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The Low-Cost Carrier (LCC) in Southeast Asia: Towards New Distance and Aircraft Patterns

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Abstract: Technology of aircrafts is one factor that made possible the popularity of LCC which have increased and expanded by 50% in five years in Southeast Asia. This study will explore how the introduction of LCC changed the geography of air transport in Southeast Asia, determine how the geography and air distances among nodes in the region played a role in fleet and aircraft models used and selected by these airlines, and how it changed the region's airline network through the years. It will also determine if this phenomenon has increased the pull of existing hubs or created new ones within the region. The investigation will be carried out using secondary data sources that shows the LCC performance, network expansion and new route/s as its effect, and the changing aircraft models used. Southeast Asia's LCC sector remains adaptive to technological changes, made route adjustments that made the air network more interconnected.

Keywords: low-cost carriers, aircraft models, airline networks, distance, technological change, Southeast Asia

1. INTRODUCTION

In Asia, air transport is crucial in enhancing people's mobility and piecing together a contemporary society. Better access to transport can improve a certain location with respect to how it increases a place's popularity and therefore growth. Thus, in the region, air transport also serves to boost the tourism industry (Zhang, Hanaoka, Inamura, & Ishikura, 2008).

In ASEAN, for instance, long-established airline companies known as flag carriers dominated the airline industry. Backed up with protection from the government, these airlines were able to charge high fares for their services which led them to generate high profits. But a new era in civil aviation emerged in the region after an economic crisis occurred in the late 1990s. Deregulation and liberalization brought about by this crisis spurred a competitive environment and new airlines have emerged that changed the nature of this industry (Damuri & Anas, 2015). These airlines, commonly referred to as low-cost carriers (LCC), allowed middle-income people to purchase tickets at low prices. As air transport became more affordable, people started to switch from bus and rails to planes for domestic and international trips (Zhang, Hanaoka, Inamura, & Ishikura, 2008).

Low-cost carriers are usually labeled as low-cost, no-frills, and low-fare carriers. Among these, the most popular difference from conventional airlines is the difference in fare. LCCs cut costs substantially by reducing the services they offer to the passengers. In-flight meals or entertainment, and seat reservations are excluded from the fares and are sold separately, which allow them to sell tickets at cheaper prices (Henderson, 2006). Franke (2004) also argues that the services offered by these airlines are its defining characteristics. LCCs, provide only the basic

services to the passengers, as compared to the full-service flights in traditional airlines. In between, there are airlines that although cut costs than the conventional airlines but still offer a limited range of services (Figure 1).

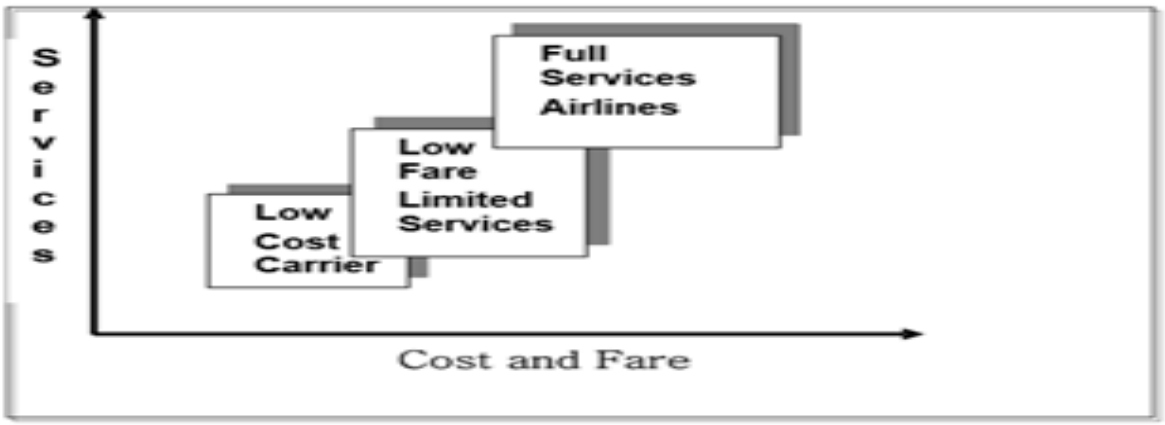

Figure 1. Franke's (2004) model showing LCC's position (Damuri & Anas, 2015)

As opposed to the conventional airline's hub-and-spoke network, LCCs also tend to provide point-to-point services (Tretheway, 2004). By doing so, the airline's handling costs are reduced, the logistics involved in connecting flights are removed, and the inconvenience is shifted to the passengers. Other ways to reduce the costs are through innovations in the distribution and marketing. New distribution channels were introduced like call centers, ATMs, convenience stores and supermarket networks (Damuri & Anas, 2015). Aside from these low-cost and low-fare characteristics, Henderson (2006) claims that other features of budget airlines include same design of planes, single class of travel, and high aircraft utilization.

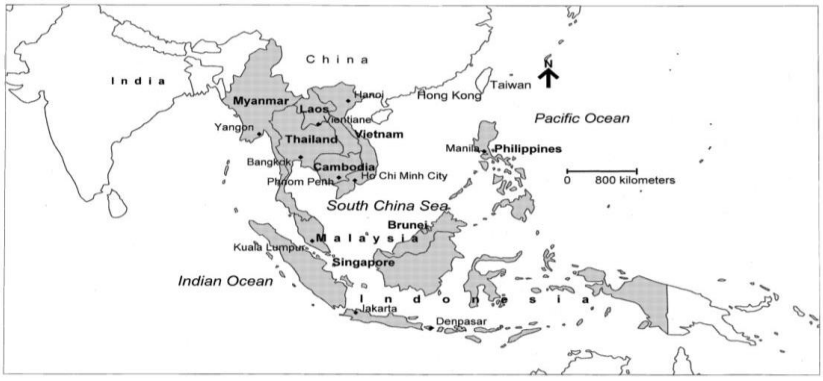

Figure 2. Southeast Asia (Bowen, 2000)

Currently, there are at least seven low-cost carriers in Southeast Asia (Figure 2). These carriers have driven change and development in the airline industry. Through data derived from published and electronic sources, this paper will examine the changes in the airline network or the air transport in general in Southeast Asia that was caused by the emergence of these low-cost carriers.

