case of airlines entering into long-term leases of aircrafts, in order to deliver the product or service (air transport from points of origin to points of destination).⁵

Figure 2.1 Aviation services market value chain



Source: Tretheway and Markhvida (2014)

This study reviews the performance of airlines and airport infrastructure in service delivery. It does not include other components of the value chain, such as providers of insurance, ground services, catering, aircraft maintenance services. The airlines included in this study are Philippine Airlines, Cebu Pacific, and Air Asia. Minor airlines are mentioned in passing. The study includes a discussion of operations at the NAIA in Pasay City, Metro Manila. The learning derived from the case study of the operation of airlines in NAIA could be used as a take off point for future in-depth studies of airline and airport operation in other parts of the country, specifically Cebu and Davao international airports, or such airports to be identified by the Philippine Competition Commission (PCC).

Figure 2.1 also shows that airlines have to collaborate with two types of distribution systems, one for passengers and the other for freight, in accomplishing their service delivery task. Cargo services are important to the extent that they compete with passenger flights for take-off and landing rights and gate use. Cargo services are not included in the study for lack of data

and time constraints. An in-depth look at the air transport market for cargo (i.e., freight forwarders, cargo integrators, and consolidators) may be undertaken by the PCC in the future. Similarly, an assessment of the role of computer reservation systems (CRS), travel agents, integrators, and tour operators in the domestic air transport industry may be considered.

There could be a need for a future study of the other components or units of the air services market value chain to get a complete understanding of competition issues in the air transport industry. Certain practices in the air transport industry could give rise to competition issues. We only describe in passing some of these practices because they are outside the scope of this study but certainly they are important areas for future study.

One of those practices is the code-sharing arrangements among airlines that allow a flight operated by one carrier (known as the "operating carrier" which will offer the flight for sale under its own code or designator and associated flight number) to be marketed by another carrier (known as

⁴ Source of basic data <http://www.nscb.gov.ph/io/DataCharts.asp>

⁵ Michael Porter's value chain analysis considered inbound and outbound logistics, operations, marketing and sales, and service as primary activities of the value chain. See Porter (1985).

the “marketing carrier”) under the operating carrier’s code and flight number. Cleave (2007) points out that these agreements can lead to different outcomes depending on market conditions and the nature of the code shares (i.e., parallel, unilateral, beyond or behind). While agreements among partner airlines that have complementary networks benefit consumers, they also have the potential to increase entry barriers in congested airports, resulting to disadvantages to passengers. Thus, the practice may favor collusive behaviors among airlines by enabling the exchange of commercially sensitive information and engendering all the typical downsides stemming from cooperation among competitors (European Competition Authorities, 2006).

Some code shares involve interlining arrangement,⁶ whereby an airline enters into an agreement with another airline to carry passengers on behalf of another airline. Austria (2001) made the point that this type of arrangement becomes “particularly important and strategic if an airline has extensive domestic network or if one of the points in the route is an international hub”. Typically, an incumbent airline, which has first-mover advantage, would have had such interlining arrangement done in the past. Potential new entrants to the air transport market without such interlining or code-sharing arrangement may face difficulty in attracting passengers who are ready to pay for interline travel because of greater seat availability and greater flight frequencies, including greater amenities (e.g., travel lounge available to business and first-class travelers) provided by airlines who have a history of code-sharing or interlining arrangement.

Another feature of the air transport industry that may act as an entry barrier is the frequent flyer programs (FFP) offered by incumbent carriers. The pooling of FFPs by

airline within the same alliance may also constitute a considerable entry barrier. Hanlon (1996) pointed out that more than half of respondents (travelers) in his survey always or almost always considered building FFP mileage in their choice of airlines. The FFPs build loyalty among customers in favor of incumbents who can also line those FFPs with additional perks. The FFPs tend to affect competition by increasing customer switching costs, thus, reducing chances of competitors to attract customers from airlines offering FFPs. Apart from strong loyalty effects, the loyalty programs may tend to reduce effective or potential competition if they have the so called tying effects,⁷ foreclosure effects,⁸ and strong exclusivity effects⁹ (European Competition Authorities, 2005).

The CRS also has the potential to direct passengers to the airline who owns or controls it. The CRS, which was a device developed to save time and effort in handling numerous flight reservations during the era of regulated airfares, has been transformed into an instrument for giving priority screen listing to incumbent carriers’ flights or to whoever owns or directs such CRS (Hanlon 1996, Warren et al, 1999, Austria 2001). Hanlon (1996) observed that 75 percent of flights made through a CRS are made from the first screen page of the CRS. It will be interesting to find out if the same phenomenon can be seen in the domestic air transport market.

III. COMPETITION AND REGULATORY ISSUES IDENTIFIED IN THE LITERATURE

The airline industry has many unique features. As listed by Vasigh, Fleming, and Tacker (2008) they are as follows: (a) perishable nature of the product and the consequent elasticity of demand and pricing complications; (b) the control of the method of delivering the service by

a disinterested third party (namely, air traffic control); (c) the presence of only two major suppliers of the means of providing the service; (d) the unique dominance of this form of transportation for long haul passenger traffic; (e) the interesting and complicated financial arrangements that are used to provide the service; (f) the existence of quasimonopolistic entities (airports) to jointly deliver the service; and (g) last, but by no means least, the international legal aspects of the industry. It is a complex and important transport industry and from the point of view of competition policy, its industrial organization gives rise to competition issues.

Studies on the performance of the air transport industry will invariably have as a useful reference the experience of the United States with deregulation and liberalization, which intensified competition in the industry. Manuela’s (2011) review of literature described the US experience. His summary is as follows.¹⁰ The deregulation of the domestic airline industry in the US in 1978 was the forerunner of similar policy shifts across the Atlantic and in other developed economies. Deregulation, in combination with competition, spurred growth in the airline industry and resulted in lower fares, more efficient use of capital, higher productivity, more passengers, and more departures. One of the downsides of deregulation, however, is more crowded planes and congested airports because of the tremendous growth in passenger traffic in the US between 1979 and 2002, which outpaced the growth in capacity as new entrants and weaker airlines filed for bankruptcy or were acquired by their larger rivals. More crowded airplanes and congested airports tend to reduce the airlines’ quality of service especially in high-density markets.

Manuela (2011) referring to various studies reported that the US deregulation benefited many passengers, but due to intense competition a number of incumbents and new entrants exited the air transport industry a few years after deregulation. The exit of

several carriers reduced the number of departures and seat capacity thus resulting in cabin congestion. The liberalization of international and regional routes also resulted in substantial reductions in airfare as the number of competitors increased but with the side effect of reducing profits for most airlines. Citing various studies, Manuela (2011) reported that low-cost carriers (LCCs) are the major beneficiaries of deregulation and liberalization, and by offering lower fares and keeping their costs at a minimum those LCCs flourished at a time when their larger rivals have been in and out of Chapter 11 bankruptcy protection. He cited the findings of several studies indicating that: (i) competition between full service airlines and LCCs resulted in price wars, driving weaker airlines into bankruptcy, (ii) airlines used price discrimination to keep their market share and increase revenues and profits; and (iii) price discrimination can increase the airlines’ profits by selling tickets at different prices and restrictions, taking advantage of the different price elasticities of demand of customers.

In the US, Vasigh, Fleming, and Tacker (2008) observed some initial problems with deregulation in 1979 but eventually the airline industry was able to recover and posted profits in the late 1980s and again in the late 1990s. Airlines were forced to innovate and control costs in response to the competition. Some innovations were more effective revenue management, FFPs, and recently e-ticketing, which allows airlines to reduce ticket distribution costs. Technological innovations that have given rise to better and more fuel-efficient jet engines helped with increasing the profitability of the airlines. The recovery of the global economy at that time also helped to put the industry in the black. Thus, deregulation led to a lowering of airfares with the consequent air traffic growth. The freedom of airlines to determine their routes resulted in more flight frequencies and non-stop flights.

⁶ Interlining agreements do not necessarily involve code-sharing.

⁷ If the tying is not objectively justified by the nature of the products or commercial usage, such practice may constitute an abuse of a dominant position.

⁸ A foreclosure effect arises from agreements, which are capable of affecting patterns of trade making it more difficult for undertakings to penetrate a market. It may occur when suppliers impose exclusive purchasing obligation on buyers.

⁹ When most or all of the suppliers apply exclusive customer allocation, this may facilitate collusion, both at the suppliers’ and the distributors’ level. Hence, a competition risk of exclusive supply is the foreclosure of other buyers

¹⁰ Manuela’s review of literature cited various authors who did studies on the various aspects of the US experience with liberalization and deregulation.

Vasigh, Fleming, and Tacker (2008) further noted that the recent air transport liberalization in Europe and India has led to a tremendous growth in air traffic in these countries. On the other hand, in the US, the international routes have been deregulated only gradually through negotiated bilateral open-skies agreements. These agreements enable airlines from two countries (bilateral partners) to fly between their respective countries without restrictions. Nevertheless, limited open-skies agreements do not necessarily create a fully competitive market (Gowrisankaran, 2002)

In the Philippines, the year 1995 marked a critical turning point in the domestic air transport industry (used interchangeably here with “civil aviation industry”) with the issuance of Executive Order (EO) No. 219 liberalizing the industry.¹¹ This included the privatization of Philippine Airlines (PAL).¹² For more than 20 years before the issuance of EO No. 219, the air transport industry was a monopoly of PAL, a corporation fully owned and controlled by the government.¹³ Letters of Instructions Nos. 151 and 151-A issued in 1973 granted PAL a monopoly of the civil aviation industry. Although Presidential Decree 1590 (issued in 1987) provided PAL with a franchise, which was not considered as an exclusive privilege to PAL, it nevertheless operated as a virtual monopoly from 1973 till the issuance of EO No. 219 in 1995. Before liberalization and deregulation under EO No. 219, the Civil Aeronautics Board determined which routes the PAL, a monopoly, will service, and at the same time regulated air ticket prices.¹⁴

Liberalization and deregulation stimulated the growth of the domestic civil aviation industry. After the removal of restrictions on routes, flight frequencies, and fare setting, domestic airline passenger traffic grew with the entry of several competitor airlines in the civil aviation industry, the most notable

11 This section of the study draws from Austria (2001) and Manuela (2011).

12 The first domestic airline was PAL, a government owned-and-controlled corporation, which served as the flagcarrier of the country. This was before the issuance of EO No. 219.

13 Inefficient management and financial woes eventually led to the privatization of PAL. It was dependent on government subsidies for its operations. Austria (2001) described the mismanagement of PAL and its inefficient air services as a clear waste of resources.

14 This was the same situation in the US before deregulation in 1979 when the US Civil Aeronautics Board controlled airline routes and pricing (Gowrisankaran, 2002).

15 Source: Cebu Pacific position paper on House Bill Nos. 5815 and 5817 submitted to the Committee on Legislative Franchises, House of Representatives, August 10, 2017.

of which was Cebu Pacific. Grand Air entered the domestic air transport industry in 1995 while Air Philippines, Asian Spirit, and Cebu Pacific Air (Cebu Pac) entered in 1996. Asian Spirit and Air Philippines changed their names to Zest Airways (Zest) in 2008 and Airphil Express (Airphil) in 2009, respectively. Grand Air exited the industry in late 1998 while South East Asian Airlines (SEAir), a charter operator, entered the scheduled airline industry in 2003, bringing the number of active airlines to five, namely PAL, Cebu Pac, Zest, Airphil, and SEAir. EO No. 219 relaxed market entry and encouraged at least two airline operators in any route while exit from unprofitable routes was given free course.

At present, PAL, Cebu Pac, Airphil, and to some extent Air Asia (a new operator), serve the major high-density markets while minor routes were left to the small operators like Zest, SEAir, and Skyjet. It is noted that PAL Holdings own Airphil, which has a code-share agreement with PAL.

In 2014, SEAir, Inc. was acquired by Cebu Pacific and was rebranded as “CebGo.” CebGo now operates an all ATR-fleet serving inter-island short routes. Cebu Pacific and its wholly-owned subsidiary CebGo now comprise the Cebu Pacific Group (CEB), which is today the largest Philippine carrier in terms of routes and frequencies operated within the Philippines.¹⁵

There was an increase in the number of passenger seats offered in major markets such as Manila-Iloilo, Manila-Cagayan de Oro, and Manila-Bacolod. The expansion of passenger seats in the major markets, e.g., Manila-Bacolod market expanding by as much as 42 percent between 1994 and 1995 even without the presence of a competitor, was interpreted as an indication that PAL had been restricting output prior to liberalization (in 1995) and that

such restriction of passenger seats below competitive levels had resulted in efficiency losses,¹⁶ which in turn had an adverse impact on consumers. By 2009, Manuela (2011) indicated that PAL, CEB, Airphil, Zest, and, SEAir competed for almost 14.7 million domestic passengers, up 198 percent from its 1995 level, outpacing the growth in capacity or passenger seats, which increased 176 percent in the same period. The load factor then is higher in 2009 than in 1995, a positive development in an industry characterized by losses and bankruptcies. Fare setting in markets with at least two airline operators was deregulated under EO No. 219 although fares in markets with a single operator continued to be regulated. Manuela (2006) estimated that airfare per kilometer is 10 percent lower, on average, after liberalization while more than 90 percent of domestic airline passengers in 2003 benefited from lower fares due to discounts and promos that stimulated demand for air transport services.¹⁷

The immediate results of liberalization, therefore, were the entry of several operators as well as the huge increase in domestic passenger traffic in traditional major markets and the opening of new markets for airline services. An example of a relatively new market is Caticlan, which has become an important gateway to the world-famous Boracay island, a major tourist destination.

It has been observed that the airline industry is vulnerable to economic fluctuations and is inherently unstable (Gowrisankaran, 2002; Manuela, 2011) with volatility in prices of fuel and labor contributing to fluctuations in profitability. The Asian financial crisis and lately the global economic crisis, threats of terrorism, and a general slowdown of economies have had adverse impacts on regional and global airline operations. All these may have triggered the exit of less capable operators. As earlier noted, Grand Air exited the industry in 1998 three

16 Manuela, Wilfred “The evolution of the Philippine airline industry” https://aerlinesmagazine.files.wordpress.com/2013/01/36_manuela_evolution_philippine_airline_industry1.pdf (accessed January 25, 2018).

17 Manuela, Wilfred (2006) “The Impact of Airline Liberalization on Fare: The Case of the Philippines” *Journal of Business Research*, doi:10.1016/j.jbusres.2006.10.019 http://cba.upd.edu.ph/phd/docs/manuela_paper.pdf

18 A BBC news report on June 13, 2003 states that “the SARS virus has had more effect on the global airline industry than the war with Iraq, according to a report from the flight schedule provider OAG”. <http://news.bbc.co.uk/2/hi/business/2986612.stm> (accessed June 23, 2018).

years after liberalization. Austria (2001) also mentioned the short-lived operation of Mindanao Express, an airline intended to serve regional routes. Manuela (2011) pointed out that in 1999 PAL pulled away from low-density markets and concentrated on the most profitable routes to stay in competition. Both major airlines like PAL and smaller airlines in the scheduled airline industry suffered substantial losses during this period because of those external events (see **Table 3.1**). Thus, even major operators like PAL, which has a sizeable share of the market are not immune to downturns and losses arising from such external events. It can be recalled that European airlines and the global travel industry suffered substantial losses during the height of the Severe Acute Respiratory Syndrome (SARS) crisis.¹⁸

Despite the erosion of PAL’s share of the market in terms of passenger and cargo traffic, number of passenger seats, and revenues, it has managed to retain a substantial share of the market. Austria’s (2001) computation of the Herfindahl-Hirschman Index (HHI) for the industry, a measure of industry concentration, shows it is only the major routes that are fiercely contested. She noted that the secondary and tertiary or the minor routes were niche markets, which faced competition from the nascent high speed ferries that started to operate following the deregulation of the inter-island shipping industry. The HHI is a measure of industry concentration; a value of 1 corresponds to a monopoly; 0.5 corresponds to an industry with two equal-sized firms, 0.33 to an industry with three equal-sized firms, etc. (Gowrisankaran, 2002).

Manuela’s (2011) computations corroborated Austria’s earlier findings. Austria (2001) and Manuela (2007, 2011) indicated potential anti-competitive issues in the civil aviation market dominated by two large domestic operators and a motley small

Table 3.1 Philippine Scheduled Airline Industry Profits (In million PhP)

Year	Industry	PAL	Grand Air	CEB	Airphil	Zest	SEAir
1995	-1,634.13	-1,716.91	82.78				
1996	-2,105.60	-2,182.28	234.50	27.19	-185.40	0.39	
1997	-2,035.71	-2,502.00	209.69	130.45	119.78	6.37	
1998	-8,264.41	-8,581.00	-21.50	301.71	40.01	-3.63	
1999	-10,648.39	-10,188.00		63.72	-562.85	38.74	
2000	-1,102.97	46.00		24.90	-1,234.27	60.40	
2001	-420.39	419.00		80.77	-941.70	21.54	
2002	-1,562.15	-1,008.00		25.17	-650.63	71.32	
2003	-193.08	372.00		12.40	-573.41	-6.47	2.40
2004	-489.62	-643.00		130.32	9.90	9.43	3.73
2005	1,350.19	1,162.85		82.00	55.07	48.68	1.58
2006	1,127.20	1,245.93		196.79	-153.42	-165.62	3.53
2007	10,531.75	7,139.65		3,614.02	-164.09	-63.67	5.85
2008	-2,828.05	1,302.73		-3,259.89	-580.77	-200.92	-89.20
2009	-11,513.75	-13,434.62		3257.85	-687.16	-619.67	-30.14

Source: Airlines' annual reports as submitted to the Civil Aeronautics Board.

group of minor operators. This study will examine these findings and review whether the current situation in the domestic civil aviation industry still reflects these earlier findings.

In 1999, the government started with a policy on progressive liberalization of the bilateral air services agreement entered into by the country with other countries. There is a need to examine the bilateral air services agreement because of a disturbing finding made by Austria (2001) that during negotiations of these agreements, the government's tendency was to keep to its old restrictive policies and practices while other countries went for the elimination of constraints in flight frequency and capacity to meet the rising demand for international travel.

This protectionist stance taken by bureaucrats in trade negotiations is due to a mistaken notion that it will serve national interest. In the particular case of the air transport industry, a negotiation stance such as this only serves to protect the interest of the incumbent operators, mainly the big one, which is not necessarily aligned with public interest. In other words, the interest of incumbent operator/s do not

necessarily coincide with that of the larger public, that is, passengers, cargo shippers/forwarders/operators, tourism operators and their ancillary enterprises, exporters and others who would obviously prefer low cost transport and logistics. Austria (2001) hypothesized that the absence of competition results to poor performance and growth. She used as indicator the inability of PAL to use the entitlements, e.g., capacity under the country's air service agreements (ASAs) signed at that time. In 1996, PAL used only 61 percent of the country's traffic rights per week compared to 81 percent by the foreign airlines flying in the country. This represents missed opportunities for Philippine-based operators to take advantage of those entitlements without immediate need for the government to ask for greater capacity under those ASAs.

In sum, the literature showed a mixed experience of the Philippines with liberalization and deregulation, which have transformed the market structure of the domestic airline industry and the incentives faced by airlines/carriers (Table 3.2). The developments in the domestic air industry mirror more or less the experience of other countries, which had earlier deregulated

Table 3.2 Philippine air transport industry post liberalization and deregulation

Positive developments	Negative developments
<ul style="list-style-type: none"> Overall, growth of the air transport industry More air carriers, LCCs lower air fares opening of new routes (e.g., Caticlan) More passengers More departures, boost to tourism Higher productivity and increased mobility of economic agents More efficient use of capital Investment in new fuel efficient aircraft 	<ul style="list-style-type: none"> Crowded planes Reduction in quality of service Congested airports Bankruptcy of smaller airlines and their acquisition by larger rivals Few operators reduction of service quality in high-density markets Monopoly in low-density markets

Source: Authors' review of literature

and liberalized the industry. However, there are also results unique to the Philippines. There is a great deal of competition among air carriers resulting in opening of new routes and lower air fares but there is also scope for anti-competitive issues in a market dominated by two dominant domestic operators. Curiously, government policy or regulatory stance, for example, a protectionist stance in ASA negotiations, can result in an unintended consequence of strengthening potentially anti-competitive practice.

IV. POLICY AND REGULATORY FRAMEWORK

Republic Act No. 776 (also known as the 1952 Civil Aeronautics Act of the Philippines, as amended by Presidential Decree No. 1462) and Executive Order No. 217 govern the technical and economic regulation of the air transport industry. Two government bodies regulate aviation, namely, the Civil Aeronautics Board (CAB) by virtue of RA No. 776 and the Civil Aviation Authority of the Philippines (CAAP) by virtue of Republic Act No. 9497, also known as the CAAP Law. The CAB regulates the economic aspects of air transport and has general supervision, control, and jurisdiction over air carriers, general sales agents, cargo sales agents, and air-freight forwarders. Meanwhile, CAAP acts as the public registry for aircrafts and generally regulates the technical, operational, safety, and security aspects of aviation.

¹⁹ Interview with IATA resident representative, April 26, 2018.

²⁰ Interview with CAB, April 4, 2018.

²¹ Ibid.

Liberalization and deregulation of air transport industry

EO No. 219 under President Fidel Ramos removed barriers to entry by new players in the Philippine domestic air transport industry. In the domestic front, this enabled the entry of Grand Air in 1995 and later Cebu Pacific, Air Philippines, and Asian Spirit. In the international air transport market, the government has pursued a policy of progressive liberalization of the ASAs between the Philippines and its bilateral partners. The EO removed the restrictions on domestic routes and frequencies together with government control of rates and charges. At present, airlines employ a yield management approach, which takes into consideration the cost structure of the company, routes, and traffic forecast, among others.¹⁹ According to CAB, there is total freedom to start or end a domestic route and there are also no seat limitations. The only limiting factor is the airport infrastructure.²⁰

Fare setting is deregulated but CAB approval is still needed. The CAB conducts hearings to ask airlines to explain applications for fare increases or other fees. At present, there is a move in Congress to make CAB regulate fares once again by setting ceiling prices and to set uniform fares for all passengers based on average fares charged by airlines. The proposed bills in Congress seek to return to a regime of regulated air fares.²¹ These market interventions will be very detrimental to the efficiency of the air transport market and ultimately to end-consumers. The

proposed bills need thorough analysis and enlightened debate in Congress. The International Air Transport Association (IATA) resident representative argues that the fare capping contemplated by legislators will have dire implications, especially if it is made to cover international air fares. The setting of international air fares is governed by specific provisions of the ASA entered into by any country, which are supposed to be binding on the parties to the agreement.²²

From 2001 to 2010, liberalization continued as a principal policy and the government began developing secondary gateways. In 2001, during negotiation on ASAs, the government started to aggressively negotiate for new entitlements and create provisions for separate entitlements for secondary airports outside of Manila.

Executive Order No. 253 (s. 2003) aimed to strengthen EO No. 219 by expanding air services at the Clark International Airport in the Clark Freeport Zone and the SBIA at the Subic Bay Freeport Zone. This EO opened these airports to international air cargo operators that later on resulted in an upsurge in commercial air cargo.