2. LCC PERFORMANCE IN SOUTHEAST ASIA

In the recent years, low cost carriers (LCC) has transformed the landscape of the aviation industry in Southeast Asia. With the cheaper flight tickets, it has encouraged more demand especially for the growing middle class in the region.

The emergence of LCC in Southeast Asia has influenced flow of passenger traffic. In 2017, 10% growth in the number of passengers were recorded with a double-digit increase for half the members of the region (CAPA, 2018). Air Asia and Lion Air was accounted 30% each of the Southeast Asia traffic (CAPA, 2016).

Meanwhile, Southeast Asia market share (in terms of seat) to the air travel has become significant with the development of LCC. In 2014, it reached a peak of 57% share. However, from 2015 to the end of 2017, it showed a decline to 51%, shown in Figure 3 (DBS, 2018). According to DBS, this decline may be rooted from the maturing LCC in the ASEAN region.

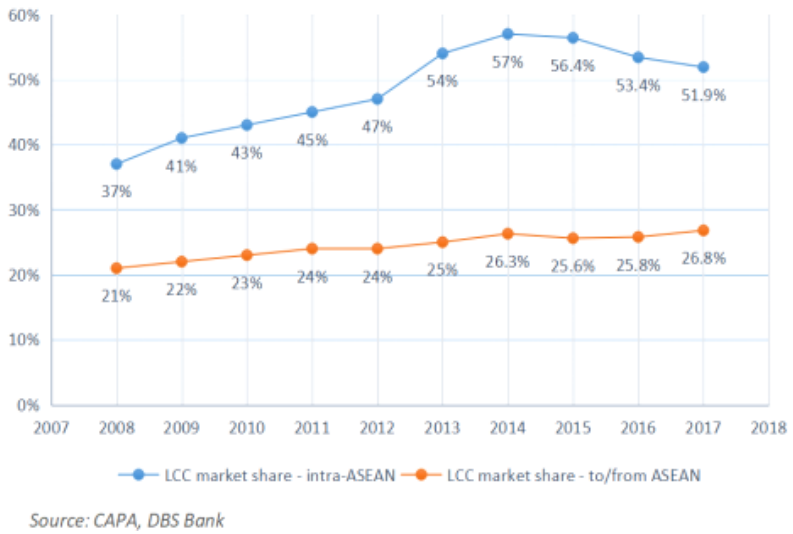

Figure 3. LCC market in ASEAN air travel

The increasing operations of the low-cost carriers in Southeast Asia is also accompanied by the fleet expansion. In 2016, nearly 600 fleets were operating, a 50% growth from 2013. Based on the 2018 CAPA report, there are currently 20 LCCs operating in the region with 690 aircrafts. Currently, Southeast Asia's airlines continue to increase their fleets and include new and improved models to their services.

However, according to CAPA reports, low cost airlines face several problems including overcapacity and intensified competitions among other LCCs in the region which affect its performance. Despite of these challenges, adopting low cost carriers in Southeast Asia remains favorable despite of the changing trend in terms of growth.

3. LCC AIRCRAFT MODELS

An integral part to the success of LCCs is greatly associated with the aircraft model. High rates of fleet utilization and high load factors allow the low-cost airlines to reduce cost substantially. To

achieve a high utilization, the time interval between one flight and another should be shortened. Traditional carriers use their aircrafts 6-8 hours per day only, and the time gaps between flights are limited to 25-30 minutes. In Southeast Asia, LCCs utilize their aircraft for 12 hours to increase flight frequency (Damuri & Anas, 2015).

Airlines need to have a good operating system to make sure that all the required ground handling procedures can be finished within a limited period. Hence, airlines typically use one type of aircraft for the whole fleet to eliminate the need to hire more people with different skills that would perform the inspection and checking of various types of aircraft, and they can assign the flight attendants and pilots to any flight (Damuri & Anas, 2015). In this section, a general look on the evolution of LCC aircraft models will be discussed.

3.1 ATR-600

Avions de Transport Regional (ATR) is one of the leading regional turboprop manufactured aircrafts based in Toulouse, France that was established with the partnership between Airbus and Leonardo. It is consisted of the 70-seat ATR 72 and 50-seat ATR-42 which are fuel and cost efficient (ATR, n.d.).

In 2012, ATR 600 series started to operate. (Air Transport Action Group, n.d.). It used cockpit technology with improved functions, better safety and handling (ATR, n.d.). Their 'Armonia' cabin design lightweight materials and weight savings functions allowed these aircrafts to be fuel and carbon dioxide emissions efficient. "Waste processing" and "recycling" are prioritized in its technological upgrade as these aircrafts push for environmental- friendly services (ATAG, n.d.).

In Southeast Asia, ATR supplies aircrafts for numerous airlines. In 2014, Garuda Indonesia through "Explore," planned to operate 30 ATR 72-600 into its hubs including Bali, Makassar and Ambon (Polek, 2014). Cebu Pacific Air, a major Philippine LCC airline, also ordered ATR 72-600 aircrafts in 2015 to service the inter-island travel demands in the country (ATR, 2015).

3.2 Boeing 787

Boeing 787 (Dreamliner) is a family of aircrafts manufactured by Boeing Commercial Airplanes. It is considered as super-efficient airplanes. The services of 787 family have reached more than 1500 routes and has established more than 170 new nonstop routes (Boeing, 2018)

The Boeing 787 family is composed of three aircrafts including Boeing 787-8, 787-9 and 787-10. Boeing 787-8 can accommodate 242 passengers in 2-class configurations up to 7355 nautical miles (nmi). Meanwhile, Boeing 787-9 has a capacity of 290 passengers with a range of 7635 nmi. The newest aircraft, Boeing 787-10 can fly 330 passengers up to 6430 nmi. The engine used for these aircrafts is GEnx-1B / Trent 1000. For the fuel efficiency, these aircrafts are 20 - 25% better than the aircrafts being replaced (Boeing, n. d.).

In the Southeast Asia, Boeing 787 aircrafts are operated by some airlines. Thailand received its first 787-9 aircrafts in 2017. Similarly, Vietnam Airlines is currently operating its 11 787 aircrafts that serves both its international and domestic flights. Singapore Airlines already purchased the latest Boeing 787-10 aircrafts (Boeing, n.d.). Additionally, Scoot Airlines, a budget airline owned by Singapore Airlines, has completely phased out it's Boeing 777 series and

replaced it with Boeing 787-8 and Boeing 787-9 models (Civil Aviation Authority of Singapore, 2018).

3.3 Embraer E2

Empresa Brasileira de Aeronautica or *Embraer* is the largest aerospace company in Brazil. It was first built as a government-owned corporation in 1969 but it was later on privatized in 1994 to save it from bankruptcy. Its commercial fleet is categorized under the narrow-bodied aircrafts. This type consists of aircrafts that has a width of about 3 to 4 meters and are commonly known as regional airliners that connect countries or continents (Schmidt, 2014).

Embraer E2 belongs to Embraer's E-Jet family. This family could accommodate 70 to 124 passengers. It features twin engines By General Electric (Schmidt, 2014). E2 is the second-generation aircraft of the E-Jet family. It claims to have a new engine that would lessen its fuel consumption, emission, and noise; a new landing gear that helps in reducing maintenance costs; and a new stabilizer for lower area and further weight reduction. E2 is said to be more cash-efficient than the Airbus A320neo and Bombardier CS100/300. The E2 aircrafts have a maximum speed of 870km/h. E175-E2, E-190-E2, and E195-E2 has a Furthermore, compared to the Embraer E2, Bombardier has higher ranges reaching up to 3,100 nm for the CS100 and up to 3,300 nm for the CS300. This means that it could easily connect far-range of 1,920 nm, 2,800nm, and 2,000nm respectively ("Embraer E-Jet 2," n.d.).

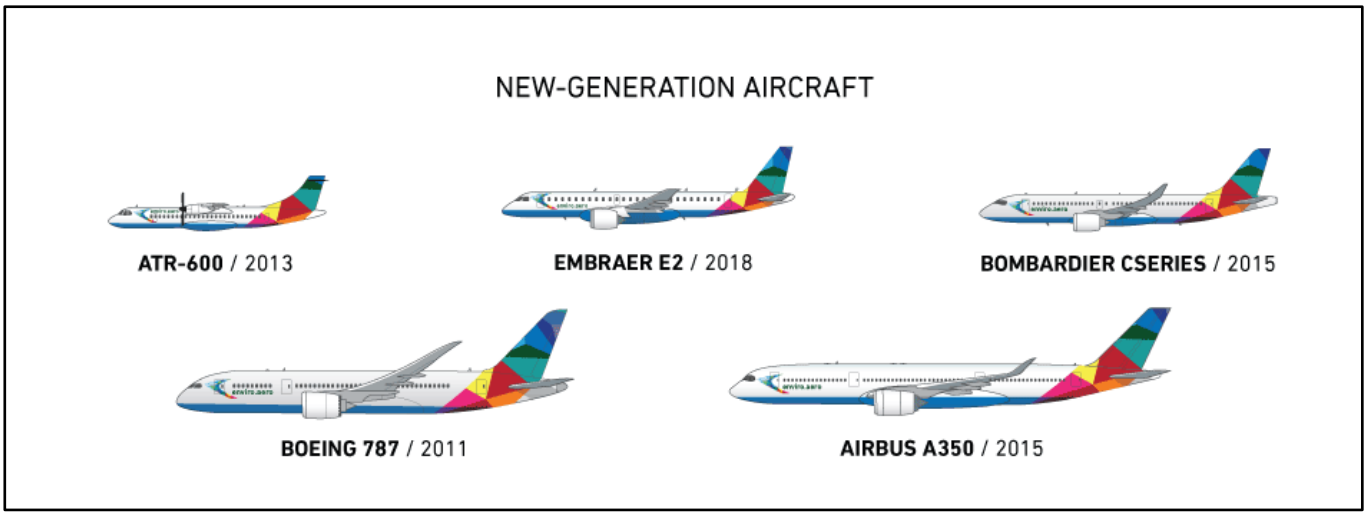

Figure 4. New Generation Aircraft Models ("Efficient technology." n.d.)

3.4 Bombardier CSeries

This type of aircraft claims to be a candidate for longer and thinner routes. Weighing up to 12,000 lb. lighter than its competitors, Bombardier's CSeries was built entirely and designed specifically for 100 to 150-seat market. The family also offers more than 25% cost advantage on direct maintenance costs ("Bombardier CSeries," n.d.)