By virtue of CAB Resolution 23 (s. 2005), the government liberalized the international charter market to support the thrust to promote tourism. A grantee of a permit to operate under the liberalized charter program can now operate pre-approved charter flight schedules renewable for six (6) month periods or less with authority to issue individual tickets. The program covered the following gateway airports: Diosdado Macapagal International Airport (DMIA), SBIA, Davao International Airport (DIA), Mactan-Cebu International Airport (MCIA), Laoag International Airport (LIA), Zamboanga International Airport (ZIA), and other developmental gateways.

CAB Resolution 23 served as catalyst in stimulating direct flights to Kalibo and Clark. It has enabled the development of long-term charter operations in Kalibo

International Airport, the gateway to Boracay. Both PAL and Cebu Pacific operate charter flights. The charter flights cater primarily to leisure travelers although some flights also accommodate non-leisure travelers like returning Philippine residents, but these are relatively few compared to tourist arrivals. A 2017 study by the Asia Foundation revealed that the number of tourists who used direct flights to Kalibo reached 648,948 in 2016, 51.3 times the volume in 2008, the year international charter flights started in Kalibo. The relative shares of international tourists who flew directly to Kalibo Airport to the total international tourist arrivals to the Philippines increased from 0.4 percent in 2008 to 10.9 percent in 2016. Before the issuance of CAB Resolution 23, charter applications were approved on a per-flight basis. The new policy allows for charter flights over a six-month period. Nevertheless, this falls short of the practice of other countries like Malaysia that allow long-term charter flights where charter operators can operate for one year or more and with incentives.

Executive Order No. 500 (s. 2006) designated the Clark International Airport as an international gateway, allowing unlimited flights by foreign airlines to Clark. It lifted the restrictions on airlines to fly to the Clark International Airport with regard to traffic rights, capacity, and air freedom rights, with the exception of cabotage, that is, transport between two points within the country. It promotes the utilization of Clark International Airport by foreign air carriers without counting their flights or entitlements to fly to Clark against their total entitlements to fly to the Philippines, particularly Manila. This opened Clark International Airport to unlimited point to point air seat entitlements and with limited fifth freedom (intermediate and beyond points) traffic rights.

Executive Order No. 500-A (s. 2006) amended EO No. 500 because of the lobby of certain interest groups. It restricts the entry of non-designated low budget airlines into Clark International Airport

and SBIA. However, some political and business leaders in the region have claimed that EO No. 500-A impedes the flow of new investments and the generation of employment and tourism receipts in the region. Local elective officials claim that the issuance of EO No. 500-A was for the purpose of extending protection to PAL.

Executive Order No. 29 (s. 2011) expanded the coverage of the so-called “pocket open skies” to all secondary airport gateways outside of Manila. It opened secondary airport gateways to competition by removing restrictions in third and fourth freedom traffic rights and by granting limited fifth freedom traffic right. **Table 4.1** provides brief descriptions of those freedoms of the air.

EO No. 29 (s. 2011) provided the government air negotiating panel with a policy framework for bilateral ASAs as seen in those that were negotiated as new or amended ASA from the time of the policy issuance, that is, with Australia, Japan, Hong Kong, Malaysia, Myanmar, Ethiopia, South Korea, Macau, New Zealand, Singapore, Taiwan, Thailand, and Oman. In the case of China, the unlimited frequencies between

secondary gateways of the Philippines and China were already included in the 2010 bilateral air agreement before EO No. 29 was signed. In the case of Turkey, the 2015 agreement still imposed limitations on secondary gateways.

The policy reduced the entry barriers of international airlines to secondary airports. The ratification by the Philippines of the ASEAN agreement on open skies for secondary airports of ASEAN further reduced the barriers to entry to the Philippines for the ASEAN-based airlines. In 2016, the government ratified the ASEAN Protocols 5 and 6 with Manila as capital gateway under the ASEAN Multilateral Agreement for the Full Liberalization of Passenger Services. However, congestion and poor infrastructure in NAIA have continued to limit competition in Manila.²³

International ASAs and the ASEAN Single Aviation Market

The Philippines is a party to the ASEAN Single Aviation Market (ASAM). The ASAM aims to provide the competitive space in terms of more destinations, increased capacities, and lower fares through the

Table 4.1 Freedoms of the air

First freedom	The right of an airline of one country to fly over the territory of another country without landing
Second freedom	The right of an airline of one country to land in another country for purposes of refueling and maintenance while en route to another country, but not to pick up or disembark traffic (passenger, cargo or both)
Third freedom	The right of an airline of one country to carry traffic from its country of registration to another country
Fourth freedom	The right of an airline of one country to carry traffic from another country to its country of registration
Fifth freedom	The right of an airline of one country to carry traffic between two countries outside of its own country of registration as long as the flight originates or terminates in its own country of registration
Sixth freedom	The right of an airline of one country to carry traffic between two countries via its own country of registration (i.e., combination of third and fourth freedoms)
Seventh freedom	The right of an airline of one country to operate flights between two other countries without the flight originating or terminating in its own country of registration
Eight freedom	The right of an airline of one country to carry traffic between two points within the territory of another country, on a service originating and terminating in the home country of the airline (i.e., consecutive cabotage rights)
Ninth freedom	The right of transporting cabotage traffic of the granting country on a service performed entirely within the territory of the granting country (stand alone cabotage)

Source: World Trade Organization (2001)

22 Interview with IATA resident representative, April 26, 2018.

23 This will be discussed in detail in Section 5.

provision of international air services with full third, fourth, and fifth freedom traffic rights within the ASEAN region.

2006: The Philippines' long-standing bilateral ASAs with South Korea, Japan, Taiwan, Singapore, Hong Kong, Malaysia, Thailand, United Arab Emirates, the Netherlands, and Germany had already reached a level of full or high utilization of entitlements. This means that the parties to the ASAs were close to reaching the maximum seat and flight capacities set forth in their respective agreements.

2007: The Philippine air panel held air talks with key markets. The successful conclusion of new air agreements with South Korea, Canada, New Zealand, Macau, Hong Kong, and Thailand has significantly expanded air access to and from the Philippines, particularly through the Clark International Airport. In less than two years, from a combined 23,850 airplane seats per week, the Philippines increased its entitlements to at least 58,100 seats per week to Korea, Macau, New Zealand, and Hong Kong. The Clark International Airport alone gained 12,600 seats per week in new entitlements as a result of proactive stance and visibility during the conduct of air talks. The recent air talks also led to new and increased entitlements to other secondary gateways, such as Davao, Cebu, and Laoag.

2007: In the south, the Philippines signed a Memorandum of Agreement (MOA) to enhance economic growth in the East ASEAN Growth Area, which covers Mindanao and Palawan in the case of the Philippines. The MOA effectively put in place an open skies policy by granting fifth freedom traffic rights to selected airports in the BIMP (Brunei, Indonesia, Malaysia, Philippines) region. It also encouraged the development of international gateways in Davao, Zamboanga, General Santos, and Puerto Princesa, which are covered by the agreement.

24 Sosa, A. (2007) "Philippine Civil Aviation Policy Paper: ASEAN Single Aviation Market" Available at pdf.usaid.gov/pdf_docs/PNADJ694.pdf; accessed 18 October 2009.

25 ASEAN Transport Strategic Plan 2016-2025

26 Ibid.

2008: Transport ministers of the ASEAN signed three agreements that seek to liberalize freight and other air services in the region, namely Multilateral Agreement on the Full Liberalization of Air Freight Services (MAFLAS), the Multilateral Agreement on Air Services, and the ASEAN Framework Agreement on the Facilitation of Inter-State Transport.²⁴

2009: The ASEAN Multilateral Agreement on Air Services (MAAS) and its Protocols are in force and effective among all member states except the Philippines with Protocols 5 and 6 still to be ratified. The ASEAN MAFLAS and its Protocols are in force and effective among all member states.²⁵

2010: The ASEAN Multilateral Agreement on the Full Liberalisation of Passenger Air Services (MAFLPAS), and its Protocols (12 November 2010) are in force and effective among all member states except Indonesia and Lao PDR.²⁶

The MAAS and MAFLPAS have now both entered into force after receiving the acceptance of the minimum number of three member states for each agreement. The MAAS and MAFLPAS both refer to the liberalization of passenger air services. The main difference between the two is that the MAAS provides for freedom rights only between sub-regions (e. g., from BIMP-EAGA, that is, Brunei, Indonesia, Malaysia, Philippines to Indonesia, Malaysia, Singapore) and between capital cities, while the MAFLPAS provides for freedom rights in international destinations within the entire ASEAN. Essentially, MAAS is the more conservative initial step while the MAFLPAS provides for full liberalization of passenger air services within ASEAN.

Under the MAAS and MAFLPAS, each contracting state party will provide the designated airlines of the other contracting parties the right to fly across its territory without landing (the "first freedom") and the right to make stops in its territory for non-

traffic purposes (the "second freedom"). The MAAS and MAFLPAS Implementing Protocols that spell out the "freedoms" are legal instruments that stand separately from their "parent" MAAS and MAFLPAS agreements. Hence, these Protocols must be individually accepted by member states before they can take effect for those states. Otherwise stated, the instruments only have binding effect for and among those states that have expressly accepted them.

MAAS Protocol 1 provides that designated airlines from each contracting party shall be allowed to operate unlimited third and fourth freedom passenger services from any designated point in its territory to any designated point in the sub-region to which it belongs. The Protocol lists the designated cities by country – for the BIMP-EAGA sub-region, for instance, Bandar Sri Begawan is designated by Brunei; Balikpapan, Manado, Tarakan and Pontianak by Indonesia; Kota Kinabalu, Labuan, Miri and Kuching by Malaysia; and Davao, Puerto Princesa, Zamboanga and, General Santos by the Philippines. What is obvious is that the designated points in the subregions covered by Protocols 1 to 4 are mainly secondary cities. This is due to the desire of these ASEAN states to protect their respective carriers' operations and to be more cautious in granting greater access to other states' carriers.

Notably, the Philippines has accepted Protocols 1 to 4 but has not ratified Protocols 5 and 6. Consequently, Protocols 5 and 6 do not have binding effect on the Philippines. Protocol 5 provides for unlimited third and fourth freedom traffic rights between ASEAN capital cities while Protocol 6 provides unlimited fifth freedom traffic rights between ASEAN capital cities.

The reason behind the Philippines' non-ratification of Protocols 5 and 6 is to protect local carriers like the Philippine Airlines and Cebu Pacific from foreign competition. Non-ratification has resulted to the restriction of other ASEAN carriers' operations in the Philippines, subjecting them to

finite capacity that has to be negotiated bilaterally. This has an effect on the level of competition and the availability of lower air fares to domestic travelers. There is a good case for ratifying Protocols 5 and 6 of MAAS. The ratification of Protocols 5 and 6 of the MAAS are measures that will help improve the competitive condition in the air transport sector. Allowing ASEAN carriers' operations into the Philippines will increase competition and provide travelers with lower fares and connectivity to the ASEAN region.

The Philippines has agreed to the MAFLPAS to open up access to its secondary cities while keeping Manila (NAIA) restricted. This explains its staying out of MAAS Protocols 5 and 6 while embracing MAFLPAS. The Philippines has justified its decision by reference to the shortage of landing and take-off slots, and overall runway congestion at NAIA. While the Philippine government's concern over the implications of congestion on air safety and passenger comfort at NAIA is understandable, we argue that traffic rights and airport slots are separate matters. The lack of slots at an airport should not prevent member states from ratifying the ASEAN agreements to liberalize market access rights and signal support for ASEAN's market integration commitments. Linking slots to access rights is also a negative precedent in that it encourages governments to use congestion and lack of slots as excuses to delay their adherence to regional commitments to liberalize the industry. Rather, the right thing to do is to pursue with great urgency the rehabilitation of NAIA and the development of other international airport/s near Metro Manila to ensure greater connectivity and competition.

Despite efforts at multilateral air services agreement, it is noted that bilateral agreements seem to be the norm among countries to date. On this, the WTO (2001) states that "Air Services Agreements have started from a very restrictive approach with severe market access limitations, toward gradually embracing more liberal provisions within the bilateral framework. These include increased freedom for designated

carriers to choose the entry point and the destination country, freedom to choose the gauge of aircraft, and an increased ability to utilise behind and beyond destination points. Nevertheless, bilateral air transport traffic rights remain the *modus operandi* throughout most of the world”.

According to North (1993), institutions form the incentive structure of a society; the political and economic institutions, in consequence, are the underlying determinants of economic performance. As humanly devised formal (rules, laws, constitutions) and informal (reputations, conventions) constraints, these institutions serve to structure interactions and define the incentive structure of societies, and specifically, economies. These constraints can influence the returns on economic activities by restricting agents’ behaviors and incentivizing them in different directions. Institutions can also be viewed as “political settlements” between various groups in society, which can be changed according to the changing relative strengths of these groups (Rodolfo, 2012).

In the case of international aviation, Gillen (2009) explains that the bilateral ASAs and market liberalization policies are examples of these formal institutions. They shape the strategic behavior of airlines and the users of air services, which in this case, are enterprises like airports, hotels, tour operators, and shippers. The bilateral ASA, an international framework that emerged from the 1944 Chicago Convention established the rules that govern the entry of airlines into markets. This framework became the basis for the exchange of traffic rights and the ASAs as matters for negotiation between states, not carriers. The ASAs are trade agreements between governments and contain administrative (soft) and economic (hard) provisions. They define the number of airlines that can only be allowed to service the markets, route structures, flight frequencies, seats, the type of aircraft, costs of doing business, and tax policies, among others. The soft provisions cover taxation, exemption from duties on imported aircraft parts, airport charges, and

transfers of funds from ticket sales from abroad, and so on. The hard provisions cover pricing and capacity limits. Gillen (2009) further notes that the international experience in the past 60 years revealed that the property rights for market access were, by default, given to nations. They, in turn, transferred those rights to their national airline, thus leading to highly protectionist or “predetermined” agreements and unproductive activities that consequently increase transaction costs. The ASAs have, thus, constrained the ability of airlines to operate on a fully commercial basis on international routes.

The ASAs provided for the framework for fares and tariffs that may be charged on routes. One modality is for the airline to seek prior approval from both states that are parties to the agreement. Another is where each state decides on the tariffs within its own jurisdiction. Airlines may also be free to decide on tariffs and fares and are required only to file them with the regulating bodies. The last form is the so-called double disapproval regimes under which airlines have freedom until a fare is disapproved by both states.

The EO No. 219 provided the direction for the Philippine air negotiating panel to “exchange traffic rights and routes with other countries based on (a) the national interest taking into consideration the larger interest of the country, which shall include value for the Philippines in terms of promoting international trade, foreign investments and tourism, among others; and on (b) the reciprocity between the Philippines and other countries. Reciprocity shall be interpreted to mean the exchange of rights, freedoms, and opportunities of equal or equivalent value, thereby attempting to move away from the traditional zero-sum game in bilateral air service negotiations.

While EO No. 219 allowed the official designation of at least two Philippine carriers to serve international routes, it would not be able to promote effective competition in the international air transport market unless the restrictions embodied

in the ASAs are amended or removed. One restriction is the number of airlines permitted or designated by each state to operate frequencies or mount seats on certain routes. The designation could be single, dual or multiple for each state.

The multiple designation policy is limited as in the case of the Philippines-South Korea ASA where not more than four airlines were permitted to operate for each state. Another restriction is in the capacity (seating of aircraft) or frequency of flights that may be operated. Airlines of each state are restricted to specific numbers of seats per flight or per route or the number of weekly frequencies that may be operated. The type of aircraft may also be restricted for one state in the bilateral ASA, as in the case of the Philippines-Japan ASA that provided for conversion factors for certain types of aircraft.

Even if a particular ASA provides for multiple designation policy of airlines for each state, the entry of a new airline may still be restricted under conditions where frequencies or seats per week would already be fully allocated by the government to the incumbents.²⁷ The air entitlements, whether in the form of frequencies or seats per week, may also be allocated for use for all points of entry in each state. Thus, if an incumbent officially designated airline is already utilizing all its allocated entitlements in Manila, it had to reduce its capacity utilization in Manila for it to explore new routes out of Cebu, or any other Philippine point. Some ASAs in the 1990s provided for separate but limited entitlements for other points outside of Manila, as in the case of the Philippine-Hong Kong ASA.²⁸

Pocket “Open Skies”

In the past, there was a great deal of discussions on adopting an “open skies” policy that will allow foreign airlines to provide unlimited services in the country, whether for passenger, cargo, scheduled

or charter services. It amounts to full deregulation because it will allow airlines to set their routes, capacities, flight frequencies, and fare pricing free from government restriction. Initial estimates indicate that ASEAN Open Skies significantly increased intra-ASEAN air passenger flows and bilateral flows by an estimated 70.5 percent (Mandri-Perrott, 2015).

The liberal open skies policy was deemed too radical by government and instead, a “pocket (or limited) open skies” policy was allowed. The government’s preference is to liberalize access through secondary airports like Clark and SBIA under the so-called “pocket open skies” policy. Despite its limitations, the “pocket open skies” policy has produced salutary effects as indicated in **Box 2**.

Box 2. Effects of pocket open skies policy

Between 2005 and 2006, tourist arrivals at the Clark International Airport increased by over 70 percent from 55,000 to 93,000 or equivalent to at least Php200 million in direct and indirect earnings by the tourism industry. The number of hotel rooms likewise increased by over 50 percent in the same period. In Clark alone, there are over 1,337 rooms to date. In the Greater Clark area, including Angeles and the neighboring areas, occupancy rates of hotel rooms are at an all-time high. The effects on employment rate have been noteworthy. Thousands of jobs are being created with an average of 1.2 to 1.4 employees for every room. The success of these hubs in making travel affordable to markets beyond the affluent and bringing in tourists from foreign countries whose carriers are allowed to fly into the country makes the prospect of open skies all the more promising.

There is pressure created from the provincial governments, tourism authorities, and business community to allow greater direct access into regional cities.

Source: Serrano and Salandanan (2010) and <https://asiafoundation.org/2009/02/25/in-the-philippines-to-fly-friendlier-skies/>

Restrictions on foreign ownership and control

Air transport service is governed by Commonwealth Act No. 146, also known as the Public Service Act. This is in relation to Section 11, Article XII of the 1987

²⁷ For example, prior to the amendments of the Philippine-South Korea ASA, the agreement provided for a maximum of 13 frequencies per week only for each state (total of 26 frequencies for both) and with only Manila and Seoul as points of origin and/or destination.

²⁸ Prior to the amendments of the Philippine-Hong Kong ASA, the air entitlements for points outside of Manila (i.e., Clark, Cebu, Subic, Davao and Laoag) provided for a maximum of 2,300 seats per week.

Constitution, which provides that, “No franchise, certificate, or any other form of authorization for the operation of a public utility shall be granted except to citizens of the Philippines or to corporations or associations organized under the laws of the Philippines, at least sixty per centum of whose capital is owned by such citizens; nor shall such franchise, certificate, or authorization be exclusive in character or for a longer period than fifty years. Neither shall any such franchise or right be granted except under the condition that it shall be subject to amendment, alteration, or repeal by the Congress when the common good so requires. The State shall encourage equity participation in public utilities by the general public. The participation of foreign investors in the governing body of any public utility enterprise shall be limited to the proportionate share in its capital, and all the executive and managing officers of such corporation or association must be citizens of the Philippines.”

Section 13(b) of the Public Service Act provides that the term “public service” includes every person that may own, operate, manage, or control in the Philippines, for hire or compensation, with general or limited clientele, whether permanent, occasional or accidental, and done for general business purposes, any common carrier. However, airships within the Philippines except as regards the fixing of their maximum rates on freight and passengers are exempted from the aforementioned provision.²⁹

In accordance with the Public Service Act in relation to Section 11, Article XII of the 1987 Constitution, any person or entity wishing to engage in air commerce or transport, whether foreign or domestic, must secure a certificate of public convenience and necessity (CPCN) from CAB. The CAB requires air carriers to have minimum paid-up capital ranging from PhP 10 million for

carriers with domestic non-scheduled flights to PhP 50 million for carriers with domestic and international scheduled flights.

A CPCN authorizing a person to engage in domestic air commerce or air transport can only be granted to a Filipino citizen.³⁰ A domestic air carrier is classified as a public utility subject to the nationality requirement that at least 60 percent of its equity (including at least 60 percent of its voting equity) should be owned by Philippine nationals.

A foreign air carrier is not subject to this requirement and is allowed to engage only in foreign air transportation (i.e., air transportation between the Philippines and any place outside it or wholly outside the Philippines). Only foreign air carriers duly designated by their respective governments with which the Philippines has an ASA can operate in the Philippines by applying for a foreign air carrier’s permit (FACP) with the CAB. The foreign air carrier must submit an FACP application form, together with the required attachments (including articles of incorporation and by-laws of the foreign air carrier, Securities and Exchange license to conduct business in the Philippines, and a note verbale designating the applicant as an official carrier to the Philippines), to the CAB.

A domestic air carrier must have:

1. a legislative franchise or CPCN from the CAB; and
2. an air operator certificate from the CAAP.

While a foreign air carrier must have:

1. a foreign air carrier’s permit from the CAB; and
2. a foreign air operator certificate from the CAAP.

Liberalization and deregulation have provided beneficial results both to the industry, business, and most of all the public. There is a need for amendment of the Public Service Act to remove the provision of air transport services from the definition of public services, effectively lifting the nationality and accompanying legislative franchise requirement and allowing non-domestic or foreign air carriers to engage in domestic transportation, as well. The ratification of Protocols 5 and 6 would be rendered nugatory if all foreign carriers would be required to register as a business in the Philippines and secure a CPCN before it could enjoy the freedoms allowed by Protocols 5 and 6.

ASEAN Community Carrier

Airlines are subject to the traditional “substantial ownership and effective control” rule not only in the Philippines but also in the rest of ASEAN. Carriers must be majority-owned by their designating state’s nationals and foreign interests are restricted to minority shares. In the Philippines, the foreign investor’s share is capped at 40 percent. Such rules hamper the raising of capital from across the region to establish new airlines or to re-capitalize existing ones. They hurt airlines in developing ASEAN member states that especially need foreign investments.

One way to go around the foreign ownership and control issue is the ASEAN agreement allowing the creation of “Community Carriers”. The ASEAN agreements allow alternative ownership and control regimes. In particular, they provide for the ASEAN Carrier,³¹ in which majority ownership can be held by ASEAN nationals taken together. For example, a Myanmar-registered carrier need not be majority-owned by Myanmar nationals, but can be owned by 20 percent Myanmar, 20 percent Malaysian and 11 percent Vietnamese interests. Majority ownership can thus be spread out among ASEAN interests as long as effective regulatory control (e.g., for safety and security matters) remains

with the Myanmar authorities. This looks like a workable mechanism to provide an incentive for capital to be raised region-wide for the airline sector.

The ASEAN agreements, however, provide that individual member states retain the right to reject a Community Carrier that wishes to operate in those states. Hence, any member state can withhold market access rights from a Community Carrier to continue protecting its own airlines. Ironically, this runs contrary to the liberalizing intent of the ASEAN agreements.

One way to lift this barrier is for member states to retain the traditional “substantial ownership and effective control” rule for their own carriers only. For other ASEAN carriers, the community model should be allowed and welcomed, with no threat of denying market access. This will reassure airline investors of the Community Carrier’s long-term sustainability. Eventually all restrictions on ownership and control by ASEAN nationals of the member states’ own airlines should be phased out. This is a logical step to take if a true “single” aviation market is to emerge.

The concept in MAAS Article 3(2)(a)(ii) thus distinguishes between “effective economic control” and “effective regulatory control”. While the latter must remain solely with the designating state to ensure optimal compliance with safety, security, and other important regulatory matters, effective economic control (along with substantial ownership) may reside with non-nationals. What the ASEAN agreements have done is to allow substantial ownership and effective economic control to reside in the region with one or more member states and/or its nationals. This takes the process of liberalization one step forward, in that it allows for community ownership and control. Hence, majority ownership and effective economic control can lie with interests outside the designating state, as long as these interests are still from within the ASEAN grouping family.

²⁹ Section 14 of the Public Service Act

³⁰ A Filipino citizen is defined as: an individual who is a citizen of the Philippines; a partnership of which each member is such an individual; or a corporation or association created or organized under the laws of the Philippines, of which the directing head and two-thirds or more of the board of directors and other managing officers are citizens of the Philippines, and in which 60 percent of the voting interest is owned or controlled by persons who are citizens of the Philippines (Section 3(r), RA No. 776). However, foreigners residing in the Philippines who are members of aero clubs organized purely for recreation, sport, or the development of flying skills, may be issued permits as a prerequisite to any aeronautical activities within Filipino airspace.

³¹ Policy Brief No. 2014-04. June 2014

What is problematic, though, is the qualification in the agreements that the contracting party receiving the application of such a designated carrier must approve before the carrier can operate, that is, exercise market access rights. This means that a carrier constituted according to the above trans-ASEAN ownership and control model does not possess the certainty that it can access all countries in the region. This will be a great disincentive for any airline or investor thinking of constituting an airline as such, unless a number of ASEAN member states with major markets first declare their unequivocal approval for such a model.

The ASEAN agreements should preferably have provided for member states to opt out of such a model for their own carriers, without affecting carriers from other ASEAN member states that wish to adopt the community model. However, this appears not to have been acceptable to a number of member states that still want a say or veto over the ownership structure of foreign airlines flying into their points. For now, any airline or investor who wishes to have certainty would be wise to comply with the traditional substantial ownership and effective control rule. In practice, this negates the liberalizing intent of the ASEAN agreements. Going forward, this will be a major issue for the impending ASAM arrangement to resolve, quite apart from the market access issue analyzed earlier.

The member states should work toward a regime that allows for carriers bearing a trans-ASEAN ownership structure to be recognized automatically, instead of at the discretion of each individual member state. As noted above, member states can always retain the traditional national ownership and control restrictions for their own designated carriers. This aspect of sovereignty will thus not be compromised. For such states as the Philippines whose domestic laws prevent airline companies from being owned beyond a certain proportion by foreign interests (40 percent in this case), an “opt-out” clause applicable to their own carriers would suffice to ensure compliance with

domestic laws, while allowing for fellow ASEAN states’ airlines to be set up as “Community Carriers”.

Another possible compromise could be to allow majority ownership to be constituted in a trans-ASEAN manner, but to retain effective economic control strictly with the nationals of the designating state. This will provide the assurance of close and continuing economic links between the carrier and its designating state.

On its part, the third alternative formulation in MAAS Article 3(2)(a)(iii) envisages that a carrier need not even have substantial ownership and effective economic control reposed within the region (nor by implication, its designating state), as long as it is incorporated in and has its principal place of business in the designating state. That state must also have and maintain effective regulatory control over the airline. Hence, this is the most progressive of the three alternative options. It opens up the intriguing possibility that an airline in ASEAN could be owned and economically controlled by interests from outside the region. However, this possibility comes with two major qualifications. One is the requirement that each contracting party receiving the airline’s application must approve its operations. The shortcomings of such a discretionary requirement have been noted above. The other condition relates to the requirement that the arrangement will not be equivalent to allowing airlines or its subsidiaries access to traffic rights not otherwise available to them. This appears to reflect a concern that foreign airlines from outside the region must not be allowed to buy into an ASEAN carrier and begin using it to access intra-ASEAN routes for which they (the foreign airlines) have no underlying rights. In effect, Article 3(2)(a)(iii) will largely end up facilitating investment by foreign non-airline interests only.³²

In the Philippines, regulatory control over Philippine-registered Community Carriers may remain with the Civil Aeronautics Board in accordance with RA No. 776, or the Civil

Aeronautics Act of the Philippines. However, in line with the Constitutional restrictions on foreign ownership and the Public Service Act, the foreign ownership restriction must be lifted in order to allow for the existence of Community Carriers owned by various ASEAN interests. Moreover, control and ownership rules should be pursued along liberalizing market access. Otherwise, it is meaningless to provide for a Community Carrier if its market access to points in ASEAN can be constrained by individual states.

A true single or common aviation market, such as that which exists in Europe, liberalizes operations fully and opens the door for greater market competition throughout the region. For instance, British Airways can base a stand-alone plane or fleet to operate between Paris and Frankfurt, without the flight having to begin or end in the U.K. The fact that British Airways has not done so is because the Paris-Frankfurt market is too competitive, and not because governments prohibit that operation.

In ASEAN, the MAAS and MAFLPAS do not even address seventh freedom operations since the member states have not achieved consensus on the issue. Similarly, the ASEAN agreements do not free up domestic or “cabotage” operations.³³ These are also known in the industry as the “eighth freedom” (if the flight originates in the carrier’s home country, e.g., a Singapore carrier operating Singapore-Jakarta-Bali) and the “ninth freedom” (the same carrier operating between Jakarta and Bali without starting or ending in Singapore). In the EU, any EU carrier can now operate what were previously considered as “cabotage” flights, e.g., British Airways operating between Frankfurt and Berlin, both points within Germany, if it wishes to.

“Cabotage” or domestic carriage remains highly sensitive for large countries with a huge domestic base. Typically, such operations are reserved exclusively for local players. In ASEAN countries, no foreign

airline - not even from friendly fellow ASEAN states - can perform domestic flights, and most governments prefer to uphold that status quo. The ASAM objectives are, thus, modest - market access relaxations stop simply at the third, fourth, and fifth freedoms, and do not extend to the seventh, eighth, and ninth freedoms with the latter two involving domestic carriage. Consequently, AirAsia (a Malaysian carrier) cannot base a fleet in Singapore to ply routes between Singapore and third countries as these would be seventh freedom operations that compete head on with the Singapore carriers. Neither can AirAsia operate between two domestic points in Indonesia. But how does this explain AirAsia’s well-known operations in Thailand, Indonesia, and the Philippines that allow it to operate from and within these countries? **Box 3** explains how Air Asia was

Box 3. AirAsia’s strategy to address ownership and control restrictions

AirAsia’s strategy is to address ownership and control restrictions is to incorporate subsidiaries that are technically considered domestic airlines after registration. Each subsidiary carries a different airline code and is majority-owned and controlled by local interests. Thus, AirAsia owns only minority stakes (less than 50 percent) in each of those subsidiaries. The result is that AirAsia Thailand flies between Bangkok and Singapore as a Thai carrier, exercising simple third/fourth freedom rights belonging to Thailand, and not as a Malaysian carrier. This operating model is one effective method that industry players use to get around governmental requirements on ownership and control. In effect, it allows the AirAsia group to exercise the seventh freedom rights (such rights are not allowed under bilateral or multilateral agreements) and to effectively operate such flights out of their Bangkok, Jakarta, and Manila hubs under a well-known common brand. For the travelling public that does not appreciate legal distinctions nor care at all, what matters is safe and timely flight.

All AirAsia subsidiaries’ flights are run by a single airline company, particularly since ticket sales are conducted through a common and integrated internet platform. In addition, this operating model allows circumvention of domestic “cabotage” prohibitions as well, since AirAsia Indonesia would be entirely within its right to operate domestic flights from Jakarta to Bali simply because it is an Indonesian carrier.³⁴ Similarly, Philippines AirAsia is allowed to carry traffic between Manila and Cebu as a Philippine carrier.

Source: Authors’ research and interview with AirAsia, April 12, 2018

32 Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges (page 33).

33 In the Philippines, the Co-Loading Act or Republic Act No. 10668, also known as the amended Cabotage Law, only refers to sea carriage of foreign cargo and does not cover passenger flights.

34 Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges, (pages 15-16)

able to circumvent ownership and control restrictions in the ASEAN.

The above “circumventions” are inconvenient and less than ideal. This is because the AirAsia group has to resort to establishing overseas subsidiaries, and accepting only a minority shareholding in each of these, instead of operating in its own right. In other words, the vehicle of setting up subsidiaries with minority shareholding is an imperfect “stop-gap” measure that awaits further liberalization of market access rules to allow full seventh freedom and domestic operations for foreign carriers.

In this regard, market access issues are closely related to ownership and control restrictions. On top of prohibiting seventh freedom and domestic operations by foreign carriers, the current regime also disallows a carrier like AirAsia from going into, say, Indonesia, either to establish a wholly-owned subsidiary or to buy over an existing local airline fully. In comparison, these moves are permitted in the EU common aviation market. Any EU national can move into another EU country and establish a fully-owned airline there, and fly it between any two points within the EU. In essence, both market access and ownership and control are freed up, forming the hallmarks of a true single or common aviation market.

As previously discussed, ownership and control along with market access remain highly restricted within ASEAN. In most of the bilateral ASAs between the individual ASEAN states, it is a common condition that carriers designated by the respective governments to enjoy the relevant third, fourth, and fifth freedom market access rights must be “substantially owned and effectively controlled” by the designating state and/or its nationals. This means that foreign interests’ stakes in a local carrier cannot exceed 49 percent of shareholding. Again, in the Philippines, the foreign ownership component is even stricter – no foreign interest can own more than 40 percent of shareholding in a Philippine

carrier due to the Constitution’s regard for airlines as strategic public utilities.

The likes of AirAsia have sought to get around such restrictions by establishing local subsidiaries that are technically separate from the parent carrier. Airlines like Jetstar Asia (Singapore), Jetstar Pacific (Vietnam), Tiger Mandala (Indonesia), and Malindo (Malaysia) are all majority-owned by their respective local owners with the parent airline group owning only a minority stake. In this sense, they have all scrupulously copied the original AirAsia model and are wholly faithful to the requirement of majority local ownership. These carriers also utilize the operating rights found in the relevant home country’s bilateral agreements with other countries.³⁵

That said, the requirement of “effective control” is problematic. On the one hand, the CEOs of these subsidiary carriers are typically individuals with local nationality, and their respective boards have majority local representation. Yet, there is little doubt that management expertise and strategic decisions do emanate from the parent foreign airline that kept as a minority owner by the rules. An unfortunate situation will be when the local majority shareholders does not have any aviation nor management experience.

In the Philippines the requirement is clear: “effective control” means 60 percent Filipino ownership or voting rights. The 1987 Constitution reserves the ownership and operation of public utilities exclusively to (1) Filipino citizens, or (2) corporations, or associations at least 60 percent of whose ‘capital’ is owned by Filipino citizens. Republic Act No. 7042, otherwise known as the Foreign Investments Act of 1991, clearly defines a “Philippine national” as a Philippine citizen, or a domestic corporation at least “60% of the capital stock outstanding and entitled to vote” is owned by Philippine citizens.

In the case of Gamboa,³⁶ the Supreme Court held that: “Under Section 11, Article

XII of the 1987 Constitution, to own and operate a public utility a corporation’s capital must at least be 60% owned by Philippine nationals.” In this particular case, the Supreme Court explained that the right to elect directors, coupled with beneficial ownership, translates to effective control. The Court stressed that “the 60% Filipino ownership required by the Constitution to engage in certain economic activities applies not only to voting control of the corporation, but also to the beneficial ownership of the corporation.” The Court further held that it was “imperative that such requirement apply uniformly and across the board to all classes of shares, regardless of nomenclature and category, comprising the capital of a corporation. Under the Corporation Code, capital stock consists of all classes of shares issued to stockholders, that is, common shares as well as preferred shares, which may have different rights, privileges or restriction as stated in the articles of incorporation.” The Court further explained that if a corporation, engaged in a partially nationalized industry, issues a mixture of common and preferred non-voting shares, at least 60 percent of the common shares and at least 60 percent of the preferred non-voting shares must be owned by Filipinos. In short, the 60-40 ownership requirement in favor of Filipino citizens must apply separately to each class of shares, whether common, preferred non-voting, preferred voting or any other class of shares.

Reducing the cost of doing business

With respect to the high cost of doing business as a deterrent to a competitive environment, certain legislation has been passed in order to reduce the cost of doing business. The passage of Republic Act No. 10378 in 2013 removed the three percent common carriers tax on passenger revenues. This is a positive response to the consistent clamor of international air carriers who had identified the 3 percent common carriers tax as a major impediment to expanding business in the country.³⁷ In addition, the government implemented a

24/7 Customs, Immigration, Quarantine and Security (CIQS) operations in all international airports of entry.

A summary

In sum, liberalization and deregulation have paved the way for competition in the air transport market, which has resulted in the availability of more routes, more flight frequencies, lower airfare, and generally much better air transport services than during the years when PAL had a monopoly of the industry. Liberalization and deregulation, which have broken PAL’s monopoly of the air transport industry, opened the way for the entry of more air service providers and as well consolidation when some carriers faced problems of viability.

Constitutional restrictions on ownership and control of airlines in addition to those under the Public Services Act have somewhat weakened the forces of competition in the domestic air transport market and have acted as barriers to entry of potential foreign investments in the air transport industry.

The Philippines is a party to the ASAM and to some extent the international air service agreements, basically mostly bilateral air service agreements and the ratified protocols have contributed to a more liberal policy and regulatory environment for domestic and international carriers. However, the ASAM, which has been envisaged as liberal and competitive air transport market in an integrated region, remains challenged by the ASEAN member states policy stance to protect their respective (airlines’) interest during negotiations of international ASAs. International airlines have found a second-best approach, that is, incorporating a domestic subsidiary in a host country in order to circumvent the strict restrictions on ownership and control imposed by ASEAN states. In the Philippines, AirAsia registered Philippines AirAsia as a domestic subsidiary, which is treated as a domestic airline that is free from cabotage restrictions that

³⁵ Toward a Single Aviation Market in ASEAN: Regulatory Reform and Industry Challenges (pages 16-21)

³⁶ GR No. 176579, Gamboa v. Teres, October 2012

³⁷ RA No. 10378 allowed the removal of the Gross Philippine Bilings on the basis of reciprocity only

constrain foreign airlines from providing domestic (within country) air services.

This policy and regulatory environment has shaped the structure of the air transport market, which in turn has influenced the behavior (conduct and performance) of domestic airlines. Section 5 below discusses how the market structure has changed under a liberalized and deregulated environment as domestic airlines seek a greater share of the air transport market and greater profitability.

V. ANALYSIS OF THE AIR TRANSPORT INDUSTRY

Analytical framework: Structure-Conduct-Performance

A convenient analytical framework for the study of competition issues in the domestic air transport industry is the now familiar “Structure-Conduct-Performance” (SCP) approach initiated by Joe Bain in the 1950s, and subsequently used in many industrial organization studies (Ferguson and Ferguson, 1994). The idea behind the SCP approach is that if structural variables, e.g., concentration influences the likelihood of collusion, an understanding of such structural characteristics could be used to: (i) investigate markets in which collusion is likely; (ii) detect instances of collusive

conduct; and (iii) reduce the likelihood of collusion by changing the structure itself, which drives such collusive behavior (Ayres, 1988).

Figure 5.1 illustrates the analytical framework of the study that guides our analysis of the air transport industry. The structure, conduct, and performance of the airline transport industry is nested in the country’s policy and regulatory framework and institutions that impact the behavior of firms in the industry. Certain regulations may constitute a barrier to entry to the industry while other regulations help to make the markets competitive.

The framework helps in understanding the interrelationship between market structure, conduct, and performance of firms in an industry, and in this study, the airline companies. It is assumed that market structure influences the behavior or conduct of firms, that in turn, determines its market performance. Common measures of market performance are profitability, efficiency, and growth. Structure involves the economic environment in which the firms operate and certain features of the market such as the size and number of buyers and sellers or of suppliers and customers. Firm conduct has to do with setting prices, advertising, promotion and distribution, among others, in order to satisfy consumer demand. In the

SCP paradigm, concentration and market shares are viewed as major indicators of market power. Operators in a duopoly (market structure), for example, may collude (conduct) to fix prices and generate more profits (performance) at the expense of customer welfare.

There are criticisms of the SCP approach, which assumes a linear relationship or one-way link from structure-to-conduct-to-performance. In reality, the direction of effects could be two-way and there is no a priori means to indicate the direction of causation. Conduct could very well affect the structure of the market. It is also possible that performance of the firm (high profitability) can affect its conduct (more opportunities to innovate, do R&D) which then enables it to get a bigger slice of the market (structure). A merger (conduct) of firms could result to greater efficiency (performance). Research and development and innovations (conduct) may affect the structure of the industry.

Baumol (1982) introduced the concept of contestable markets. In contestable markets, there is ease of entry and exit of new firms and the credible threat of entry or more competition would be an incentive for firms to behave. The hypothesis is that air transport industry markets are contestable markets that will behave as a competitive market regardless of the concentration in the industry. This implies that contestable markets will bring consumers the same benefits provided by a perfectly competitive market (Baumol and Lee, 1991). Austria (2001) quoting (1996) pointed out the importance of the threat of competition, as distinct from actual competition, in enforcing good conduct among firms in a concentrated industry. On the other hand, Hanlon (1996) disputed the supposed contestability of air transport markets and argued that the air transport industry does not possess the characteristics of a contestable market. Entry to the air transport industry is not easy because of barriers to entry that may arise because of regulations or the high cost of investments (sunk cost) in the industry. However, sunk costs need not

deter possible entrants in the air transport industry because aircraft may be leased or sourced from second-hand markets (Austria 2001). Ayres (1988) demonstrated empirically that in the US airline routes are not contestable markets.

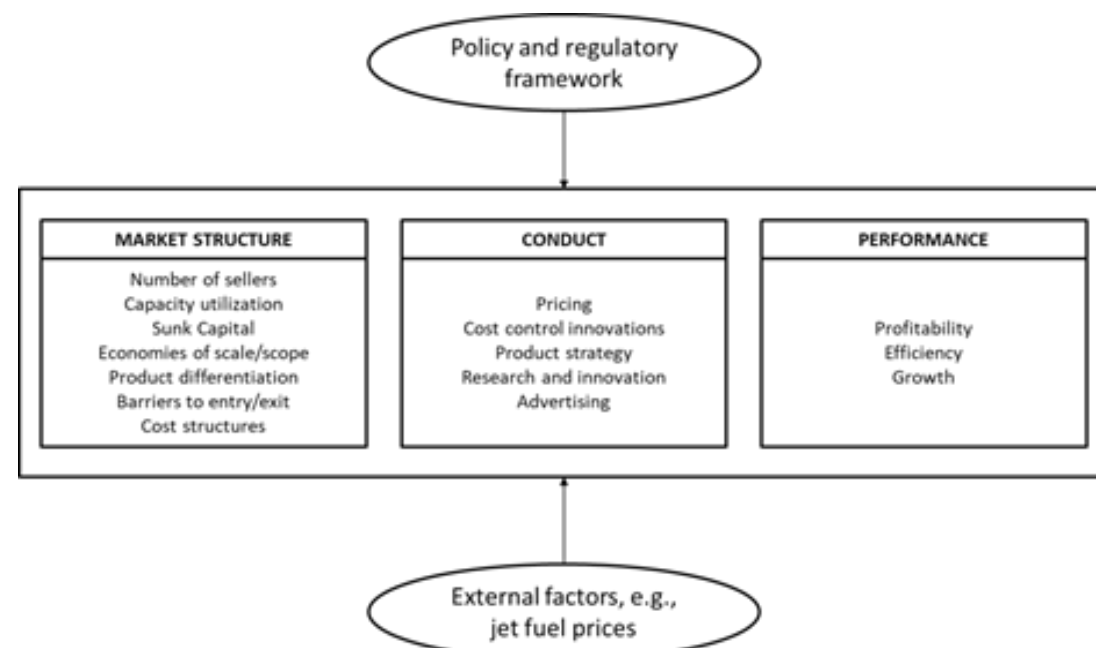
There are other critics of the SCP approach. The Chicago school argues that it is government policy that creates monopolies in the market while the Austrian school maintains that monopoly profits could lead to innovation, more R&D and thus, to higher growth (welfare). These criticisms are amply discussed in standard textbooks of industrial organization and will not be discussed here. Criticisms notwithstanding, the SCP approach remains as a standard tool for a study of the industrial organization of an industry and it provides a useful frame for understanding the domestic air transport industry.

What is missing in the simple representation in **Figure 5.1** is the role of policy and regulatory frameworks on influencing industry or firm behavior. It may very well be that government policies or regulations act as barriers to entry, which thus, lead to industry concentration and market power by firms. A bureaucrat’s protectionist stance may be a reason why there is lack of competition in an industry. External factors, e.g., global economic crisis, are also important determinants of firm behavior. Thus, we added both internal and external factors in the representation in **Figure 5.1**.

The framework also oversimplifies the actual situation because airlines depend very much on the availability and efficiency of airport infrastructure to provide air transportation services as indicated in **Figure 2.1**, in the discussion of the aviation services value chain. In this regard, we discuss the airport infrastructure in the Section 6.

In this scoping study, we concentrate on the evolution of market structure as it responds to internal factors (policy and regulatory reforms, including ASAs) and broad external factors (Asian financial crisis, emergence of LCCs in foreign air transport markets, and

Figure 5.1 Analytical framework of the study



the ensuing competition among regional carriers, i.e., Asia and ASEAN).

This section first reviews the market structure in both the domestic and international air transport markets in the Philippines. We do not have operating and financial data, and other detailed information on the domestic airlines, which has prevented us from analyzing conduct and performance of those carriers. This could be done in future detailed studies subject to cooperation by the airlines and government regulators with sharing necessary data. Nevertheless, the discussion of market structure gives some insights on how the domestic airlines have conducted themselves in their quest for profitability and bigger share of the market. This section then turns to a discussion of airport infrastructure (NAIA), which is a very critical component of the air transport industry because it greatly determines the ability of airlines to transport people and cargo. After all, airlines will be useless without airports!

Domestic air transport market

Our review of literature revealed that liberalization and deregulation introduced profound changes in the market structure of the airline industry and the incentives faced by airlines. **Table 3.2** in the review of literature provides a summary of findings of different studies. Average fares have gone down and more routes have been opened to competition, thereby providing consumers with greater choices at a lower cost. Econometric estimates (Manuela, 2011) showed statistically significant positive effects of competition on air fares until 2009.

In light of the past experience, some interesting questions arise. Have these benefits been sustained? Have there been unintended effects of airline liberalization on the industry? Have there been changes in the demand and supply conditions that have influenced market structure and in turn conduct and performance of the industry from 2010 onward? How has NAIA's dominance, being the principal international and main gateway airport providing links

to major international airports outside the country, and to different domestic airports, affected market structure and eventually conduct and performance of the airlines?

An increase in number of carriers

The Philippine experience from 1995 to 2010 has provided some evidence to theoretical predictions on the outcomes of liberalization and deregulation. From 2010, the air transport industry has witnessed the entry of new and smaller players and consolidation in a tough business environment. Cebu Air Inc., (CEB) the airline company that owns the trade name Cebu Pacific and operates a legislative franchise of 40 years under RA No. 7151 (s. 1991) became a listed company with the Philippine Stock Exchange on October 26, 2010. On March 20, 2014, CEB acquired 100 percent ownership of Tiger Airways Philippines (TAP), including a 40 percent stake in Roar Aviation II Pte. Ltd., a wholly-owned subsidiary of Tiger Airways Holdings Limited. On April 27, 2015, with the approval of the Securities and Exchange Commission, TAP was rebranded and now operates as CebGo, Inc. CebGo operates under the legislative franchise of SEAIR Inc. (RA No. 9517 s. 2008) that previously operated as South East Asian Airlines and Tigerair Philippines.