The fuel burn advantage of the C series is said to be at 20% reduction in terms of carbon dioxide emissions, and 50% reduction in terms of nitrogen oxide emissions. It claims to be an

ideal commercial jet for urban operations and noise-sensitive airports as it produces the lowest noise levels. In addition, the CS100, has a take-off field length of only 4,000 feet that makes it suitable for hot-and-high and city-center airport operations ("Bombardier CSeries," n.d.)

Furthermore, compared to the Embraer E2, Bombardier has higher ranges reaching up to 3,100 nm for the CS100 and up to 3,300 nm for the CS300. This means that it could easily connect far-flung points. Figure 5 shows the countries that can be reached within this range in the Asia Pacific region ("Bombardier CSeries," n.d.).

3.5 Airbus A350

Airbus is a European multinational corporation that designs and manufactures diverse products from passenger jetliners to freighters and private jets. Its commercial fleet of aircrafts range from 100 to more than 600 seats. The Airbus350 is its largest, longest-range, highest-flying and fastest cruising twin. It is considered as the primary rival of the Boeing 787 and the two models have a lot of similarities. Airbus A350 is larger than Boeing 787 and can accommodate 315 passengers at 7,750 nm. Compared to Boeing's promise of a 15% better fuel efficiency, Airbus claims to deliver 25% fuel consumption improvements (George, 2015).

These recent advances in the aviation technology allows for the accommodation of more passengers. It is especially needed in the midst of increasing demand for this mode of transport due to the affordable prices of low-cost carriers. Additionally, as previously mentioned, it is to sustain LCCs as they make up for lowered prices with the quantity of passengers accommodated per flight and the frequency of flights per day.

Knowledge on the changes in technology used for the different aircraft models is a key element in understanding how LCCs managed to flourish in Southeast Asia. Currently, our society is in the middle of the 'wave' of new and fuel-efficient aircrafts that enable and facilitate the expansion of the airline network in the region.

Figure 5. Areas covered within 3,300 nm in Asia-Pacific

4. EMERGING HUBS AND ROUTES

In the air travel industry, an important element in determining the structure of operating costs is the network configuration. The most common are the "hub-and-spoke" (HS), operated mostly by full-service carriers, and "point-to-point" (PP) which are usually operated by LCCs. HS network configuration have a main airport called *hub*, from which all destinations are linked whereas in a PP configuration, airports are connected by direct routes. Each configuration has its own set of advantages and disadvantages. HS networks have the potential to achieve economies of scale and economies of density, but operations in the hubs can generate traffic congestion which could cause flight delays and increase in the number of turnover times of the aircraft. This could in turn raise the unit costs. On the other hand, PP networks have lower temporal density since it offers no connection services. Hence, delays could be avoided, and the number of aircraft turnovers can be lessened. This is especially favorable in transporting perishable cargo. Efficiency is achieved by airlines that adopt this network configuration. The main disadvantage of this configuration is, due to the absence of a hub it needs to implement a larger number of routes to link similar number of destinations (Lordan, 2014).