On the other hand, Philippines AirAsia evolved from the merger of two airline companies - Zest Airways and Air Asia Philippines. The former is a product of the purchase by Zest Airways of the controlling interest in Asian Spirit Inc. in terms of shareholdings and the use of its legislative franchise under RA No. 9183 s. 2003. The Air Asia Philippines on the other hand is the joint venture between Air Asia Group of Malaysia and local partners approved by the Board of Investments in 2010. It started to fly out of Clark International Airport after receiving its Air Operator Certificate from the CAAP in 2012. Through a share swap deal with Zest Airways in 2013, Air Asia Philippines gained 85 percent ownership of Zest with 49 percent voting rights and access to the premium slots of Zest Airways

Table 5.1 Current market structure: airline company characteristics (as of September 2018)

Company	Brand Names	Ownership	Franchise	Scope of Operation under AOC	Fleet*		Systemwide Passengers Carried*	Domestic Route (City-Pair) Network*	International Route (City-Pair) Network*	Hubs*
					Aircraft Type	No.				
Philippine Airlines Inc. (PAL)	PAL PAL Express (formerly Airphil Express)	PAL is subsidiary of publicly listed-PAL Holdings Inc Owned by Air Philippines Corporation (APC), 99.97% subsidiary of Zuma Corporation Holding company, in turn 57% owned by PAL Holdings	PD No. 1590 (s. 1978) as amended 50 years RA No. 8339 as amended by RA 9215 (s. 2003) franchise of APC 25 years	Domestic and International	B777 300ER	10	14.46 M	35 destinations including code share with APC as operator 57 routes	42 destinations including code share with APC as operator 56 routes	NAIA, Cebu, Clark, Davao
					A340 300	6				
					A321 231	15				
					A320	24				
					Bombardier Q400	19				
					Bombardier Q300	8				
					Total:	86				
Cebu Air Inc.	Cebu Pacific CEBGO	Publicly listed Company	RA No. 7151 (s. 1991) 40 years RA No. 9517 (s. 2003) 25 years	Domestic and International	A319	1	19.74 M	36 destinations 52 routes (Cebu Pacific) 48 routes (CebGo)	30 destinations 46 routes 1 destination 1 route	NAIA, Cebu, Clark, Davao City Iloilo City
					A320	36				
					A330	8				
					ATR 72-500	8				
					ATR 72-600	8				
					Total:	61				
Philippines AirAsia	Philippines AirAsia	Joint Venture between Zest Airways and Air Asia Berhad of Malaysia	RA No. 9183 (s. 2003) – franchise granted to Asian Spirit	Domestic and International	A320s	20	5.28M	9 destinations 17 routes	12 destinations 17 routes	Manila, Cebu, Clark, Davao
Magnum Air	SkyJet	Local company	Franchise application pending in Congress (Approved by the House on 2017-0925; referred to the Senate Public Services Committee on 2017-09-27)	Domestic and International	BA 146-100 BA 146-200	2 2 Total: 4	250,807	5 destinations 4 routes		Manila
Air Juan	Air Juan	Local company	Certificate of Public Conveyance and Necessity	Domestic	Grand Caravan 208EXs Cessna Grand Caravan seaplanes	4 6 Total: 10	5.28M	11 destinations 8 routes		Manila, Puerto Princesa

*as of December 2017
Source: Compiled by the authors

in NAIA. Zest Airways served as the operator of Air Asia Zest. In 2015, both Zest and Air Asia Philippines agreed to rename the merger to Philippines Air Asia. The Clark operations were transferred to NAIA. In 2016, Philippines AirAsia applied for the transfer of the controlling interest of Zest Airways Inc. to Air Asia Inc. with Philippine Congress in order to raise the latter's 49 percent equity in Air Asia Zest. Meanwhile, Air Philippines commenced operations in 1996 and was re-branded to AirPhil Express and to PAL Express in 2013. PAL Express is a PAL subsidiary and operates as a low-cost carrier. **Table 5.1** gives an idea of the current market structure of the air transport industry.

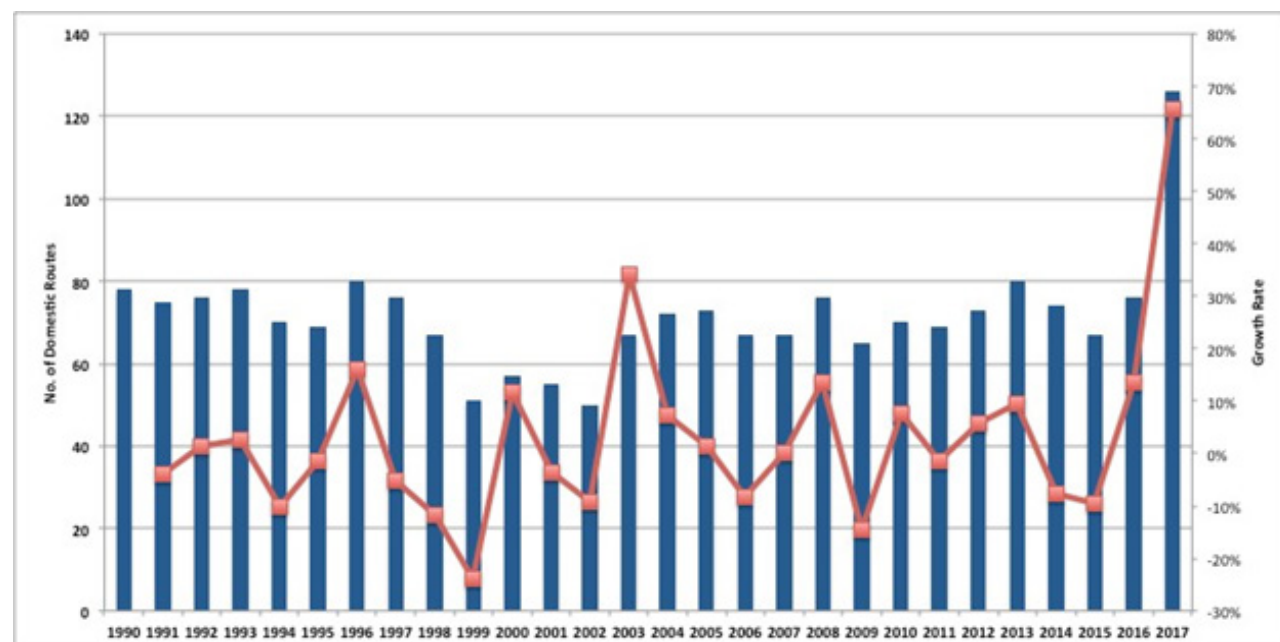
An increase in number of domestic routes

From 1995 to 1996, the number of domestic routes jumped from 69 to 80 with the entry of Cebu Pacific, Air Philippines, Grand Air and Asian Spirit (**Figure 5.2**). Asian Spirit concentrated in and monopolized small and niche markets using small aircrafts. Asian Spirit became instrumental in introducing the Manila-Caticlan route that eventually stimulated tourism traffic growth to the famous island of Boracay in Aklan. The bigger airlines like Cebu Pacific, Air Philippines, and Grand Air contested PAL's monopoly in the trunk routes from Manila to Cebu, Davao, Iloilo,

Kalibo, Tacloban, Cagayan de Oro, Bacolod and Puerto Princesa. The Asian Financial Crisis in 1997 drove PAL to drastically reduced its operations. All of the domestic routes dipped to a low 51 routes in 1999. As pointed out in the literature review, competition exacerbated PAL's financial woes. However, more routes were served starting in 2003 with the entry of SEAIR that contested Asian Spirit's monopoly in the niche markets. SEAIR introduced new flights to those routes abandoned by PAL. However, it was not able to sustain operations in some routes due to relatively poor load factors. It is noted that Grand Air had already made an exit from the industry during this period also due to financial woes.

For the first time since the industry was liberalized in 1995, the number of domestic routes or city pairs with flights by at least one Philippine carrier reached 126 city pairs or routes in 2017, or 65.8 percent more than in 2016 (**Figure 5.2**). Due to the NAIA congestion and the government's drive to utilize more airports outside of Manila, the domestic air carriers introduced new and more connections outside of Manila. Cebu Pacific introduced and expanded its Cebu connections starting in 2008/2009. It also introduced new flights such as Clark-Coron in 2017. In 2016, PAL established a new hub in Clark, decades after concentrating

Figure 5.2 Number of domestic routes/city pairs served by Philippine carriers



Source of basic data: CAB

its flights out of NAIA and contested Cebu Pacific's presence in Clark. By the end of 2017, PAL has already introduced new flights to a total of 14 domestic routes (out of the 16) connecting Clark to various destinations. Philippines AirAsia returned to Clark and mounted flights to Kalibo and Davao.

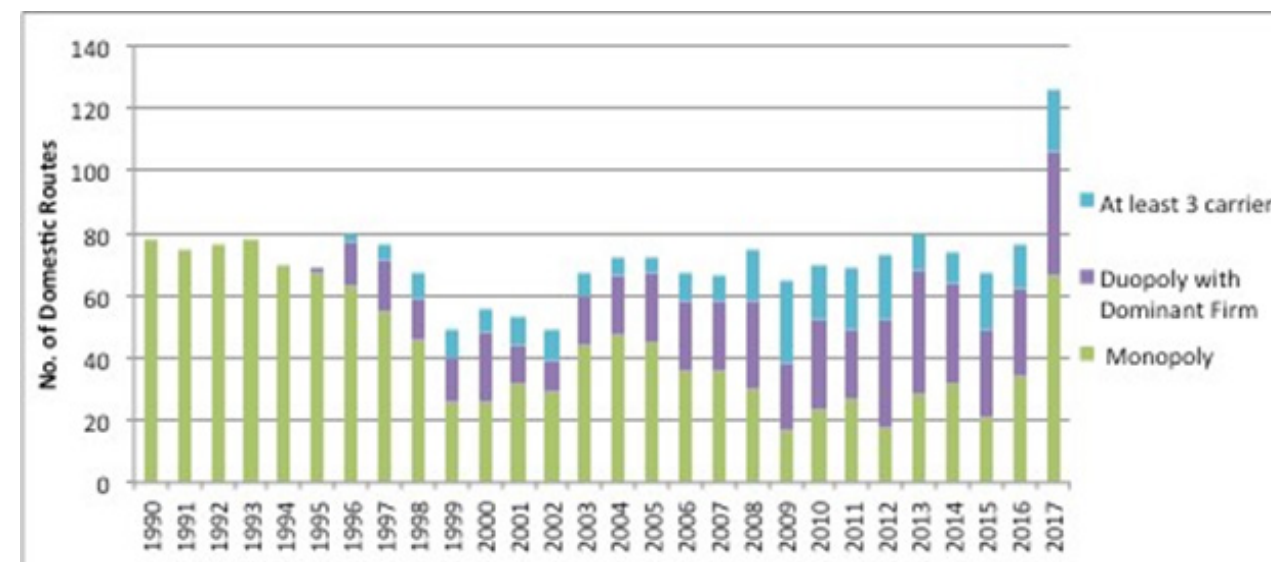
There has been a relative increase in the number of highly contested routes - primarily the trunk routes connected to Manila as the main hub for almost two decades and to Cebu in recent years.

Figures 5.3 and 5.4 show the number and

distribution of routes based on the number of air carriers with services, respectively. The number of monopoly routes declined from 67 (97.1 percent of the 69 routes) in 1995 to 26 (45.6 percent of 57 routes) in 2000 as a result of PAL's exit in some of its monopoly routes following the Asian financial crisis.

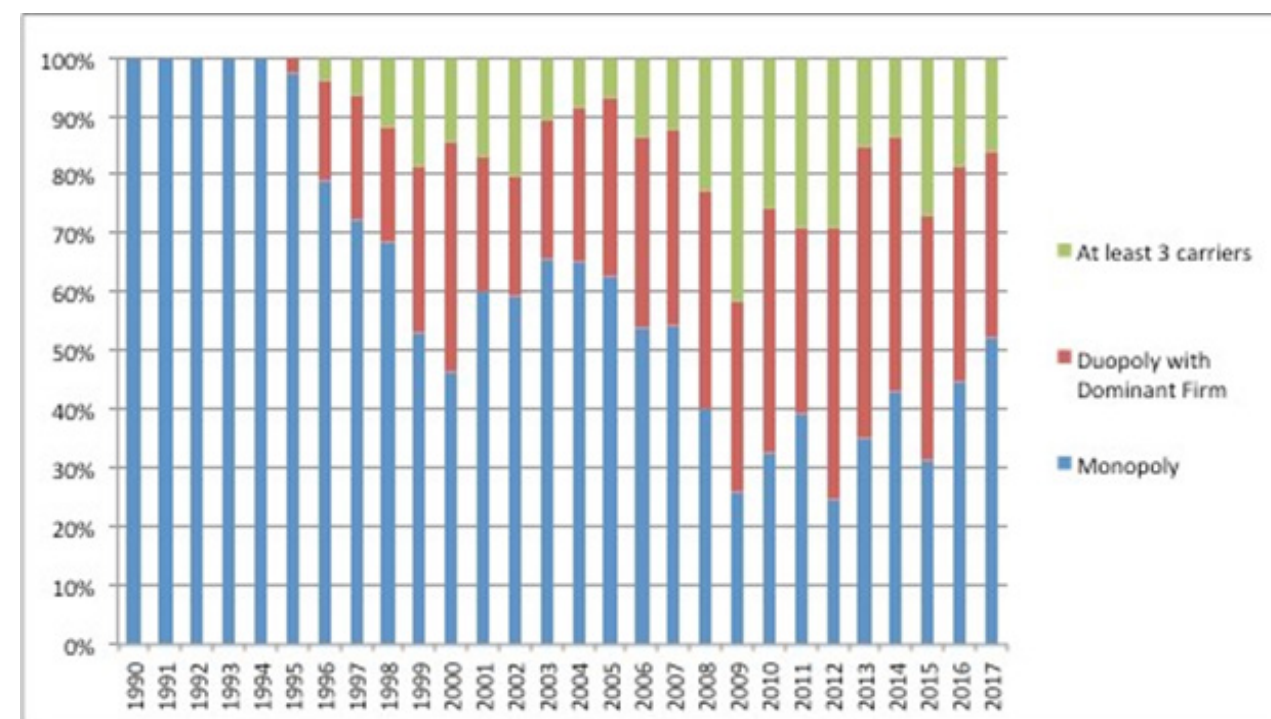
However, there was a remarkable rise in domestic routes from 2001 to 2007 after which the relative shares of monopoly routes declined significantly due to the expansion of Cebu Pacific, CebGo, and Philippine AirAsia. The share of monopoly routes started to rise again to 34 in 2016 and 66

Figure 5.3 Number of domestic routes based on number of air carriers with services



Source of basic data: CAB

Figure 5.4 Distribution of routes by number of air carriers with services



Source of basic data: CAB

in 2017. By the end of 2017, depending on the route, only PAL Express or Cebu Pacific served more than 50 percent of the 129 routes as a result of the expansion programs of airlines, especially outside of their Manila hub. For example, consider the entry of PAL and PAL Express, the return of Philippines AirAsia, and additional flights mounted by Cebu Pacific and CebGo in Clark. Similarly, the smaller players like Air Juan operated in new niche markets, primarily tourism island destinations, using its landplane and seaplane. Skyjet on the other hand continued to contest the routes where the three major airline companies - PAL, Cebu Air, and Philippines AirAsia - provide services.

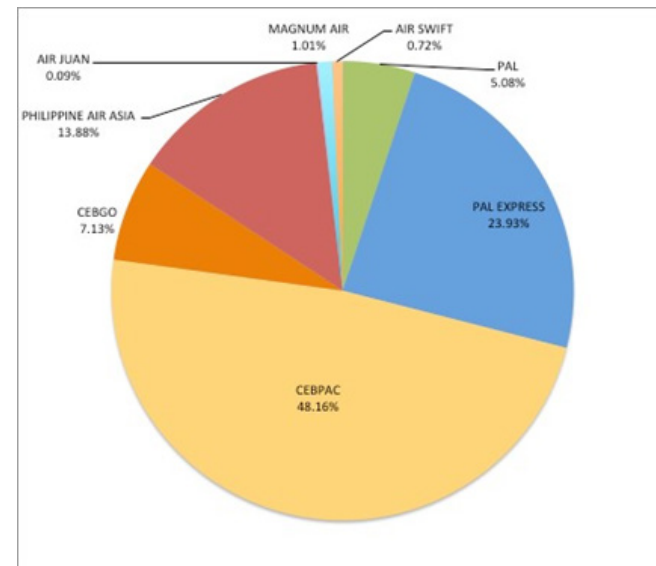
The number of duopoly routes increased from 2 (2.9 percent of the 69 routes) in 1995 to 14 (17.5 percent of the 80) in 1996 and to 22 (38.6 percent of the 57 routes) in 2000. As explained above, the total number of routes declined in 2000 following the Asian financial crisis. After a brief period of increase in monopoly routes in 2001 and 2002, the number of duopoly routes continued to rise and eventually reached a total of 40 in 2013 and in 2017. While the absolute number of duopoly routes is the same for the years 2013 and 2017, the relative share to the total number of routes in 2013 was higher at 50 percent compared to the 31.8 percent in 2017.

Market share

In 2017, the three airline companies - CEBU Air Inc., PAL, and Philippines AirAsia - accounted for 98.2 percent of the total domestic passenger market in the Philippines. CEBU Air, which owns both Cebu Pacific and CebGo, was the market leader with 55.3 percent share followed by Philippine Airlines Inc., owner of PAL and PAL Express, with 29.0 percent share. CEBU Air and PAL have a combined share of 84.3 percent. Philippines AirAsia ranked third with 13.9 percent market share. The rest is accounted for by Skyjet, Air Juan, and AirSwift. Ranked according to brand or business names, Cebu Pacific was the market leader with 48.2 percent share in

2017 (Figure 5.5). PAL Express followed with 23.9 percent share, up by 19.3 percentage from its small share of 4.6 percent when it first entered under the Air Philippines brand in 1996 (Figure 5.6). The PAL brand concentrated in the premium domestic market and in international routes only, leaving PAL Express to compete intensely against Cebu Pacific and CebGo, and Philippines AirAsia. Thus, PAL's market share dropped significantly from 95.7 percent in 1995 to 5.1 percent in 2017. Skyjet which started operations in 2013 already enjoyed an increase in market share from 0.09 percent to 1.01 percent in 2017 as a result of its penetration of the tourism markets such as Coron and Siargao.

Figure 5.5. Market share distribution in the domestic passenger market by airline brand, 2017

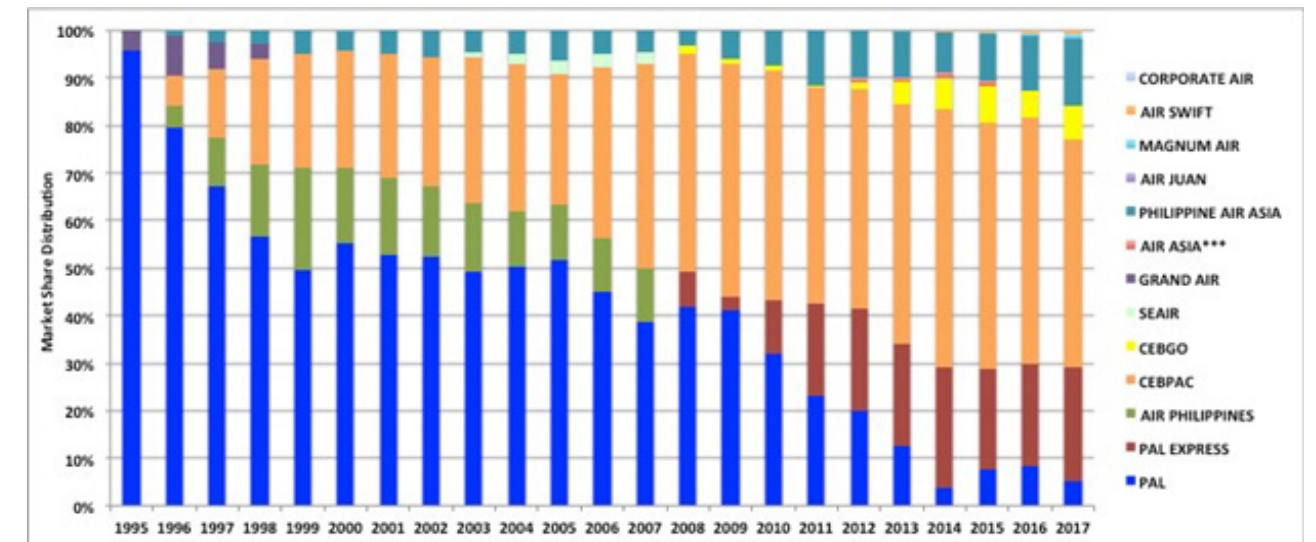


Source of basic data: CAB

Market concentration and intensity of competition

The intensity of competition or market concentration was measured using the Herfindahl-Hirschman Index (HHI). The HHI is a measure of market concentration and calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. The HHI takes into account the relative size distribution of the firms in a market. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 1.0 when a market is controlled by a single firm.

Figure 5.6 Market shares by airline brand: 1995 to 2017



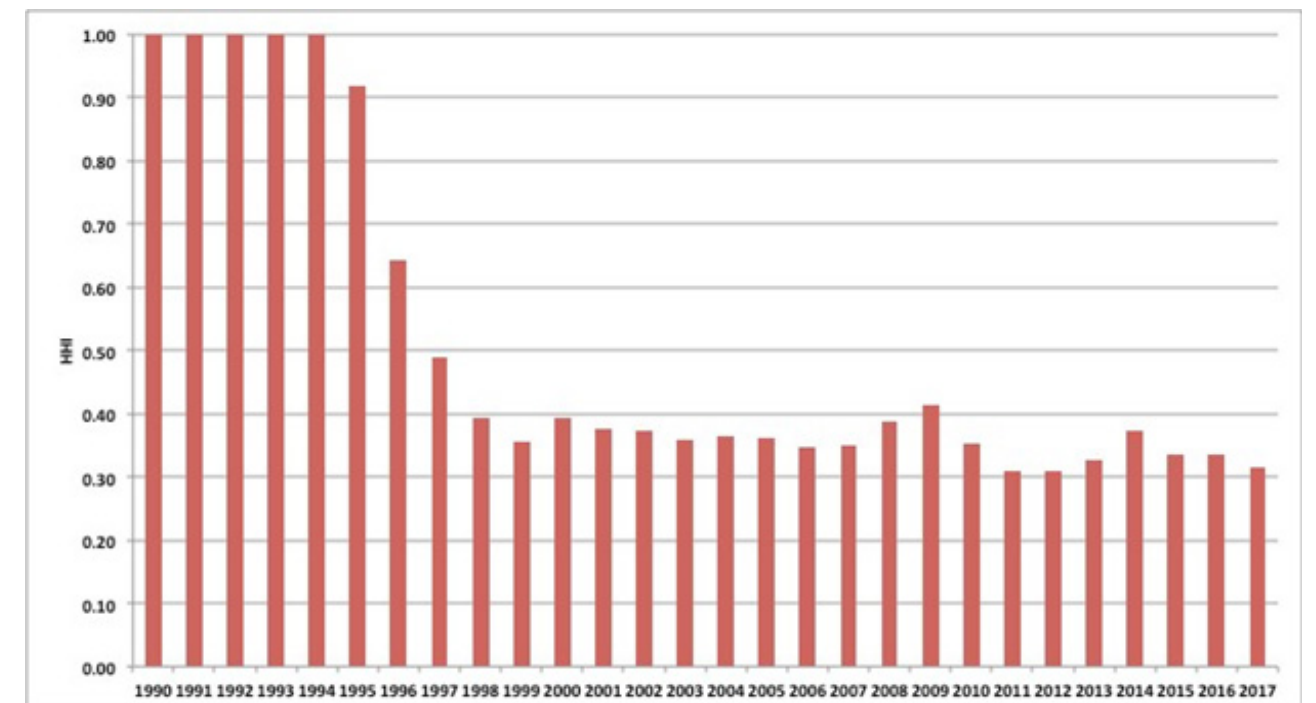
Source of basic data: CAB

The HHI increases both when the number of firms in the market decreases and when the size disparity of firms increases.