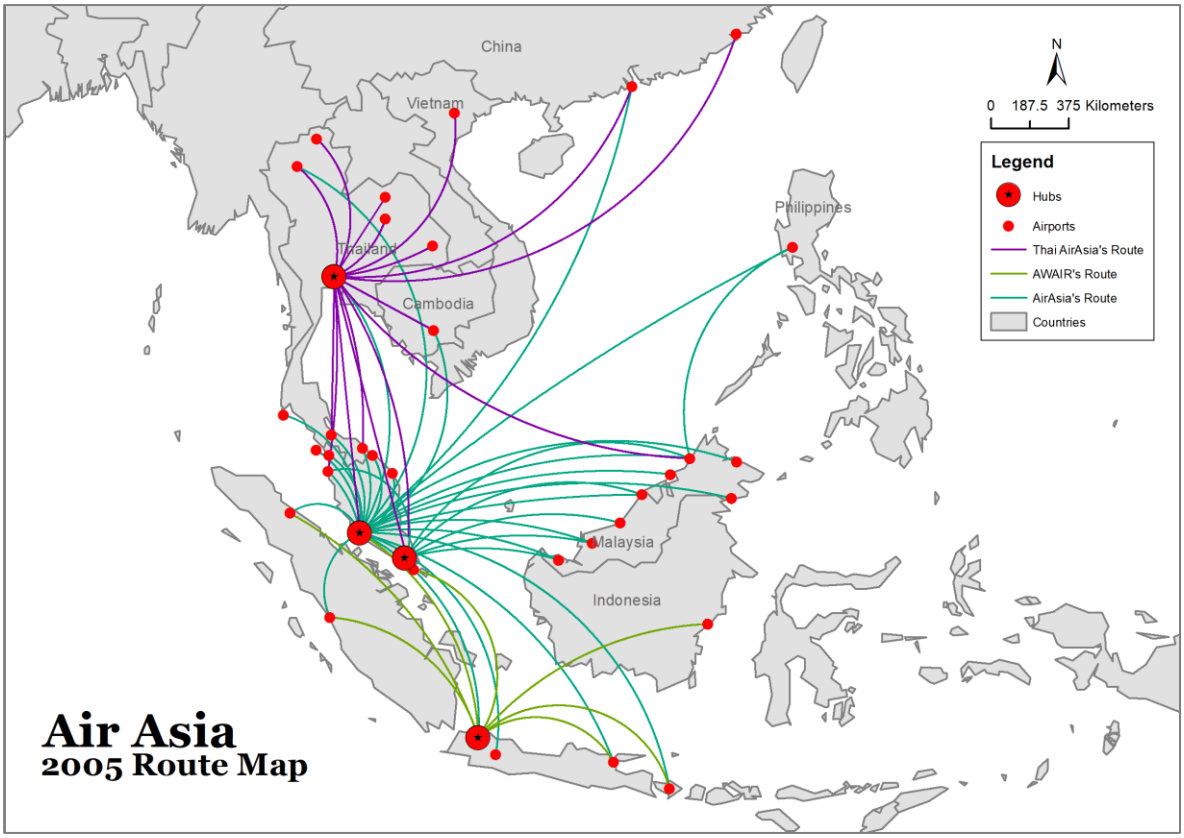

Figure 6. AirAsia Route Map, 2005

With these factors mentioned above, it is a rational decision for LCCs to operate a PP network configuration because this allows them to cut costs substantially and unlike in an HS configuration, it doesn't need to provide value added services (Lordan, 2014). In addition, fleet utilization of LCCs are optimized through the use of cheaper and less crowded secondary airports.

These airports allow an easier landing priority and terminal space and tend to have less traffic (Damuri & Anas, 2015).

The role and contributions of LCCs in SEA are already invaluable in interconnecting the region since its relatively recent emergence. Over the years, it's flourishing can be visibly observed through the developments in network expansion. In SEA, AirAsia is perhaps one of the most successful and arguably the pioneer of LCCs in the region (Damuri & Anas, 2015; Henderson, 2006). Many other airlines base their models on the success of AirAsia in establishing the LCC market in SEA thus, examining the exploits and status of the airline will provide valuable insights in the growth of LCCs in the ASEAN region.

Bilateral agreements limit access among countries as such, low cost carriers have developed a strategy to bypass these limitations. In 2003, Air Asia started setting up subsidiaries in Thailand and also bought Awair, an inactive airline in Indonesia in order to increase access to domestic markets (Damuri & Anas, 2015). At present, Thai AirAsia and AirAsia Indonesia share multiple hubs in Southeast Asia including, Don Mueang International Airport, Soekarno-Hatta International Airport, and Kempegowda International Airport.

AirAsia initially started to link Malaysia domestically by using the capital, Kuala Lumpur, as its the main hub. They used the same strategy with their subsidiary airlines in Thailand (Thai AirAsia) and Indonesia (Indonesia AirAsia) using Bangkok and Jakarta respectively as their main hubs (See Figure 6). They increased their destinations domestically in response to the increasing demand and improved point to point connectivity.

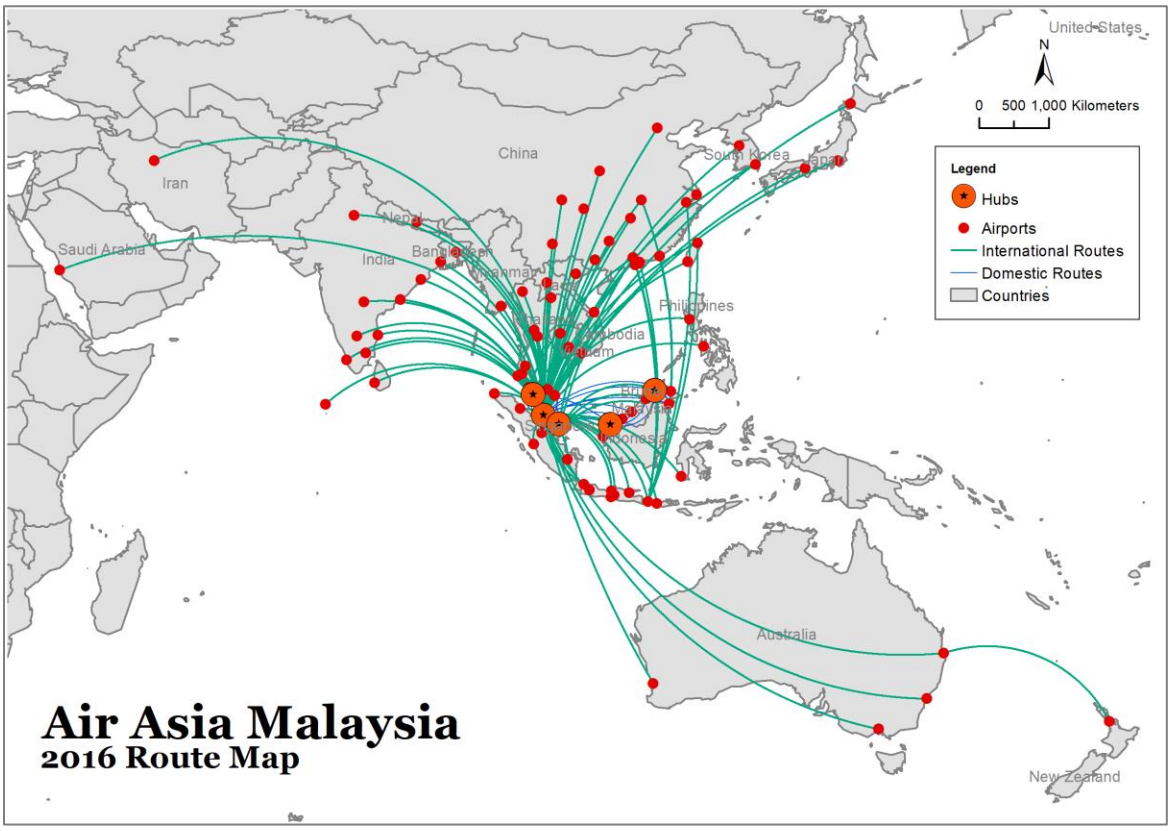

Figure 7a. AirAsia Malaysia Route Map, 2016

The designation of new hubs can then be observed from AirAsia's route maps from 2005 to 2016. In able to be regionally and internationally competitive, airlines must establish new hubs. AirAsia Malaysia exemplified this by making Johor Baru, a city near Singapore, as its second hub. It is to provide an alternative to the otherwise dominant Singaporean market. (Damuri & Anas, 2015)