The industry experienced a slight decline in concentration during the first five years from 1995 but concentration increased again in the next ten years until 2009 (Figure 5.7). From a very concentrated industry prior to liberalization in 1995, air transport experienced a rapid decline in concentration until 1999. Concentration started to increase albeit slowly in the next ten years until 2009.

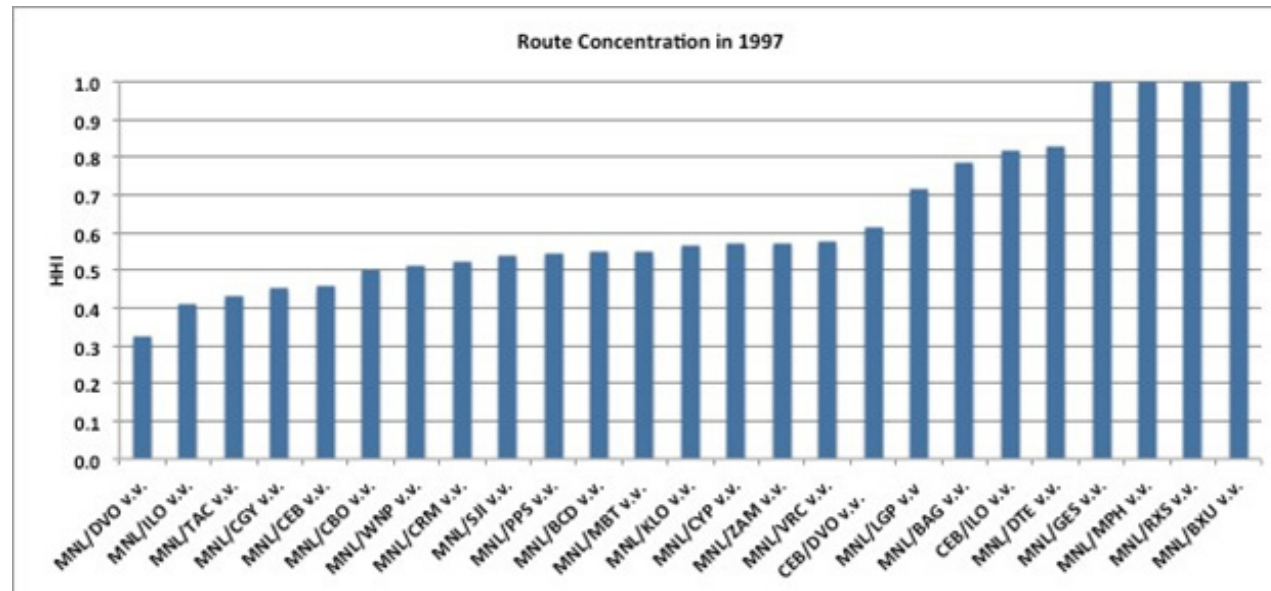
The value of the HHI decreased from 0.41 in 2009 to 0.31 in 2012 due to the rise in market shares of Philippines AirAsia, especially in routes with only two airlines. The number of effective competitors increased from 2.4 in 2009 to 3.2 in 2012. However, the consolidation and rapid expansion of CebGo in 2013 and 2014 led to a slight increase in market concentration. From 2015 to 2017, the concentration index dropped again to the level of 2011 and 2012, the lowest since the 1995 liberalization, again due to the faster growth in passenger traffic of Philippines AirAsia (Figure 5.7). The number of effective competitors has increased by 1.6 times

Figure 5.7 Measure of concentration in the domestic passenger market: 1990 to 2017



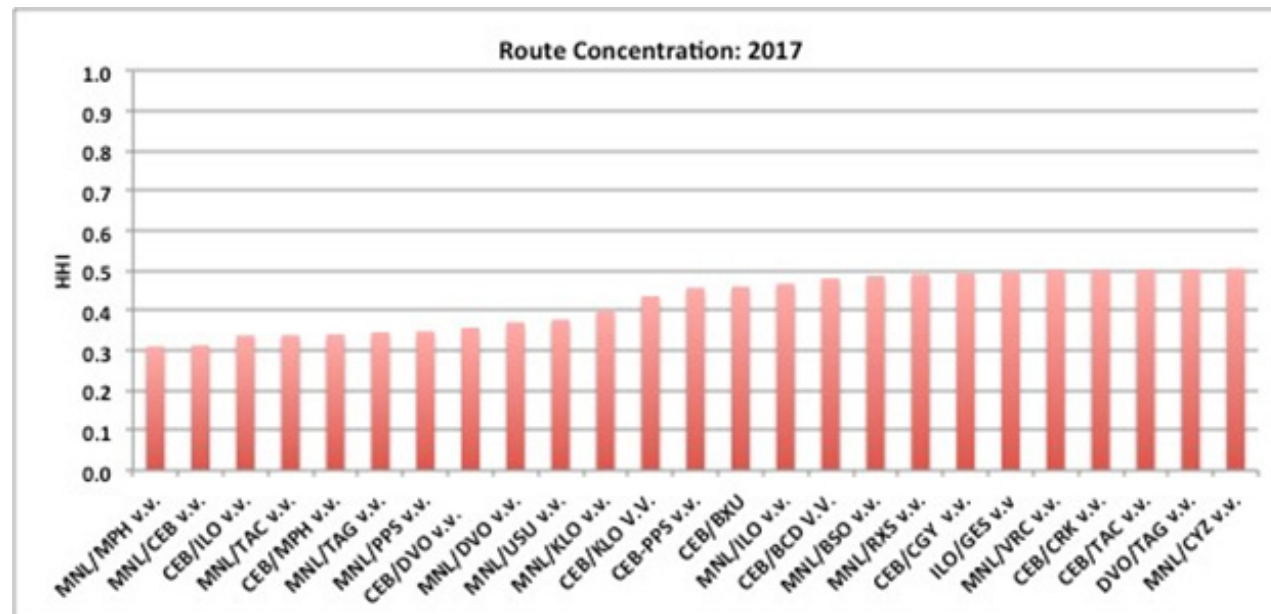
Source of basic data: CAB

Figure 5.8 Domestic routes ranked according to intensity of competition: 1997



*The rest of the routes not shown in the graph above have HHI values equal to 1.0.
Source of basic data: CAB

Figure 5.9 Domestic routes ranked according to intensity of competition: 2017



*The rest of the routes not shown in the graph above have HHI values equal to 1.0.
Source of basic data: CAB

from 2.0 in 1997 to 3.2 in 2017. On the other hand, using market shares per airline company instead of brand or business name will yield high values of HHI by as much as 1.3 times because the combined shares of Cebu Air and PAL Holdings already account for 83 percent of domestic passenger traffic.

A comparison of the domestic route market structures in 1997 and forty years later (2017) using the HHI revealed that the highly contested routes are primarily the trunk routes connected to Manila as hub (**Figures 5.8 and 5.9**).

This is further evidenced in **Table 5.2**, which shows the Top 40 most heavily traveled routes in 2017 and the evolution of the market structure since the liberalization of the domestic air passenger market two decades ago. Twenty-five out of these forty routes (or 62.5 percent) are directly connected to Manila. This can be explained by the fact that Luzon, particularly NCR, Regions 4 and 3 is the major source market due to the concentration of economic activity³⁸ and population³⁹ in these regions for decades.

Table 5.2 Domestic route competition intensity: 1995, 1997 and 2017

	CITY PAIR/ROUTE	1995	HHI	1997	HHI	2017	HHI
1	MNL/CEB v.v.	1,018,190	0.80	1,516,787	0.46	3,440,310	0.31
2	MNL/DVO v.v.	439,199	0.66	733,685	0.32	2,581,560	0.37
3	MNL/ILO v.v.	354,130	1.00	577,354	0.41	1,398,440	0.47
4	MNL/PPS v.v.	123,610	1.00	206,857	0.55	1,392,765	0.35
5	MNL/CGY v.v.	262,401	1.00	413,158	0.45	1,329,868	0.56
6	MNL/BCD v.v.	314,889	1.00	422,179	0.55	1,250,836	0.55
7	MNL/MPH v.v.			49,705	1.00	1,046,374	0.31
8	MNL/TAC v.v.	230,148	1.00	310,097	0.43	981,898	0.34
9	MNL/KLO v.v.	211,321	1.00	281,333	0.57	823,204	0.40
10	MNL/TAG v.v.	33,341	1.00	43,780	1.00	813,808	0.35
11	MNL/ZAM v.v.	139,739	1.00	207,620	0.57	713,858	0.62
12	CEB/DVO v.v.	134,699	1.00	235,960	0.62	656,495	0.36
13	MNL/GES v.v.			82,532	1.00	626,490	0.58
14	MNL/LGP v.v.	122,178	1.00	151,291	0.71	564,545	0.55
15	MNL/BXU v.v.	36,838	1.00	45,557	1.00	538,005	0.72
16	MNL/DGT v.v.	80,900	1.00	74,631	1.00	518,722	0.53
17	MNL/USU v.v.					413,678	0.38
18	MNL/RXS v.v.	75,114	1.00	75,729	1.00	292,959	0.49
19	CEB/CGY v.v.	24,967	1.00	24,246	1.00	290,708	0.49
20	MNL/CBO v.v.	73,460	1.00	114,469	0.50	256,242	0.54
21	CEB-PPS v.v.					219,437	0.46
22	MNL/OZC					213,534	0.52
23	CEB/ILO v.v.	95,878	1.00	106,693	0.82	204,225	0.34
24	MNL/DPL v.v.	45,821	1.00	46,273	1.00	202,816	0.52
25	MNL/TUG v.v.	41,501	1.00	34,681	1.00	182,184	0.64
26	CEB/BCD v.v.	81,954	1.00	95,614	1.00	172,895	0.48
27	CEB/MPH v.v.					165,395	0.34
28	CEB/BXU	27,999	1.00	22,867	1.00	162,576	0.46
29	MNL/PAG v.v.					156,238	1.00
30	MNL/LAO v.v.	21,120	1.00	23,868	1.00	146,843	0.98
31	CEB/CRK v.v.					144,359	0.50
32	CEB/KLO v.v.	16,967	1.00	18,132	1.00	142,552	0.44
33	CEB/GES v.v.	74,076	1.00	37,190	1.00	139,868	0.64
34	MNL/WNP v.v.	47,502	1.00	96,729	0.51	138,578	0.56
35	MNL/ENI					129,691	1.00
36	DVO/ZAM v.v.	22,234	1.00	32,546	1.00	126,133	0.95
37	CEB/TAC v.v.	26,331	1.00	17,610	0.00	125,728	0.50
38	DVO/ILO v.v.					118,624	1.00
39	CEB/ZAM v.v.	69,972	1.00	46,037	1.00	104,833	0.74
40	ZAM/TWT v.v.	32,155	1.00	21,573	1.00	96,414	1.00

See Annex A for the airport code description.
Source of basic data: CAB

38 These three regions accounted for an average of 62% of the total Philippine real GDP from 2015 to 2017 (Source: PSA).

39 For the same period of 2015 to 2017, these three regions had a share of 37% of the total Philippine population (Source: PSA).

The data in **Table 5.2** affirm the discussion in earlier sections on how secondary airports like Cebu have played a critical role in increasing overall competition in the industry. As airlines expand their fleet (based on their programmed aircraft orders and delivery schedules) and operations, they seek to use other airports outside of Manila in order to avoid the negative effects of NAIA's runway and terminal congestion on their fuel costs and ultimately bottom lines. In 2017, only four routes – Manila-Pagadian, Manila-El Nido, Davao-Iloilo, and Zamboanga, Tawi-Tawi – out of the 40 most heavily traveled continue to be monopolized. In the case of Manila-Laoag, the high HHI value can be explained by the reduction in flights by Cebu Pacific starting in 2016 due to relatively low load factors. The substitutability between air transport and land transport from Manila to Ilocos Region has posed a challenge to the route's overall sustainability. The recent completion of the well-built, Tarlac-Pangasinan Expressway, which will be extended all the way to Northern Ilocos, has boosted the use of land transport.

Airlines have capitalized on the growth of the tourism industry especially in the past seven years to expand operations. The highly contested routes in 2017 are the gateways to major tourism destinations, – Caticlan and Kalibo for Boracay, Tagbilaran for Bohol, Puerto Princesa and Coron for Palawan, Legaspi airport for the tourism circuits of ALMASOR (Albay-Masbate-Sorsogon) and Triple C (Catanduanes-Camarines Norte-Camarines Sur), and the airports of Cebu, Iloilo, and Davao.

Tourism, particularly domestic tourism, has served as a major driver in introducing and intensifying competition. Domestic tourism account for around 50-80 percent⁴⁰ of the total visitor arrivals in the destinations mentioned. The volume of foreign tourists to the Philippines of 6.6 million in 2017 was still below those of other ASEAN destinations, namely, Thailand's 33 million foreign

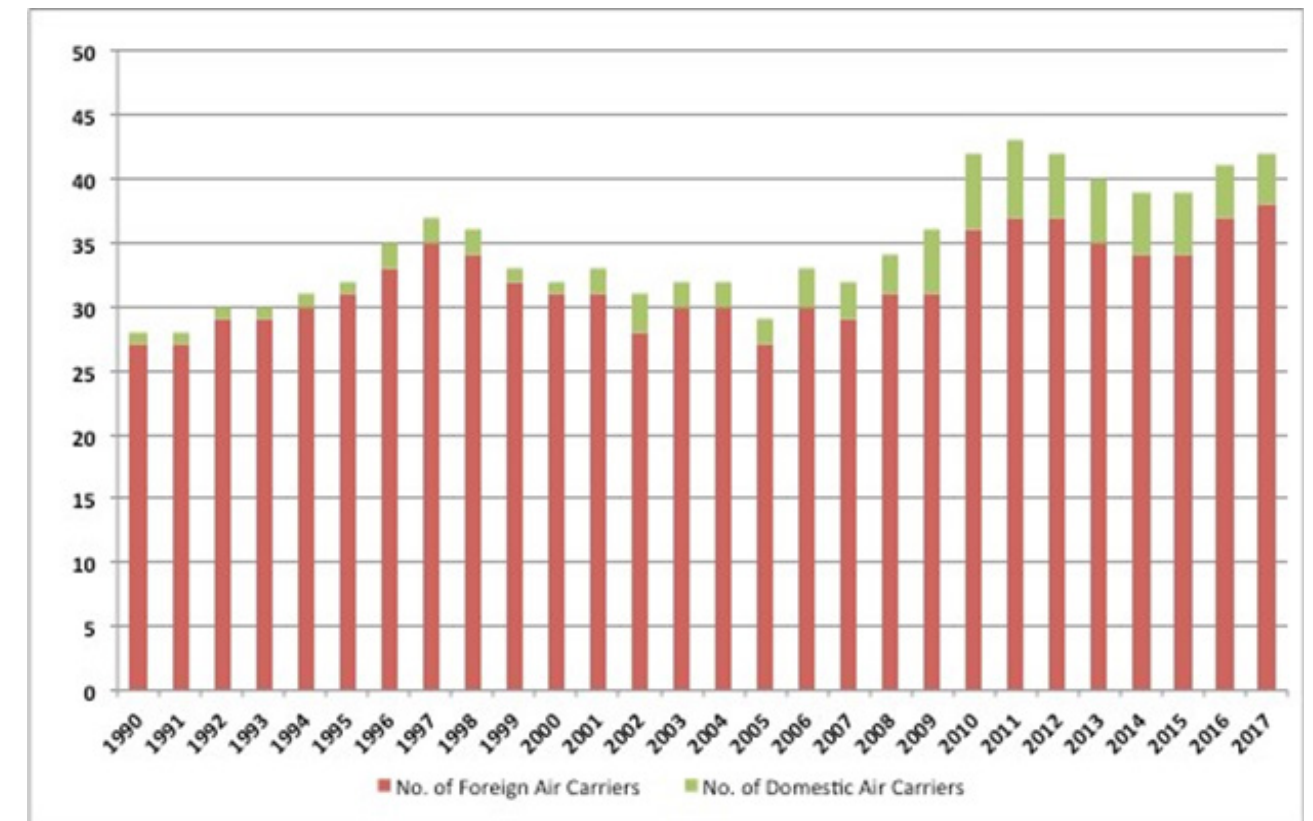
tourists, Indonesia's 12 million, Malaysia's 27 million, Singapore's 16 million, Viet Nam's 10 million. Achieving the 12 million target of foreign tourism by 2022, which will be supported by heavy infrastructure spending, tourism circuit development, and travel facilitation, among other interventions listed in the National Tourism Development Plan 2016-2022,⁴¹ will provide an opportunity to boost international and domestic traffic particularly in domestic routes with limited competition but with high tourism potentials and in international routes that can be connected directly to secondary airports outside of Manila. From a macroeconomic perspective, the foreign tourism receipts will serve as fresh infusion of revenues, increase the level of output (GDP), and create more employment.

International air transport in the Philippines

An increase in number of carriers

In 1990, there were 28 international air carriers serving the Philippine international air transport market (**Figure 5.10**). PAL was the lone Philippine air carrier with 40 percent share of the total inbound and outbound passenger volume. Among the foreign air carriers, Cathay Pacific captured the largest share of 9.8 percent of the market, followed by Thai Airways (4.7 percent) Singapore Airlines (4.1 percent), Thai Airways (3.7 percent), China Airlines (3.2 percent) and Saudi Arabia Airlines (3.1 percent). The number increased 37 in 1997 following EO No. 219 and the air talks pursued by the Ramos administration, an average of one air talk per month from 1994-1995. However, it took another six years before the Implementing Rules and Regulations of EO No. 219 were promulgated and the amendments of crucial ASAs for the potential entrants from both the Philippines and its bilateral partners were made. When PAL was placed under receivership in 1999 and underwent a

Figure 5.10 Number of online international air carriers: 1990 to 2017



Source of basic data: CAB

rehabilitation program due to the effects of the Asian financial crisis,⁴² it recommended the review of the air agreements with Taiwan, South Korea, Hong Kong, and Singapore to ensure its viability, to level the playing field given PAL's bankruptcy and downsizing.⁴³

Under the Arroyo administration, the Philippines pursued air talks for additional seats and frequency entitlements with Singapore, Brunei, Macau, and South Korea from August 2001 to November 2001. In the case of the Philippine-Singapore ASA, both States agreed to change the designation policy from dual to multiple designation, enabling the entry of other Philippine carriers such as Cebu Pacific in 2005, SEAIR, and Air Phil Express in 2010. On the side of Singapore, new entrants included Tiger Airways and Jet Star Airways. The CAB prioritized other regional hubs like Hong Kong, South Korea, and Japan in order

to generate the fastest increase in access for tourism and to capitalize on the global network of air carriers that target foreign tourists from the European market.

From 1995 to 2017, the industry witnessed the entry of new players, both full service carriers (FSCs) and LCCs, and the exit of some other carriers.⁴⁴ Amidst the exit of these legacy carriers, the Philippine market became a relatively attractive ground for LCCs such as Jin Air, Jeju Air, Air Busan from South Korea, Tiger Airways and Jet Star Airways from Singapore. Among the new entrants, Philippine air carriers Cebu Pacific and Philippines AirAsia became the most aggressive contenders against the monopoly or dominant positions of the incumbents, either PAL or a foreign air carrier, especially in the Asian markets. Not all LCCs were established as new airline companies, as in the case of Cebu Pacific and Philippines AirAsia, to challenge the

40 Based on the distribution of regional travelers data from the Department of Tourism. The data are collected from the accommodation establishments and exclude visitors using homes of friends and/or relatives during their travels

41 Based on the Malacanang-approved National Tourism Development Plan 2016-2022, April 2017.

42 In 1997, PAL's management bought 34 new planes, financed largely by debt, as part of its re-fleeting and modernization program. But PAL had to declare bankruptcy as a result of the Asian financial crisis in 1998. Its fleet reduction from 54 to 22 planes led to a net loss of 1.2 million seats in the international market.

43 PAL argued that the other Asian airlines were "poaching" (Arpon, Aquino & Baetiong, 2000) passengers from PAL, and that Filipinos bound for the US were flying on these airlines from Manila instead of the direct flights by PAL to Los Angeles and San Francisco. PAL claimed that this was a violation of the so-called "Sixth Freedom Traffic Right" defined by the 1944 Chicago Convention.

44 These carriers - Swiss Air, British Airways, Pakistan Airlines, Garuda Indonesia, Lufthansa - made an exit due to various reasons - bankruptcy, consolidations and mergers, and high cost of doing business in the Philippines relative to other destinations.

legacy carriers. The legacy carriers set up their own subsidiaries of LCCs or infused investments in existing LCCs as response to the threat posed by those LCCs in the broader regional aviation market and not just in the Philippines.