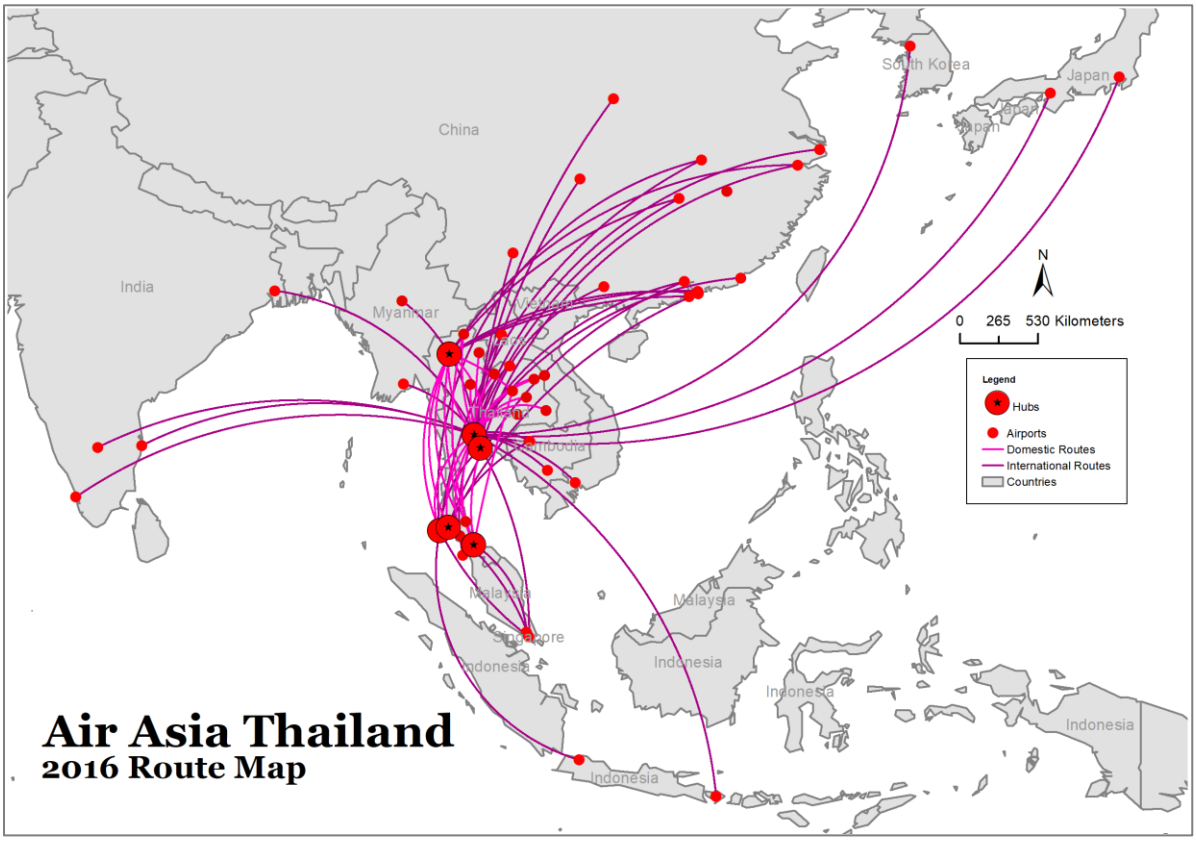

Figure 7b. AirAsia Thailand Route Map, 2016

The designation of new hubs can then be observed from AirAsia's route maps from 2005 to 2016. In able to be regionally and internationally competitive, airlines must establish new hubs. AirAsia Malaysia exemplified this by making Johor Baru, a city near Singapore, as its second hub. It is to provide an alternative to the otherwise dominant Singaporean market. (Damuri & Anas, 2015)

Malaysia AirAsia grew from only having hubs in Kuala Lumpur and Johor Baru to gaining three more, two of which particularly located in Sabah and Sarawak in the attempt to fully bridge the country (See Figure 7a). Thai AirAsia, from a single hub in Bangkok, set up 5 additional hubs across the country (See Figure 7b) and Indonesia AirAsia grew from having one hub in Jakarta to having three more in Medan, Bali, and Surabaya (See Figure 7c). Hubs are undeniably necessary to connect further destinations as they can serve as departure points for longer international flights (Damuri & Anas, 2015).

In 2016, only 27 destinations including 12 hubs were retained from the total of 40 destinations from the 2005 network. From 2005 to 2016, a total of 77 new destinations were added to the whole network including AirAsia's subsidiaries in Thailand and Indonesia (See

Table 1). In the span of 11 years, AirAsia's network expanded from only 38 destinations into a network with 104 destinations.

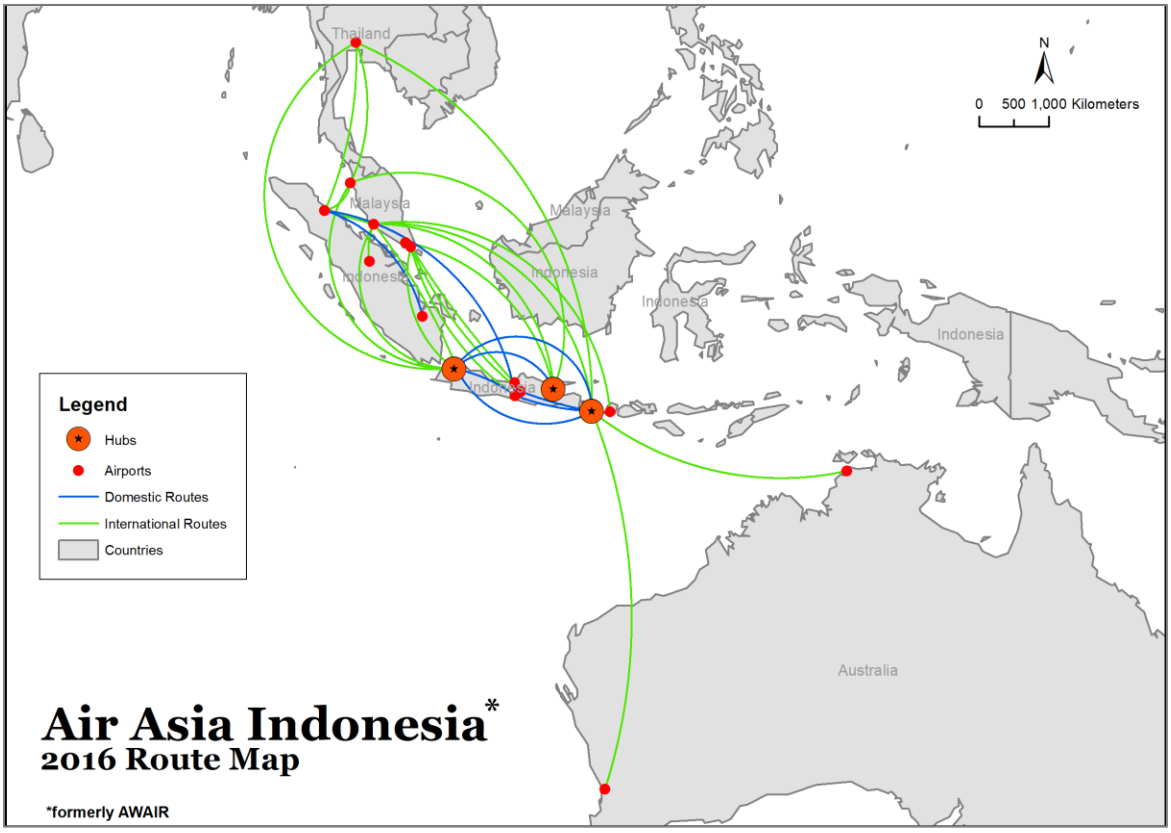

Figure 7c. AirAsia Indonesia Route Map, 2016

These evidences greatly support the premise that LCCs brought about growth in the overall network of Southeast Asia, connecting different hubs and destinations. With this, linkages became more complex among different countries, therefore changing the air transport geography of the region and creating Southeast Asia's air regional network more interconnected.

LCCs, as previously mentioned, usually utilize the PP configuration over the HB configuration, however, most air industry in SEA employ a hybrid between the two network configurations. LCCs mainly adopt the HS network in international and long-haul flights while PP networks are used in domestic and short-haul flights. This is also observed in AirAsia's development for over the decade.

Table 1. Air Asia Destinations from 2005 to 2016

Air Asia Destinations			
2005	**2016**	**Retained from 2005**	**Unretained**

Alor Setar
Bali*
Balikpapan
Bandung
Bangkok*
Batam
Bintulu
Chiang Mai*
Clark Air Base
Hanoi
Hat Yai
Jakarta*
Johor Bahru*
Khon Kaen
Kota Bharu
Kota Kinabalu*
Kuala Lumpur*
Kuala Terengganu
Kuching*
Labuan
Langkawi
Macau
Medan*
Miri
Mueang Chiang Rai
Narathiwat
Padang
Penang*
Phnom Penh
Phuket*
Sandakan
Sibu
Singapore
Surabaya*
Tawau
Ubon Ratchathani
Udon Thani
Xiamen

Auckland
Bali*
Banda Aceh
Bandar Seri Begawan
Bandung
Bangkok*
Batam
Beijing
Bengaluru
Bhubaneswar
Buri Ram
Busan
Changsha
Chengdu
Chennai
Chiang Mai*
Chongqing
Clark Air Base
Colombo
Da Nang
Darwin
Dhaka
Gold Coast
Guangzhou
Guilin
Hangzhou
Hanoi
Hat Yai
Hawaii
Ho Chi Minh
Hong Kong
Hyderabad
Jakarta*
Jeddah
Johor Bahru*
Kalibo
Kaohsiung City
Kathmandu
Khon Kaen
Kochi
Kolkata
Kota Bharu
Kota Kinabalu*
Krabi*
Krong Siem Reap
Kuala Lumpur*
Kuala Terengganu
Kuching*
Kunming
Langkawi
Loei
Lombok
Luang Prabang
Macau
Makassar

Hubs
Bali
Bangkok**
Chiang Mai
Jakarta**
Johor Bahru**
Kota Kinabalu
Kuala Lumpur**
Medan
Penang
Phuket
Surabaya
Kuching

Destinations
Bandung
Batam
Clark Air Base
Hanoi
Hat Yai
Khon Kaen
Kota Bharu
Kuala Terengganu
Langkawi
Macau
Miri
Mueang Chiang Rai
Padang
Phnom Penh
Singapore

Destinations
Alor Setar
Balikpapan
Bintulu
Labuan
Narathiwat
Sandakan
Udon Thani
Xiamen