Market share

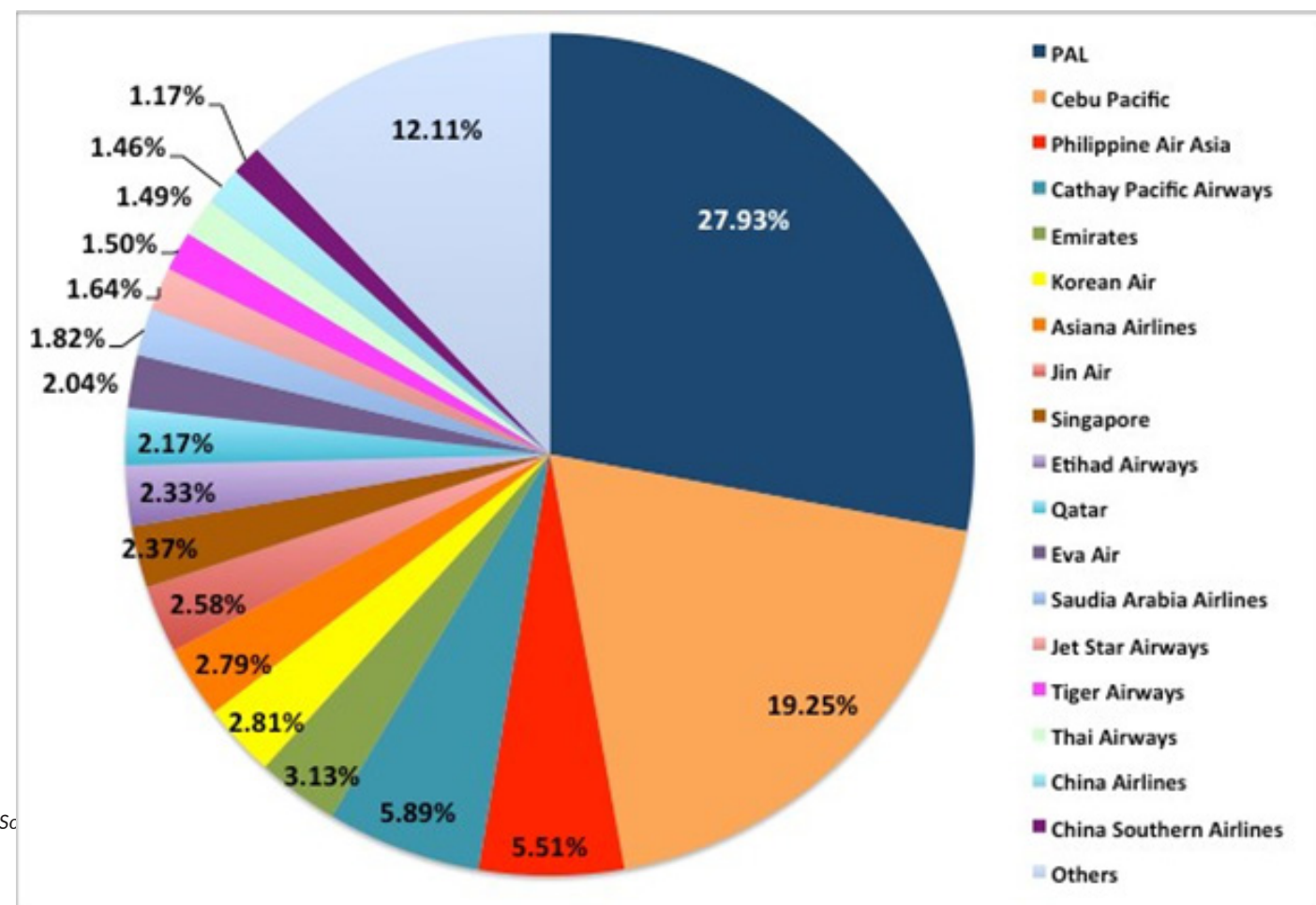
In 2017, the combined volume of Philippine air carriers represented 52.9 percent of the total market of 24.6 million⁴⁵ passengers, slightly higher than the 52.0 percent share in 2016. PAL had the largest market share of 52.7 percent of total passenger volume flown by Philippine air carriers in 2017, slightly lower than its 52.9 percent share in 2016.⁴⁶ Cebu Pacific ranked second with 36.4 percent share, lower than its 38.5 percent record in 2016.⁴⁷ Philippines AirAsia on the other hand captured 10.4 percent,

higher than its 8.0 percent share in 2016, indicating its aggressive penetration of the industry.

In 2017, as shown in **Figure 5.11**'s ranking of carriers according to individual brands, PAL was the market leader with 27.9 percent share followed by Cebu Pacific (19.2 percent), Cathay Pacific Airways (5.9 percent), Philippines AirAsia (5.5 percent), Emirates Air (3.1 percent), Singapore Airlines (2.8 percent), Qatar Airways (2.8 percent), and Korean Air (2.6 percent). Their combined market shares accounted for 70.0 percent of the total market in 2017.

PAL was able to maintain leadership given its product and service enhancements and its unique advantage of providing the only nonstop service from the Philippines to mainland USA, Canada, and recently to

Figure 5.11 Market share distribution in the international passenger market by airline brand, 2017



45 This is an adjusted number to include the passenger traffic of new entrant Turkish Airlines in the Manila-Istanbul city pair in 2015. The airline did not have any data submission with CAB. The authors derived the data for Turkish Airlines for the years 2015-2017 from the OAG database.
 46 Based on the CAB data, the combined market shares of PAL and PAL Express in 2016 reached 53.5%. It seems that PAL Express did not have any flights because there was no record of passenger traffic volume for PAL Express in 2017.
 47 In 2017, the combined market shares of Cebu Pacific and CebGo reached 36.8%. CebGo did not have any record of operations in 2016 per CAB data.

Auckland, New Zealand. In the Trans-Pacific market, PAL has substantial capacity and market shares of 35 percent and 39 percent, respectively, relative to its competitors, namely, Eva Air, Cathay Pacific, Korean Airlines, Asiana Airlines, United Airlines, All Nippon Airlines, Delta Airlines, China Airlines, China Southern, Japan Airlines, and Air China.

Cebu Pacific has emerged as the airline that has successfully gained significant market share over the years. In 2001, when it launched its first international flight to Hong Kong, it captured only 0.14 percent of the international passenger market. By 2006, its market share had risen to 4.2 percent as a result of its aggressive expansion following the amendments of bilateral air agreements under the Arroyo administration. Ten years later, at the end of 2016, Cebu Pacific captured 20.0 percent of the international passenger market. The slight decline to 19.2 percent in 2017 was due to the slower growth of 7.7 percent in passenger traffic compared to its previous years' double digit growth records.

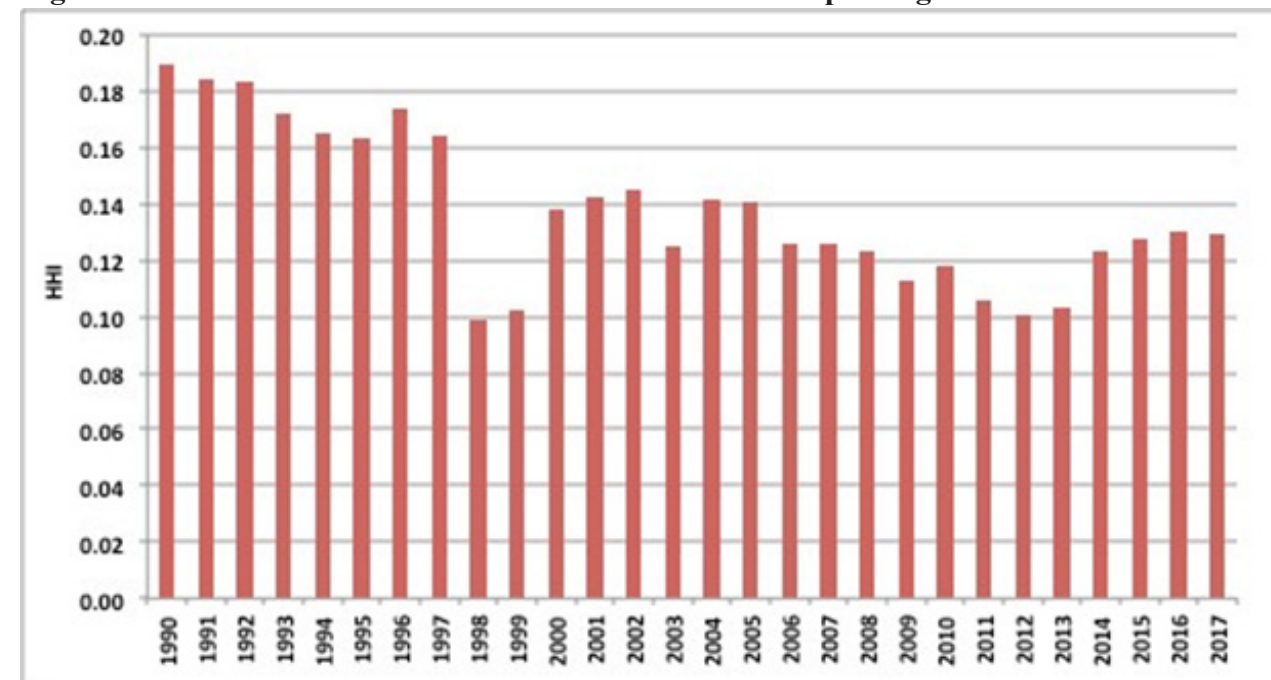
Philippines AirAsia poses stronger competition against PAL and Cebu Pacific and foreign air carriers in Asian routes as evidenced by its passenger traffic growth of 48.6 percent from 2016 to 2017 and its

market share expansion from a meager 0.7 percent in 2010 to a high 5.5 percent in 2017, making it as the fourth largest international air carrier in the Philippine air transport market, next only to Cathay Pacific.

Market concentration and intensity of competition

Overall, the international air transport market is characterized as monopolistically competitive based on the values of the HHI. **Figure 5.12** shows that market concentration drastically declined in 1998 due to the decline in PAL's market shares from 37.3 percent in 1997 to 23.5 percent in 1998 due to the Asian financial crisis. Its recovery in 2000, together with the increases in market shares of foreign carriers from South Korea and Taiwan, led to higher market concentration until 2005. The aggressive expansion of Cebu Pacific from 2006 onwards, following the amendments in the agreements with Singapore, South Korea, Japan, Hong Kong, among others, significantly contributed to the increased competition in the international air transport market. The HHI values reached a record low level of 0.101 in 2012 from 0.140 in 2005. During this same period, PAL's market share declined from 32.6 percent in 2005 to 23.6 percent in 2012. Cebu Pacific's share on the

Figure 5.12 Measures of concentration in the international passenger market: 1990 to 2017



Source of basic data: CAB

other hand jumped from 2.3 percent in 2005 to 16.3 percent in 2012.

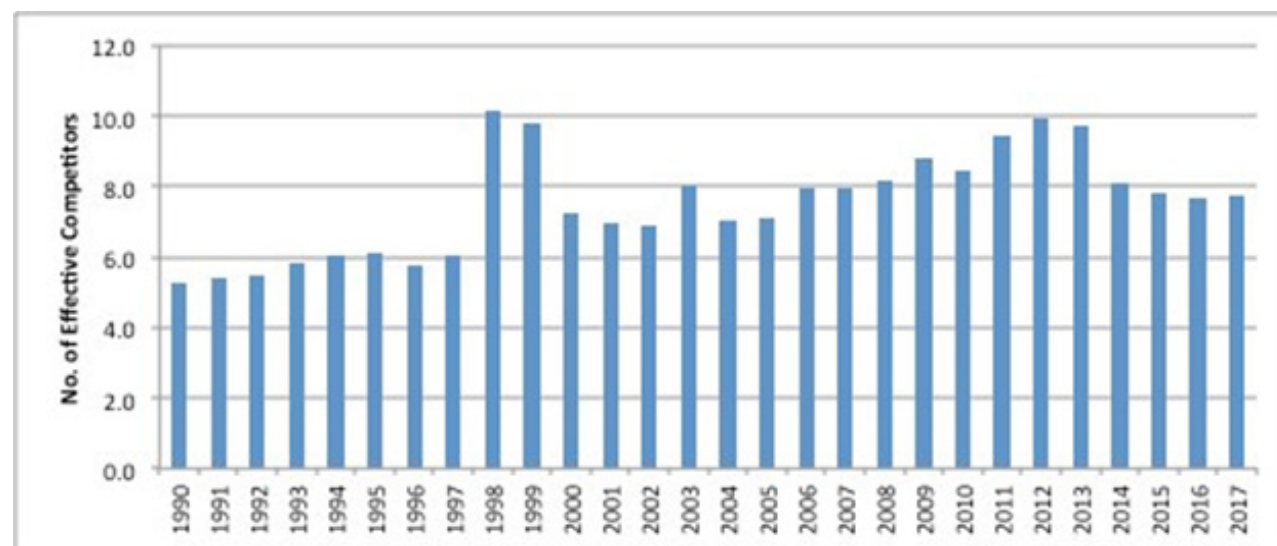
From 2013 to 2017, the Philippine air carriers as a group gained stronger position as evidenced in their higher market shares from mounting more international flights to existing and new destinations. The market shares of foreign air carriers remained relatively stable although some recorded lower market shares due to the competition from LCCs. Philippine carriers gained broader market access in the US and EU markets following the country's compliance with ICAO recommendations that removed the significant safety audit findings on Philippine aviation from 2008-2013 and the upgrade from the US FAA. This was a turn-

around for the Philippines because during 2008-2013 Philippine air carriers were not allowed to increase their capacity in the US market, a primary market for PAL.

In 2017, the number of effective competitors reached 7.75 or roughly eight players – five FSCs and 3 LCCs, namely PAL, Cebu Pacific, Cathay Pacific, Philippines AirAsia, Emirates Air, Korean Air, Jin Air, and Singapore Airlines (**Figure 5.13**) This is in contrast to the situation in 2007 when only Cebu Pacific made it to the circle of effective competitors in the market.

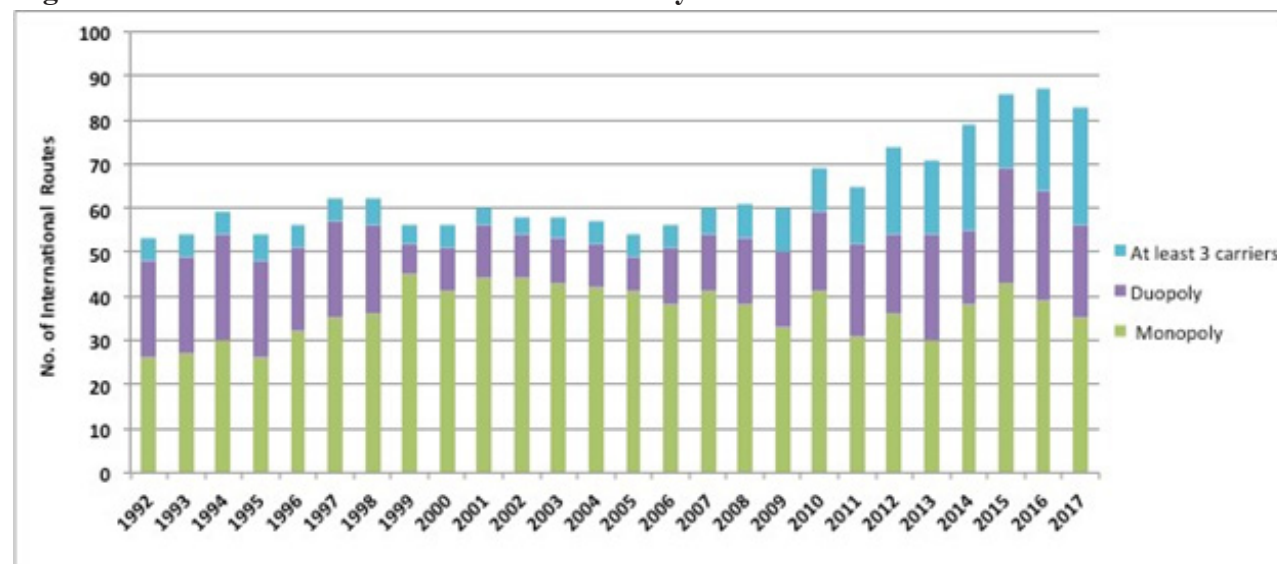
From 1992 to 2017, the number of international air routes or city pairs served by at least one Philippine or foreign carrier

Figure 5.13 Number of effective competitors in the international air transport market: 1990 to 2017



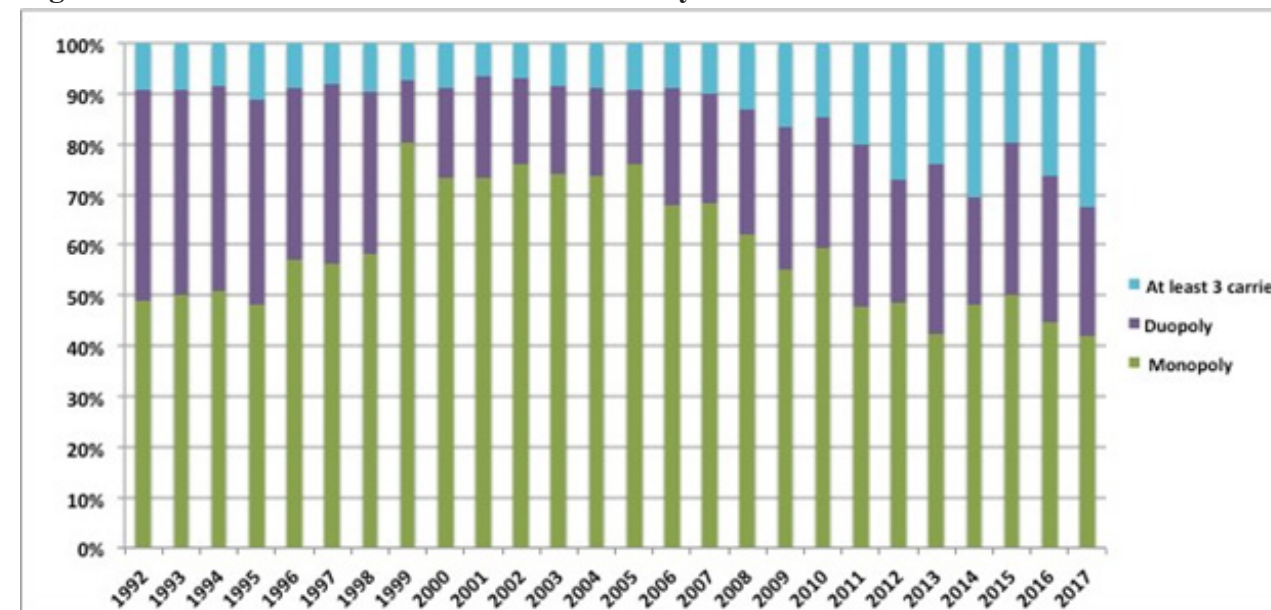
Source of basic data: CAB

Figure 5.14 Number of international air routes by number of air carriers



Source of basic data: CAB

Figure 5.15 Breakdown of international routes by the number of air carriers



Source of basic data: CAB

increased from 53 to 83 (**Figure 5.14**), heavily influenced by: (i) the entry and aggressive expansion of LCCs particularly Cebu Pacific; (ii) entry of new foreign airlines Turkish and Ethiopian servicing new routes (i.e., Istanbul, Addis Ababa) resumption of flights previously serviced by FSCs like PAL (i.e., London, Phuket); (iii) higher utilization of secondary airports (i.e., Cebu, Clark, Kalibo, Iloilo and Davao for new flights to and from highly travelled routes such as Hong Kong, Singapore and Incheon); and (iv) the conversion of charter flights introduced under CAB Resolution 23 s. 2005 in Kalibo and Clark into regular scheduled commercial services.

From 2005 to 2017, the number of monopoly routes declined from 41 (75.9 percent share of the routes) to 35 (42.2 percent share of the routes), respectively as shown in **Figures 5.14 and 5.15**. On the other hand, during the same period, the number of duopoly routes increased from eight to 21 while those routes served by at least three carriers significantly jumped from five to 27. These changes were driven by the amendments of air agreements, the official designation of additional Philippine carriers to mount international flights, and the entry of LCCs from Malaysia, Singapore, and Korea. Meanwhile, direct services to long haul markets such as US and Europe continue to be monopolized by PAL. While competition in terms of the increase in the

number of players was enhanced in routes previously monopolized by PAL or by a foreign air carrier, the market witnessed the rise of new monopoly routes in recent years, primarily those introduced in the secondary gateways of Clark, Cebu, Davao, Iloilo, Kalibo and Puerto Princesa. Similar to the experience of Cebu, the other gateways will experience more competition and benefit from it with the development of tourism products and services and trade linkages.

The highly contested routes are the most heavily travelled routes, largely the Asian city pairs with Manila as the point in the Philippines for the airline operations. The Asian carriers connect the Philippines to various destinations where direct services are not available. Competition has become more intense as revealed by the HHI values across the three time periods for most of the Top 50 routes ranked according to passenger volume in 2017 (**Table 5.3**).

From 2007 to 2017, the market structures have evolved from monopoly to oligopoly in Middle Eastern routes heavily used by overseas Filipino workers and Philippine residents travelling to European destinations and beyond. Cebu Pacific has already challenged the incumbent PAL and Middle Eastern carriers in routes such as Manila-Dubai, Manila-Doha, and Manila-Kuwait, thereby reducing market concentration. Middle Eastern FSCs have code share

Table 5.3 International route competition intensity: 1997, 2007 and 2017

	CITY PAIR/ROUTE	1997	HHI	2007	HHI	2017	HHI
1	MNL-HK	1,518,705	0.35	2,088,942	0.41	2,766,199	0.33
2	MNL-SIN	572,109	0.56	902,183	0.45	2,123,206	0.21
3	MNL-ICN	599,129	0.27	919,168	0.32	1,629,547	0.22
4	MNL-TYO	292,370	0.54	349,097	0.60	1,357,394	0.24
5	MNL-TPE	616,900	0.29	524,613	0.32	1,159,849	0.25
6	MNL-DXB	80,324	0.57	448,481	1.00	1,048,279	0.47
7	CEB-ICN			184,535	0.51	896,815	0.19
8	MNL-BKK	250,085	0.40	508,370	0.36	895,220	0.35
9	MNL-DOH	39,318	0.50	251,889	1.00	663,506	0.62
10	MNL-AUH	27,615	0.69	94,336	1.00	614,502	0.88
11	MNL-RUH	231,988	0.63	146,023	1.00	491,719	0.42
12	KLO-ICN*					475,197	0.36
13	MNL-KUL	108,310	0.45	182,739	0.58	460,337	0.32
14	MNL-SYD	156,075	0.50	129,753	0.54	429,713	0.34
15	MNL-CAN			19,217	0.50	383,359	0.59
16	MNL-LA	281,214	1.00	306,671	1.00	376,386	1.00
17	MNL-PVG			121,889	0.73	358,814	0.27
18	CEB-PUS			26,084	1.00	356,414	0.50
19	MNL-KIX	109,567	0.78	178,841	0.51	350,916	0.32
20	CRK-ICN			9,681	1.00	347,731	0.39
21	CEB-HK	63,897	1.00		0.64	343,681	0.61
22	MNL-KWI	46,125	1.00	266,550	1.00	329,233	0.40
23	CEB-SIN	49,024	1.00	102,817	0.50	283,304	0.21
24	MNL-PEK	2,511	1.00	122,372	0.57	261,057	0.44
25	MNL-SFO	191,352	1.00	32,305	1.00	256,707	1.00
26	MNL-PUS			254,815	1.00	243,294	0.39
27	MNL-NGO			55,642	1.00	242,387	0.31
28	MNL-JED	112,396	0.54	124,612	1.00	236,992	0.54
29	MNL-GUM	143,570	0.91	55,597	0.37	227,530	0.38
30	CEB-TYO	68,448	1.00	214,809	1.00	226,746	0.68
31	MNL-MCT	21,198	1.00	98,472		225,995	1.00
32	MNL-SGN	35,033	0.79			218,714	0.48
33	MNL-CA	68,702	0.53		1.00	214,267	1.00
34	CEB-TPE	3,917	1.00	75,332	1.00	203,885	0.40
35	MNL-XMN	4,288	1.00	1,342	0.52	199,629	0.42
36	MNL-IST			128,070		197,626	1.00
37	MNL-MFM				0.76	197,379	0.33
38	KLO-PVG			60,704		194,865	0.50
39	MNL-DMM					194,761	0.59
40	CRK-HK					189,811	0.61
41	CRK-SIN**					151,158	0.50
42	MNL-CGK	82,566	1.00		0.51	148,036	0.50
43	MNL-AMS	56,636	0.92	54,835	1.00	138,526	1.00
44	MNL-BWN	80,159	0.51	212,078	1.00	128,055	0.52
45	MNL-LHR	101,506	0.50	69,274		123,278	1.00
46	MNL-DPS					118,466	0.51
47	KLO-PUS					116,196	0.50
48	MNL-FUK	56,049	1.00		1.00	114,543	0.58
49	MNL-BAH	25,549	0.99	61,230	1.00	104,548	1.00
50	CRK-DXB			216,004		102,515	1.00

See Annex B for the airport code description.
Source of basic data: CAB

agreements with PAL that allow them to generate traffic through PAL as marketing carrier. The market share of Cebu Pacific is still single digit in the Manila-Doha route, where Qatar Airways continues to serve as dominant firm with 77 percent share of total passenger traffic.

In the Philippine-Asia city pairs (particularly Singapore, Japan, China, Taiwan, Hong Kong and South Korea), most no longer have dominant carriers due to the more intense competition between FSCs and LCCs, and among LCCs themselves. There is a higher degree of competition in the Northeast Asian markets, the primary markets for inbound tourism for the Philippines, compared to some Southeast Asian routes (i.e., Saigon, Jakarta, Denpasar). The tourism industry has gained from the liberalization of international air access to markets such as Korea, now ranked as the number one tourism market of the Philippines. The strong competition among the carriers, as evidenced by international flights in Cebu-Incheon, Kalibo-Incheon, Clark-Incheon, is providing further stimulus to tourism growth for countryside destinations. The Manila-Incheon route is quite competitive but the infrastructure constraints in NAIA hamper the increase in flights. On the other hand, the secondary airports and the tourists seeking to visit provincial destinations stand to gain from the direct flights and faster travel time, as seen in the case of Boracay that was connected to South Korea via flights from Kalibo.

A summary

The discussions on both the domestic and international air transport markets reveal that relatively significant changes in market structures in both the domestic and international air markets have occurred in the past twenty years as a result of the reduced entry barriers following the more liberal policy regimes. Deregulation also helped tremendously in introducing more competition in the air transport market. In essence, this implies that once the liberalization mandate under EO No. 29 is

48 Certain agreements as in the case of Philippines-Turkey and Philippines-Papua New Guinea still do not provide unlimited access to secondary airports of the Philippines.

fully implemented during air talks, entry barriers in terms of air entitlements should cease to exist.⁴⁸

Based on the computed values of the HHI, there seems to be room for introducing and/or enhancing competition especially in a few more routes, particularly in the secondary gateways. The presence of competitors and the ability of customers to switch easily to suppliers at lower cost to them constrain the ability of airlines to exercise significant market power that will enable them to reduce rivalry and get a larger market share. The Philippine experience highlights the important role of the LCCs in reducing market concentration. The US experience had shown earlier that the existence of an LCC on a route was found to be a significant variable affecting fares, even more important than the number of competitors. Ros (2010) cites the work of Gillen (2006) showing the 40 percent cost advantage of LCCs relative to the FSCs in the US. In Europe, Ryanair, the most successful LCC in Europe, was reported to have close to a 60 percent cost advantage. This is what our SCP framework predicts: that higher intensity of competition would benefit consumers in terms of lower fares and greater route accessibility.

The LCC model of point-to-point traffic has challenged the hub and spoke systems wherein sunk costs are considered to be very significant for carriers, including potential entrants, thereby limiting competition and consumer benefits in terms of lower fares (Butler and Huston, 1989). Given the reduced entry barriers under liberalized and deregulated market regimes and the little sunk costs in city pairs, airlines particularly LCCs, find it easier to transfer air assets to other routes and to secondary markets for resale when the need arises. Thus, the city pairs are, therefore, considered to be examples of contestable markets (Bailey and Baumol, 1984, as cited in Ros 2010) where potential competition limits monopoly pricing.

If potential competition would constrain monopoly pricing under contestable

markets, it is therefore relevant to inquire on possible entry barriers and sunk costs that would in turn limit entry and activities of prospective players. Under market contestability, the cost of airport infrastructure development is borne by the airport operator and not by the airlines, thereby limiting the sunk costs to include start-up activities, advertising and promotions, distribution channels, organizational set-up and costs of obtaining gates and slots among others (Ros, 2010). However, there are serious entry barriers that can limit potential competition in liberalized air transport markets. These include airport infrastructure constraints (i.e., airport slots and grandfather clauses, gate allocation, limited facilities in provincial airports) and airline practices such as code sharing agreements, FFPs and mergers and alliances. This brings us to the next section which looks at the physical and institutional infrastructure that could either enhance or limit competition depending on their adequacy on the one hand, or inadequacy on the other. Airline practices such as code sharing, FFPs and the like, being beyond the scope of this study could be the subject of future review by the PCC.

VI. ROLE OF AIRPORT INFRASTRUCTURE

Airlines can move people and goods from their points of origin to points of destination only if there is complementary infrastructure to accommodate aircraft, airport facilities, passengers and cargo. Ensuring the efficient operation of airports is essential to the sustainable development of air transport in the economy (Wiltshire, 2017). Mandri-Perrott (2015) distinguishes between physical infrastructure and institutional infrastructure that are both necessary for quality service and efficient capacity utilization. We discuss first the physical infrastructure (airports), then we turn to institutional infrastructure (air traffic management infrastructure) that support commercial, scheduled, non-scheduled flights, and general aviation.

Physical infrastructure

As of August 2016, there are 215 airports in the country of which 85 are government owned-and-controlled, while the rest are privately owned and operated. Of the 85 government airports, 11 are designated as international airports, 14 are principal class 1 airports, 19 are principal class 2 airports, and 41 are community airports.⁴⁹ Of the 11 international airports, NAIA and Mactan-Cebu International Airport (MCIA) are operated and managed by independent airport authorities, the Manila International Airport Authority (MIAA) and Mactan-Cebu International Airport Authority (MCIAA), respectively.⁵⁰ The Clark International Airport Corporation manages and operates the Clark International Airport. The CAAP manages and operates the rest of the government-owned-and-controlled international and domestic airports. In 2015, the 85 government airports handled at least 70 million passenger movements, both incoming and outgoing.

Ninoy Aquino International Airport (NAIA)

NAIA was the busiest of all government-owned airports with a record of 42 million passenger movements in 2017. The next busiest airports were Mactan-Cebu, Davao, Kalibo, Iloilo, Laguindingan, Bacolod, Puerto Princesa, Zamboanga, Clark, Tagbilaran, and General Santos. These had combined passenger movements of 28.2 million in 2017. In terms of cargo volume in 2015, NAIA handled 584 million kilograms of air cargo, equivalent to 67% of the total volume across the 11 international airports of the country. Air cargo volume jumped by an average of 34.7 percent from 2010-2015. The four airports of NAIA, MCIA, Davao, and Clark accounted for 87.6 percent of total air cargo movements across the 11 international airports. (Rodolfo, 2017).

The NAIA plays a very critical role in the air transport industry as it serves as the country's principal international gateway.

It operates four passenger terminals and is the hub of the two dominant players PAL and Cebu Pacific. The Manila International Airport was renamed as the Ninoy Aquino International Airport (NAIA) by Republic Act No. 6639 (August 17, 1987).

Executive Order No. 778, as amended by Executive Order No. 903 mandates the MIAA⁵¹ to:

- Formulate and adopt for application in the airport internationally acceptable standards of airport accommodation service;
- Upgrade and provide safe, efficient and reliable airport facilities for international and domestic air travel;
- Help encourage and promote international and domestic air traffic in the country as a means of making the Philippines a center of international and domestic air travel; and
- Perform other functions as maybe provided by the law while maintaining financial viability as an autonomous government entity.

Terminal congestion. The main issue affecting the growth and efficiency of the air transport industry is congestion at the NAIA.⁵² The country's principal international gateway's current capacity consisting of the runways and terminals cannot cope with the rising demand for the airport's facilities. The NAIA handled 42 million passengers in 2017, way beyond its rated capacity of 31.5 million passengers per year. Issues of safety, passenger inconvenience, and foregone business revenues are outstanding pressing concerns because of inadequate facilities. While the government recently completed the Php 1.3 billion rehabilitation of Terminal 1, which renovated the terminal interiors and provided wider passenger movement areas, JICA (2012) believes that future demands on the terminal facilities cannot be accommodated due to capacity constraints.

Runway congestion. NAIA has two intersecting runways that limit the type of aircraft that can use each runway. International arrivals use only Runway 06/24. This runway is 3,737 meters long and 60 meters wide. The other runway is Runway 13/31, which is 1,995 meters long and 45 meters wide. For safety reasons, arrival on Runway 13/31 is prohibited but it was recently activated only for departures, allowing movements concurrently on both runways. Runway congestion is explained by (i) the configuration of the runways, composed of two intersecting runways, the present taxiway layout and (ii) inefficient runway utilization. The lack of rapid exit taxiways impacts negatively on runway occupancy times. It is said that the congestion at NAIA contributes to airline losses. Based on the manifesto of the Advocacy for Dual Airport Priority dated April 22, 2016, the Arangkada Policy Brief No. 6 reported that for air carriers like PAL, losses reached around Php 80,000 for every 30-minute delay in flights due to runway congestion in NAIA.

Inefficient runway utilization. Different types of planes – commercial planes, cargo planes, general aviation, and military planes – use the runways with each type competing for use of a very scarce resource. General aviation is especially problematic because not only does it compete with commercial flights for use of limited runway capacity, it also has longer runway occupancy times because of general aviation's smaller engines. Runway utilization is inefficient as indicated by the low average number of passengers per aircraft movement relative to other gateway airports (JICA, 2012).

With respect to runway utilization, the government has limited the number of movements to 40 per hour. According to the Arangkada Policy Brief No. 6, "the House Transportation Committee was informed that CAAP has told airline companies that NAIA

⁴⁹ Class 1 airports are those capable of servicing jet aircraft with a capacity of at least 100 seats. Class 2 airports are airports capable of serving propeller aircraft with a capacity of at least 19 seats. Community airports are primarily used for general aviation.

⁵⁰ MIAA was created by Executive Order No. 778 (s. 1982) and MCIAA by R.A. No. 6958, dated July 31, 1990. ⁵³ Preliminary data for 2017.

⁵¹ Source: MIAA, http://miaa/index.php?option=com_content&view=category&layout=blog&id=27&Itemid=131 (accessed on June 24, 2018)

⁵² Iris Gonzales in her Philippine Star column (May 29, 2018) reported that the "NAIA Consortium, comprised of the country's biggest conglomerates, has submitted an unsolicited proposal to redevelop and operate NAIA for a concession period of 15 years at a cost of roughly Php 105 billion and expand its annual capacity to 65 million passengers per annum from 31 million at present". She cited a traffic study that showed that "the current congestion at the NAIA gateways can be greatly improved by increasing the capacity through operational change such as reconfiguring the gateway layout to increase the number of checkpoints and installation of vehicle portal scanners to reduce vehicle inspection time and increase vehicle throughput."

could only handle a maximum of 40 arriving and departing flights per hour. However, a report from the Airport Coordination Australia (ACA) showed that the number of arriving and departing flights could go to as high as 48 per hour. ACA is a foreign firm hired by MIAA and the airline community to schedule flights in such a way that flights do not arrive or depart at the same time. CAAP asserted, however, that the flights need to be separated or put on hold on the ground or in the air, a situation that results in cascading delays that affect flights set to take off or land in other time slots. Interview with MIAA indicated that the limitation of aircraft movements to 40 per hour was due to safety considerations.⁵³

In comparison, Morris (2017) reports that Mumbai's Chhatrapati Shivaji International Airport with its 12,008-foot runway has an official capacity to handle 46 take-offs and departures an hour, and on November 24, 2017 it had as many as 50 movements in an hour.⁵⁴ In this regard, IATA has proposed the optimization of the current capacity of NAIA through a more efficient air traffic control and improvements in the runway system, particularly the addition of rapid exit taxiways (Goel, 2018).⁵⁵ IATA believes that these measures will increase throughput from the present 40 movements per hour to 51 or even 56 movements per hour. The resulting increase of 40% in capacity is expected to reduce congestion at the NAIA.

Another factor contributing to congestion at NAIA is the practice of domestic airlines to mount most of their flights during the day. JICA (2012) documented that flights were highly concentrated during the core hours of 7 a.m. to 4 p.m. This is because most provincial airports lack instrument landing system equipment for handling night flights and thus, airlines cannot spread their flights throughout the day. The Arangkada Policy Brief No. 6 mentioned that in 2016

53 Currently, aircraft movement in NAIA is set at 40 movements per hour. MIAA operates 22 hours per day 7 days a week; two hours are reserved for maintenance. Source: Interview with MIAA on May 3, 2018

54 Source: Hugh Morris, "An airport just broke the record for most flights handled in a single day" <https://www.telegraph.co.uk/travel/destinations/asia/india/articles/busiest-airport-in-world-aircraft-movements/>

55 From a letter of Vinoop Goel Regional Director Members and External Relations Airport, Passenger, Cargo and Security Asia-Pacific to the authors, dated August 30, 2018, providing comments to the initial draft of the paper.

56 Rodolfo (2017) said that IATA raised these concerns during the period 2010-2013 and again on 2016.

57 Australia seeks to implement the OneSky by 2021. We thank Col. Edmundo Gammad for pointing this out during the PCC meeting on August 1, 2018.

the government invested in such facilities in the airports of Caticlan, Legaspi, Roxas, and Dumaguete. In 2017, the government embarked on the night rating of regional airports including Cotabato, Dipolog, and Ozamis in Mindanao.

In addition, IATA (2015) noted several other factors that induce the sub-optimal use of the runways: lack of radar; non-standard air traffic control procedures; poor in-route communications (e.g., frequency congestion, reliance on radioed messages from pilots, separate locations of aerodrome control unit and the approach control unit); poor surface conditions of the runways; air traffic management issues related to extended holding, vectors and delays.⁵⁶

With regard to air traffic management, the recently inaugurated Communications Navigation Surveillance/Air Traffic Management (CNS/ATM) system under CAAP is expected to help decongest NAIA, increase on-time performance of airlines, improve passenger experience, and promote safety. There is an ongoing dialogue between CAAP and the Philippine Air Force about the possibilities of pursuing the OneSky⁵⁷ program for the Philippine air space. The OneSky program seeks to integrate the civilian and military airspace where there will be a new harmonized traffic management system for both civilian and military air traffic movement. This system seeks to improve outcomes in terms of operational and cost efficiency, lesser time of delays for travelers, and reduced carbon footprints for aviation.

On the safety aspects of airport operation, the main issue concerns the need for a major investment in ATM infrastructure. For example, airside ground safety hazards remains in addition to present reliance on tactical control and controller intervention, inefficient ATC/ATM procedures and

practices, and the lack of accurate and up-to-date airfield charting.⁵⁸

Other international airports in the country

Other international airports in the country do not have the terminal capacity and scale of demand to support the transfer of flights from NAIA. It was only in June 2018 that MCI's modern second terminal was inaugurated. MCI Terminal 2 with a design capacity of 4.5 million passengers per annum was renovated to accommodate almost eight million passengers per annum. MCI Terminal 2, a new modern terminal, was brought to service in June 2018 with a design capacity of 12.5 million passengers per annum.⁵⁹

In the case of Clark as an alternate airport, it does not have the facilities, including terminal capacity, to support possible shifts of operations by air carriers operating in Manila. It was only in 2018 when the government started construction of a new passenger terminal building in Clark International Airport. It involves the construction of a new 82,600-square-meter passenger terminal building with a design capacity of eight million passengers per annum. As of May 2018, ongoing pre-construction activities consist of procurement and preparation of detailed engineering design. Construction is ongoing with a reported completion rate of 3.4 percent as of April 30, 2018.⁶⁰

A summary

The congestion in NAIA and poor infrastructure support in the provincial airports (i.e., the lack of night landing facilities, modern radar and other equipment that would allow airlines to spread some of their domestic flights in the early mornings and evenings) and the IATA findings have constrained the operations

of airlines, with undue inconvenience to passengers and business losses to firms. The CAB has recently expressed its misgivings on the problem of having very inadequate airport facilities in the country. It says that the infrastructure problem is seen in many other airports in the country. There is a lack of expansion in many airports and some are simply too small to accommodate larger planes. The plans for the rehabilitation of regional airports/new regional airports have recently been scrapped by the current administration without presenting any clear feasible alternative.⁶¹

These resulted in significant adverse audit findings by ICAO, downgrade of the Philippines by US FAA in 2008, and EU blacklisting of Philippine air carriers. In response, RA No. 9497 was enacted in 2008 creating the CAAP as an independent regulatory body. The government and the air transport industry addressed the ICAO audit findings and subsequently the US FAA upgraded the Philippines to Category 1. The EU followed suit with the removal of Philippine carriers from the EU black list.

However, congestion of NAIA terminals and runways have remained outstanding issues. The congestion impacts not only the operations of the domestic airlines but also those of foreign airlines. More foreign airlines could be calling on NAIA were it not for this problem. The poor state of airport infrastructure has also been used as an excuse in not following a more liberal and open air transport policy as discussed in Section 3 (policy and regulatory framework). Congestion has also impacted the efficient allocation of slots. Limited airport capacity has prevented other airlines to get new or additional slots in NAIA. Cebu Pacific underscored the capacity constraint in airports as key issue. Congestion in NAIA has made it difficult to open new routes or increase flight frequencies. In order to maximize the limited slots allocated to them,

58 Pointed out by Goel (2018).

59 Source: <http://megawide.com.ph/mactan-international-airport> (accessed June 24, 2018)

60 Source: https://ppp.gov.ph/?ppp_projects=clark-international-airport-project-engineering-procurement-and-construction-epc (accessed June 24, 2018)

61 Interview with CAB, April 4, 2018

Cebu Pacific has purchased larger aircrafts to serve more passengers per slot.⁶²

To address capacity constraints, the government is reviewing some options for a new, bigger, and more modern airport to serve rising demand that NAIA cannot obviously meet effectively and efficiently.⁶³ Several proposals have come to the fore: (a) development of Clark International Airport as the twin international gateway of NAIA,⁶⁴ (b) unsolicited proposal submitted by San Miguel Corporation to build a large modern international airport in a 2,500 hectares area in Bulacan entirely with private resources,⁶⁵ and (c) unsolicited proposal submitted by a consortium of investors and the provincial government of Cavite for an international airport in Sangley, Cavite.⁶⁶

After a short comment on the issues on the institutional infrastructure, which are basically the concerns of the DOTr and CAAP, we turn to an important aspect of the institutional infrastructure supporting the airline industry, namely, slot allocation in NAIA.

Institutional infrastructure⁶⁷

Arangkada Philippines Policy Brief No. 6 pointed out some issues in the institutional infrastructure that impact negatively on the air transport industry. These pertain to the weak link between airport planning, budgeting, and implementation and to weak and ineffective regulatory infrastructure. The first issue was a reiteration of a finding about the absence of an integrated system for planning, budgeting, building, and operating transport infrastructure (World

Bank, 2009). The ADB (2009), on the other hand, noted the very limited coordination among government agencies responsible for transport infrastructure. Lack of coordination happens within departments and at the inter-department level. Both DOTr and CAAP have overlapping functions in airport planning, budgeting, programming, and implementation. On the second issue, CAAP has conflicting responsibilities as regulator and operator of airports, and as investigator of air transport incidents all at the same time. Arangkada Philippines Policy Brief No. 6 said that these conflicts have made the CAAP weak as a regulator and ineffective as an operator of airports. As a regulator, it is responsible for non-economic regulatory oversight, especially safety but at the same time, it regulates what it also operates, while also being tasked with the responsibility to conduct accidents of air incidents (Rodolfo, 2017).⁶⁸

The takeaway message here is that the weaknesses in airport physical and institutional infrastructure affect in a very negative way how the air transport industry will operate and evolve in response to changing and rising demands for air transport. Such weaknesses and inadequacies give rise to competition issues in the industry.

Slot allocation

An integral part of the institutional infrastructure is the assignment slots. Airlines must obtain slots, boarding gates, and runway space for landing, embarking and disembarking passengers, and take off. The IATA 2017 Worldwide Slot

Guidelines defines an airport slot (or 'slot') as a permission given by a coordinator for a planned operation to use the full range of airport infrastructure necessary to arrive or depart at a Level 3 airport on a specific date and time.⁶⁹ A Level 3 airport is one where capacity providers have not developed sufficient infrastructure, or where governments have imposed conditions that make it impossible to meet demand. A coordinator is appointed to allocate slots to airlines and other aircraft operators using or planning to use the airport as a means of managing the declared capacity (IATA 2017). The IATA stressed the importance of managing efficiently airport slots especially where the available airport infrastructure, as in NAIA, is insufficient to meet the demand of airlines and other aircraft operators.⁷⁰

A set of allocation rules contained in the Worldwide Slot Guidelines (WSG) guides an airport coordinator in order to manage limited airport capacity. The use of limited airport infrastructure is maximized through coordination (IATA, 2017). The Philippine slot guidelines adhere to the key principle enunciated by IATA (see **Box 4**).⁷¹

All activities involving slots, including the determination of historic slots, are in Universal Time Coordinated (UTC) or GMT, unless otherwise agreed.

Slot allocation, that is, allocating time of arrival and departure of aircraft, is a critical component of the air transport industry. Traditionally viewed as a back-room activity, coordinating and allocating flights have become a critical activity because of capacity constraints, some of them severe, where development of air traffic demand has outpace the development of airport

Box 4. Key principles of slot allocation at a Level 3 airport in the IATA WSG

- a. Slots are only allocated for planning purposes by a duly appointed coordinator at a Level 3 airport.
- b. Slots are only allocated to airlines and other aircraft operators.
- c. An airline or other aircraft operator must have a slot allocated to it before operating at a Level 3 airport. Certain types of flight (for example, humanitarian or state flights) may be exempt or subject to special local procedures.⁷²
- d. Airlines and other aircraft operators must not intentionally operate services at a significantly different time or use slots in a significantly different way than allocated by the coordinator
- e. A series of slots is at least 5 slots requested for the same time on the same day-of-the-week, distributed regularly in the same season, and allocated in that way or, if that is not possible, allocated at approximately the same time.
- f. An airline is entitled to retain a series of slots on the basis of historic precedence.
- g. Historic precedence applies to a series of slots that was operated at least 80% of the time during the period allocated in the previous equivalent season.
- h. Historic slots may not be withdrawn from an airline to accommodate new entrants or any other category of aircraft operator. Confiscation of slots for any reason other than proven intentional slot misuse is not permitted.
- i. Slots may be transferred or swapped between airlines, or used as part of a shared operation, subject to the provisions of these guidelines and applicable regulations.
- j. Coordinators must be functionally and financially independent of any single interested party and act in a neutral, transparent and non-discriminatory way.
- k. The allocation of slots is independent from the assignment of traffic rights under bilateral air service agreements.
- l. Airlines and coordinators must use the IATA Standard Schedules Information Manual (SSIM) message formats for communications at Level 3 airports.
- m. Slot times are based on the planned on-block (arrival) and off-block (departure) times. Actual times of arrival and departure may vary due to operational factors.

Source: IATA (2017)

⁶² Interview with Cebu Pacific on May 2, 2018

⁶³ IATA's infrastructure solution for the Metro Manila region is the development of a new greenfield airport with sufficient capacity to meet Manila's aviation needs and is situated no greater than 50km from the city center (Goel 2018).

⁶⁴ The best option for the Philippines's aviation scene would be to build a gateway in the Clark Freeport complex as a main entry for all international travels, and to rehabilitate the Ninoy Aquino International Airport (Naia) as a potential secondary airport in the future, an official of a consortium vying for the right to redevelop the Naia said (<https://businessmirror.com.ph/clark-naia-dual-gateway-strategy-best-option-for-phl-gmr-megawide/>, April 9, 2018)

⁶⁵ San Miguel Corporation's (SMC) unsolicited proposal to build a Php735.6-billion international airport in Bulacan has been approved by the National Economic and Development Authority (NEDA) board on Wednesday, April 25, 2018, the agency said in a statement (<https://www.entrepreneur.com.ph/news-and-events/smc-wins-neda-boardapproval-to-build-a-php735-6-b-international-airport-in-bulacan-a00222-20180426>, April 26, 2018)

⁶⁶ Taipan Henry Sy Sr. and businessman Wilson Tieng submitted a proposal to build a \$12-billion (about P623 billion) international air gateway in Sangley, Cavite (<http://businessinquirer.net/247066/group-submits-12-bsangley-airport-bid>, March 5, 2018).

⁶⁷ This section summarizes findings of the Arangkada Philippines Policy Brief No. 6.

⁶⁸ The Arangkada Philippines Policy Brief No. 6 proposes recommendations to resolve the weaknesses in institutional infrastructure, e.g., separation of the functions of regulation, operation and ownership of airports; regulation by an independent entity; creation of the National Transportation Safety Board, and others.

⁶⁹ Worldwide Slot Guidelines (2017) International Air Transport Association. Montreal - Geneva. The WSG is overseen by the IATA Joint Slot Advisory Group (JSAG), comprised of an equal number of IATA Member airlines and airport coordinators. The composition of JSAG reflects the global nature of international air transport. JSAG meets regularly to agree on proposals for changes to the WSG and to consult on the administration of the twice yearly IATA Slot Conference (SC). All changes are agreed by JSAG before being endorsed by the Heads of Delegation of the SC. This ensures that no new or changed standards or best practices can be introduced unilaterally by any airline, coordinator or IATA. The WSG is an IATA Recommended Practice (RP 1761a) as documented and recognized in the Passenger Services Conference Manual. It is recommended that IATA member airlines use the WSG as the globally recognized best practice guidance for slot allocation (IATA 2017).

⁷⁰ The International Air Transport Association (IATA) is a global trade association for airlines representing over 280 airlines and accounting for 83% of total global air traffic. Philippine Airlines, as well as many other scheduled airlines which operate services to/from the Philippines, are members of IATA. Source: IATA Representative Office, Makati City

⁷¹ Per interview with MIAA.

⁷² Sometimes such humanitarian or state flights, e.g., a legislator on a planned visit to constituents, or officials from the executive branch of government on an official visit abroad, interfere with the scheduled slots, thus resulting in delays in departure or arrival of scheduled flights. These may contribute to congestion in the airport.

capacities in recent times (Ulrich, 2005).⁷³ The hard fact is that worldwide large airports are congested and will probably stay that way (Ulrich, 2005).

Table 6.1 shows aircraft movements among the world's busiest airports in 2016, which underscores the need for efficiency in slot allocation and coordination considering the limited number of airports.

Table 6.1 World's airports ranked by 'total aircraft movements,' 2016*

Airport	Movements	Rank in 2015
Atlanta (ATL)	898,356	1 st
Chicago (ORD)	867,635	2 nd
Los Angeles (LAX)	697,138	4 th
Dallas/Fort Worth (DFW)	672,748	3 rd
Beijing Capital (PEK)	606,086	5 th
Denver (DEN)	565,503	7 th
Charlotte (CLT)	545,742	6 th
Amsterdam (AMS)	496,256	13 th
Shanghai (PVG)	479,902	15 th
Paris Charles de Gaulle (CDG)	479,199	10 th
London Heathrow (LHR)	474,983	11 th
Houston Bush Intercontinental (IAH)	470,780	9 th
Istanbul (IST)	465,289	14 th
Frankfurt (FRA)	462,885	12 th
Toronto Pearson (YYZ)	456,536	16 th
San Francisco (SFO)	450,388	20 th
Las Vegas (LAS)	448,458	8 th
New York JFK (JFK)	448,354	18 th
Mexico City (MEX)	448,181	21 st
Tokyo Haneda (HND)	445,822	19 th

Source: Airports Council International (ACI)
*preliminary, as reported in List: The world's 20 busiest airports (2016)

The IATA has issued guidelines on slot allocation called WSG, which many airports have used as a norm in slot allocation. The air transport industry as a whole follows the "80%" rule. This rule requires air carriers to use the slots, as allocated, for at least 80 percent during the given seasons, (e.g., for a summer or winter period)⁷⁴ in order to profit from the grandfather rights priority during the next equivalent season. This means that

73 Ulrich, Claus (2005) "Congestion and slot allocation" <https://www.internationalairportreview.com/article/1844/congestion-and-slot-allocation/> 16 September 2005

74 Travel seasons in the Western Hemisphere.

75 Movements" refers to the number of takeoffs and landings at an airport. <https://www.usatoday.com/story/travel/flights/todayinthesky/2017/04/19/worlds-busiest-airport-2016-s-atlantaagain/100654378/>

up to 20 percent of the allocated slots could eventually be wasted by simply not using them (Ulrich, 2005).

As a rule, the MIAA follows the guidelines established by IATA on slot allocation. Slot allocation at the NAIA is based on historical allocation and the capacity of the airport to handle aircraft movements.⁷⁵ The historical slot allocation is called "grandfather rights," "historical priorities," or "historic rights" of incumbents in various jurisdictions (Ulrich, 2005). Having operated for a longer time than new entrants, the incumbents have the advantage of having landing and take-off slots allocated to them based on some history of operation. This is the practice at the country's premier airport, the NAIA. Thus, legacy carriers possess more slots because they have operated and have continuously utilized their slot allocations for a longer period of time. New entrants only have the remaining slots to use.

The MIAA and local operators have hired an independent slot coordinator, Airport Coordination Australia to implement the slot allocation guidelines agreed upon by a tripartite committee composed of MIAA, CAB, and CAAP. The airlines submit requests for slot allocation to the independent slot coordinator who aggregates the requests and sends them to MIAA for review and approval. In general, slot allocation approved by MIAA takes into account the schedules of flights submitted during two travel seasons: winter and summer in the Western Hemisphere. **Box 5** lists IATA's recommendations that are intended to improve the procedure in slot request and approval process in NAIA. They are considered to be "consistent with best global practices" (Goel, 2018).

Based on present airport capacities, aircraft movement in NAIA is set at 40 movements per hour as pointed above. Normally, NAIA operates 22 hours per day, seven

Box 5. IATA recommendations for slot request and approval process in NAIA

- All applications for timeslots and/or changes/s thereof shall be filed with the Slot Coordinator, for the issuance of the Slot Clearance. Applications filed directly with the CAB, CAAP, or MIAA, shall not be acted upon.
- The Slot Coordinator shall expediently and within seventy-two (72) hours, coordinate the slot request against declared coordination parameters and respond to the airline with approval of the best available slot.
- The Slot Coordinator SCR response to airlines shall include the clause, "SI: Please note: slot authority may be reviewed within 72 hours by government authorities under applicable law."
- The Slot Coordinator shall provide the CAB, CAAP, and MIAA, with a report of all timeslot change/s each twenty-four (24) hours.
- The CAB, CAAP, and MIAA, shall contact the Slot Coordinator within twenty-four (24) hours should any newly allocated timeslot be of concern.
- If contacted by the CAB, CAAP, or MIAA, regarding an allocated timeslot, the Slot Coordinator shall review the initial slot application SCR and contact the airline within seventy-two (72) hours of the original slot application.

Source: Goel (2018)

days a week; two hours are reserved for maintenance.⁷⁶ The NAIA uses Runway 06/24, the longer of the two intersecting runways, for take-off and landing of domestic and international flights. The other runway, Runway 13/31, has been activated but only for departures, as noted above. In reality, only a single runway (Runway 06/24) serves the purpose of runways because Runway 13/31 (the shorter of the two intersecting runways) is only good for departures. This situation has contributed to immense congestion and very limited capacity to handle more flights. With practically only a single runway, NAIA has to optimize the allocation of slots to different airlines in view of rising demand for air travel.

However, the Centre for Aviation has reported that slot restrictions at Manila have made it difficult for NAIA to keep up with rising demand; domestic traffic at Manila has increased by only 2 percent in 2017, whereas the total domestic market

76 Currently, however, airport operation is further limited to 18 hours a day due to repair works on the runway. This has resulted in airlines needing to adjust their schedule in order to fit within the airport's operating hours. Source: Interview with MIAA.

77 <https://centreforaviation.com/analysis/reports>

78 Economist explains, December 4, 2017 <https://www.economist.com/economist-explains/2017/12/economist-explains-0>

increased by 6 percent. Thus, airport constraints have restricted growth.⁷⁷ It is acknowledged though that the problem of slot constraints is not unique to the Philippines. Rodolfo (2017) observed that slot constraints in Southeast Asian airports have motivated ASEAN-based airlines to order bigger planes like the Airbus 321 neos that have larger passenger capacity. While this leads to higher runway utilization, this approach will certainly lead to greater terminal congestion in the smaller airports in the ASEAN region such as NAIA.

Slot "banking" or hoarding is not allowed at NAIA although in the past prior to the assumption of the present MIAA management there have been reports of such practice. As an official policy, airlines cannot "hoard" or "bank" their slot allocation under the 80-20 rule. Airlines would have to utilize at least 80% of their assigned slots, otherwise they lose what they do not use.

While IATA has described the slot guidelines as "fair, neutral and transparent," in practice they help bar new entrants to the benefit of incumbents (The Economist, 2017).⁷⁸ It is not easy to dislodge incumbents from those prized slots. They can readily comply with the rule to use their slots 80 percent of the time. The Economist (2017) cites a few examples resorted to by airlines to keep their slot allocations such as "flying smaller planes than necessary to spread capacity across their slots, and even running empty 'ghost' flights to ensure that the runways are busy at the appointed time." With those practices, it seems that new entrants will have a very slim chance of getting much-needed slots if incumbents choose to cling to their allocation. The Economist (2017) cites an analysis in a study wherein new entrants gained only 0.4% of Heathrow's total slots and 0.7 percent of Paris Charles de Gaulle.

Ulrich (2005) called attention to the need to use slots in the most optimal way in an era of capacity shortages in airports around

the globe. Airport slots are a scarce asset but airlines are not required to pay for slots allocated to them. Slots are allocated at no cost according to IATA guidelines.⁷⁹ The airports generate revenues from the airport fees paid by the airlines. In NAIA they constitute the following fees: landing fee, tacking fee, and parking fees.

It seems that in other jurisdictions incumbent airlines hoard the best slots, and these can even be traded or sold at “eye-watering prices, well beyond the means of start-ups” (The Economist, 2017). This is not unexpected because once the airline market has been liberalized, air carriers compete with each other, freely change schedules, introduce new ones (Ulrich, 2005), and purchase-and-sell slots. In 2016, Air France-KLM, a legacy carrier, sold a single daily landing and take-off slot at Heathrow to Oman Air for \$75 million.⁸⁰ According to the Economist, incumbents have good reason to hoard the best slots. A shortage of landing slots in Europe inflates the fares passengers pay at busy times by €2.1 billion (\$2.5 billion) a year, according to SEO Amsterdam Economics, a consultancy, and Cranfield University.⁸¹ That extra money flows straight to the lucky airlines.

This analysis points to the case for slot allocation reform. Slots are scarce assets but they are currently freely available to air carriers. Those with grandfather rights based on historical operation, mostly the legacy carriers, are clearly favored even under the 80% rule. An IATA key principle, namely “historic slots may not be withdrawn from an airline to accommodate new entrants or any other category of aircraft operator” reinforces the historic precedence given to incumbent air carriers. Thus, incumbents find great value in maintaining slots and global experience points to different ways by which incumbents retain them. However, shutting out lower-cost new entrants through various practices as described above will be to the detriment of competition and consumers.

⁷⁹ Economist explains, December 4, 2017 <https://www.economist.com/economist-explains/2017/12/economist-explains-0>

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

The quick solution to the allocation of a scarce asset is to price it at its scarcity value. Market pricing and commercialization of slots seem an obvious solution. The full range of commercialization is found in the US (e.g., slots obtained on lease basis with the original owners of the slots being able to use them again after the end of a leasing agreement (Ulrich, 2005)) but this expert has words of caution. Grandfather rights, priority rules, and slot allocation procedures have been observed for many years worldwide and there is general acceptance and support by the air carriers. It is not easy for airlines who benefit from the present arrangement to agree to changes in rules and procedures that have immensely benefited them. Ulrich (2005) further noted that acquiring slots on a buy or lease arrangement may be difficult for smaller, financially weak airlines. Also, if the airline is state-owned, it may be hard for non-state-owned airlines to obtain traffic rights (e.g., slots in the home airport of the state-owned airlines).

Gowrisankaran (2002) observes that many airport commissions in the US rely on non-market mechanism to allocate airport boarding gates and facilities. Allowing for market mechanisms such as competitive bidding in the allocation of such resources might encourage competition among airlines. He also views slot regulation as a mechanism designed to avoid congestion at the airports but it can be argued that they are much more than an instrument to deal with airport congestion. The availability of slots and the time of aircraft landing and take-off, among others, invariably affect the ability of operators to offer quality service to discriminating passengers. This means that the airline/operator with access to the best slots will be able to edge out its competitors not just because of its innate capability to provide good air service but also because of its control over a scarce asset without which operating an airline service will be impossible.

Slot allocation reform is outside the coverage of this study but it is important to take a closer look at it, examine regional and global practices, and find a better way of allocating this scarce asset, which should be fairly accessible to all airlines, incumbent and new entrants, large and small airlines alike. Ulrich (2005) shares that airlines worldwide are using slot bartering and slot trading to address the problem. Airlines may be allowed to change their flight schedules within their own portfolio and exchange slots with other carriers. In liberalized environments, the authorities allow the market to work in allocating this scarce asset. At the minimum, a clear legal and regulatory basis for slot trading and secondary trading would be necessary to ensure a congenial environment for the airline industry. Given these nuances, a deeper study of slot allocation is in order.

VII. CONCLUSION AND RECOMMENDATIONS

Liberalization and deregulation have paved the way for competition in the air transport market, which has resulted in the availability of more routes, more flight frequencies, lower airfare, and generally much better air transport services than during the years when PAL had a monopoly of the industry. Liberalization and deregulation broke PAL's monopoly hold of the air transport industry and opened the way for the entry of more air service providers. The domestic air transport market and even the international aviation market have both seen the positive impacts of liberalization and deregulation. However, the domestic air transport industry has also seen the failure of a few entrants and the acquisition of weak airlines, and finally a tendency for consolidation in this industry, which will lead to concentration.

While the industry is very profitable, its high capital intensity requiring investors with deep pockets and access to international capital markets (e.g., operators leasing instead of acquiring very expensive aircraft) and its susceptibility to external risks such as rising jet fuel price, negative impacts

⁸² PAL and Cebu Pacific have also introduced their respective LCCs

⁸³ The impression we got based on an interview with CAB where air fare setting was discussed.

of potential pandemics (e.g., SARS, that impact adversely on air travel) reinforce their tendency to merge or consolidate, resulting in a few big operators serving the market. Because of the potential anti-competitive effects of mergers and consolidation, the regulator should have a well-crafted regulatory policy upholding public welfare.

There is fierce competition between the country's two dominant carriers, that is the FSCs⁸² and also between the FSCs and LCCs in the hotly contested routes, which are of course the most viable. At the same time, niche markets in a few areas tend to be monopolized by the smaller carriers who choose to operate there. The niche markets have lighter traffic demand and simpler airport facilities that cannot accommodate big aircraft. The sole providers of air transport services in those areas have the potential to exercise some form of market power. On the other hand, small operators who service so-called “missionary” routes characterized by difficult geography and low population density, are given lenient treatment when it comes to approval of proposed air fares.⁸³ This merits a review. Smart subsidies could be a more efficient way of providing incentives to small operators to service those routes, which could be unprofitable but have to be served, rather than adopting a lenient policy toward air fare setting.

The government has experimented with limited open skies policy (called “pocket” open skies policy) in secondary airports that have been allowed to international and domestic carriers in view of the congestion at the main international gateway, NAIA, and also because of pressure from the business sector (e.g., tourism industry who stand to benefit from more flight frequencies and more seat capacities). This has boosted domestic and international tourism and local economies. The problem though is that capacity constraints in secondary airports (e.g., congested terminal facilities, absence of night landing equipment) have impacted negatively on efficiency and competition.

The congestion in NAIA and poor infrastructure support in the provincial airports (i.e., the lack of night landing facilities that would allow airlines to spread some of their domestic flights in the early mornings and evenings) have constrained the operations of airlines, with undue inconvenience to passengers and losses to firms. Safety concerns arising from inefficient air traffic management have also been raised by stakeholders.⁸⁴ The poor state of airport infrastructure has been used as an excuse in not adopting a more liberal and open air transport policy. Congestion has impacted in turn the efficient allocation of slots. Limited airport capacity has prevented other airlines to get new or additional slots in NAIA. The grandfather rule favors incumbent carriers and puts new entrants at a disadvantage. The slot allocation rests on some historical basis and this is reported to be the global practice, which implies that a review of slot allocation in NAIA and secondary international airports has to take into account the slot allocation of city pairs. In practice, as they stand, the slot guidelines help bar new entrants and benefit the incumbents. There is great value in maintaining slots and incumbents have different ways of shutting out potential entrants to the detriment of competition. There is a need to review the slot allocation and coordination policies. The Philippines is a party to the ASEAN Single Aviation Market and several international ASAs. The ratified protocols based on some of the bilateral ASAs have contributed to a more liberal policy and regulatory environment for domestic and international carriers. However, the bilateral ASAs remain challenged by the ASEAN member states policy stance to protect their respective airlines' interest during negotiations of international ASAs.

As well, during negotiations bureaucrats have often linked traffic rights to the lack of airport slots. Traffic rights and airport

slots are separate matters. Linking slots to access rights encourages governments to use congestion and lack of slots as excuses to delay full liberalization of the air transport markets. The right thing to do, in the case of the Philippines, is to pursue with great urgency the full rehabilitation of NAIA and the development of other international airport/s near Metro Manila (e.g., Clark International Airport) to ensure competitive service and greater connectivity with international markets.

There is a need to amend the Public Service Act by removing the provision of air transport services from the definition of public services, effectively lifting the nationality and accompanying legislative franchise requirement, and allowing non-domestic or foreign air carriers to engage in domestic air transport. Constitutional restrictions on ownership and control of airlines in addition to those under the Public Services Act have weakened the forces of competition in the domestic air transport market and have acted as barriers to entry of potential foreign investments in the air transport industry.⁸⁵

In view of the foregoing, the study submits the following recommendations:

- Study and develop rules for merger and consolidation in a highly capital-intensive and oligopolistic air transport industry;
- Address serious inadequacies in physical infrastructure (airports and their attendant facilities such as runways, night-landing and signaling systems and others);
- Improve air traffic management with particular emphasis on ensuring safety of passengers and aircraft;
- Review slot allocation guidelines;
- Review the regulation of air fares in routes where only one carrier provides the air transport service (e.g., missionary routes, niche markets);

- Review the policy stance in negotiating bilateral ASAs with a view to fostering competition in the domestic air transport industry;
- Review air alliances on their potential anti-competitive effects;
- Continue to improve land transport, inter-island shipping and ferries to strengthen inter-modal competition especially in secondary and tertiary routes;⁸⁶ and
- Amend the Public Service Act by removing the provision of air transport services from the definition of public services

⁸⁴ Goel (2018) wrote that "with regard to Safety, IATA remains concerned with several operational issues, including some that may compromise the safety of airlines operations. MNL is routinely characterized by airlines as one of the top high-risk airports in Asia-Pacific. From 2010 up to 2013, the predominant concerns raised by IATA member airlines were in relation to Air Traffic Management (ATM) issues, such as extended holding, vectors and delays, non-standard ATC procedures, etc."

⁸⁵ We did not include the removal of Constitutional restrictions in the list of recommendations because what we recommended are those that can be acted upon by the government and legislators in the near term. Constitutional amendments are a protracted process and it is more difficult to undertake within a short period of time. In other words, immediacy of results is one basis for the recommendations submitted herein.

⁸⁶ In Europe based on the report of the Norwegian Competition Authority (2002), in many short-haul markets the most effective competitor to the European flag carrier is the surface mode of travel represented by a railway company, a bus service or the private car.

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Annex 1 Airport Codes (Domestic)

AIRPORT CODE	Airport Name
BCD	Bacolod
BSO	Basco, Batanes
BXU	Butuan
CBO	Cotabato
CEB	Cebu
CGM	Camiguin
CGY	Cagayan De Oro
CRK	Clark
CRM	Catarman
CYP	Calbayog
CYU	Cuyo
CYZ	Cauayan
DGT	Dumaguete
DPL	Dipolog
DTE	Daet
DVO	Davao
GES	General Santos
IAO	Del Carmen, Siargao
ILO	Iloilo
JOL	Jolo
KLO	Kalibo
LAO	Laoag
LGP	Legaspi
MBT	Masbate
MNL	Manila
MPH	Caticlan
MRQ	Marinduque
OMC	Ormoc
OZC	Ozamis
PAG	Pagadian
PPS	Puerto Princesa
RXS	Roxas
SGS	Sanga-Sanga
SJI	San Jose, Occidental Mindoro
SUG	Surigao
TAC	Tacloban, Leyte
TAG	Tagbilaran, Bohol
TBH	Tablas, Romblon
TDG	Tandag
TUG	Tuguegarao
TWT	Tawi-Tawi
USU	Busuanga, Palawan
VRC	Virac, Catanduanes
WNP	Naga, Camarines Sur
ZAM	Zamboanga

Annex 2 Airport Codes (International)

Code	Description
HK	Hong Kong, China
SIN	Singapore
ICN	Incheon(Seoul), South Korea
TYO	Tokyo, Japan
TPE	Taipei, Taiwan
DXB	Dubai, United Arab Emirates
BKK	Bangkok, Thailand
DOH	Doha, Qatar
AUH	Abu Dhabi, United Arab Emirates
RUH	Riyadh, Saudi Arabia
SYD	Sydney, Australia
CAN	Canton, China
LA	Los Angeles, United States of America
PVG	Pudong, Shanghai, China
PUS	Pusan, South Korea
KIX	Osaka, Japan
KWI	Kuwait
PEK	Peking (Beijing), China
SFO	San Francisco, United States of America
NGO	Nagoya, Japan
JED	Jeddah, Saudi Arabia
GUM	Guam, United States of America
MCT	Muscat, Oman
SGN	Saigon, Viet Nam
CA	Canada
XMN	Xiamen, China
IST	Istanbul, Turkey
PVG	Macau, China
DMM	Dammam, Saudi Arabia
CGK	Jakarta, Indonesia
AMS	Amsterdam, The Netherlands
BWN	Bandar Seri Begawan, Brunei
LHR	London, United Kingdom
DPS	Denpasar, Indonesia
FUK	Fukuoka, Japan
BAH	Bahrain
TAG	Tagbilaran, Bohol
TBH	Tablas, Romblon
TDG	Tandag
TUG	Tuguegarao
TWT	Tawi-Tawi
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