	Malé
	Mandalay
	Medan*
	Melbourne
	Miri
	Mueang Chiang Rai
	Nakhon Phanom
	Nakhon Si Thammarat
	Nan
	Nanchang
	Nanning
	New Delhi
	Osaka
	Padang
	Palembang
	U-Tapao Rayong Pattaya*
	Pekanbaru
	Penang*
	Perth
	Phitsanulok
	Phnom Penh
	Phuket*
	Pontianak
	Roi Et
	Sakon Nakhon
	Sapporo
	Semarang
	Seoul
	Shanghai
	Shantou
	Shenzhen
	Singapore
	Solo
	Surabaya*
	Surakarta
	Surat Thani
	Sydney
	Taipei
	Tehran
	Tiruchirappalli
	Tokyo
	Trang
	Ubon Ratchathani
	Vientiane
	Visakhapatnam
	Wuhan
	Xi'an
	Yangon
	Yogyakarta

* Hubs
** 2005 hubs that were retained

5. CONCLUSION

The utilization of newer aviation technologies can be associated with the network expansion exhibited by LCCs. The increased trips generated to international destinations across SEA necessitated the increase in fleet units with the sufficient specifications to handle the distance and demand.

LCCs have demonstrated a consistent success in an unpredictable market such as in SEA. It changed the ways in which people travel - increasing the passenger traffic and the demand for cheaper tickets that could bring people to a wide range of locations. Clearly, LCCs have played an important role in the aviation industry and its future looks bright as it continues to adapt to technological innovations and make the region more interconnected than ever before.

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7. APPENDIX

ASEAN AIRLINES

Airlines	Starting Date	No. Routes and Flights (2006 unless specified)	No. of Routes and Flights (2018 unless specified)	Fleet (2006 unless specified)	Fleet (2018 unless specified)
Indonesia					
Citilink	July 30, 2012	41 (2012)	31 (2017)	(no data)	50 (2017):45 Airbus A320-200, 5 Airbus A320neo
Bouraq	1970s	72 flights on 22 domestic routes and 2 international	Ceased (2005)	Eight B737 and Three MD82	(no data)
Jatayu	May 2003	9 flights on 7 domestic routes and 1 international	Ceased (2007)	Four B737-200 and four B727-200	(no data)

Garuda Indonesia	1946	30 domestic and 24 international	90 (68 Domestic and 22 International)(2017)	Three B747-400, six A330-300, five DC 10-30, 26 B737-400, 17 B737-300, five B737-500, two F28-4000, three F28-3000.	142 Airbus A330-200, Airbus A330-200, Airbus A330-900neo, ATR 72-600, Boeing 737-800, Boeing 737 MAX 8, Boeing 777-300ER, Bombardier CRJ-1000
Adam Air	December 2003	38 flights on 10 domestic routes	Ceased (March 18, 2008)	26 B737-500 and B737-400	no data
Merpati Nusantara Airlines	1962	40 domestic routes and 6 international	84 until 2014 (ceased due to issues)	Seven B737-200A, two B737-400, nine F28-4000, three Fokker 100, seven IPTN 212-200, seven Twin Otter 300, 10CN-235-10, six F27-500 CN-235-10, six F27-500	39 (2014)
Mandala Airlines (now known as Tigerair Mandala)	1969	22 domestic routes	Ceased operations because of bankruptcy (Dec 2014)	12 B737-200	13 (transferred to indigo)
Lion Air	June 2000	95 (22 domestic routes and 5 international)	36 routes (2018)	19 MD80 and 5 DHC-8-301	166 as of October 2017: 8 Boeing 737 MAX 8, 35 Boeing 737-800, 3 Airbus A330-300, 70 Boeing 737-900ER
Sriwijaya Air	2002	10 routes	33 domestic and 2 international routes (june 2009) 40 Domestic routes and 3 International (2015)	Four B737	40 as of August 2017: 6 Boeing 737-300, 6 Boeing 737-500, 26 Boeing 737-800, 2 Boeing 737-900ER
Bali Air	2002	4 domestic route	Ceased (2005)	Four HS-748 and two B737-200	7 before operation ceased
Batavia Air	Jan 2002	25 domestic and 3 international routes	48 routes: 42 Domestic and 6 International (ceased 2013 because of bankruptcy)	14 B737 and one F28	34 before operation ceased
Star Air (now Indonesian Airline)	July 2001	14 domestic and 2 international routes	Ceased (2008) due to inactivity	Four B737-200 and two MD-83	6 before operation ceased: 4 Boeing 737-200 2 McDonnell Douglas MD-82 1 McDonnell Douglas MD-83
AWAir (now Indonesia AirAsia)	December 2004	14 flights on 5 domestic routes	8 Domestic and 5 International excluding subsidiaries	Two B737-300	18 Airbus A320-200
Air Paradise	February 2003	14 flights on 3 international routes to Australia	Ceased (2005)	Two A300 and one A310	6 before operation ceased in 2005: 2 Airbus A300-600R, 2 Airbus A310-300, 2 Boeing 737-800
Riau Airlines	March 2002	7 domestic destinations and 4 international destinations	Ceased operations in 2012: 8 domestic and 1 International	Two SAAB 340 B, two Cessna C-280	1 Boeing 737-500 (2011)

Deraya Airlines	1967	11 domestic destinations	15 Domestic and 1 International (2006)	3 Cessna 150, 3 Cessna 172, 1 Cessna 206,2 Cessna 402B, 2 Cessna 402C, 1 PZL 104 WILGA, 2 Shorts SD 330, 3 Shorts SD 360, 3 Casa 212-100, 3 Skyvan, 1 Piper Cheyenne, 5 ZODIAC	2 British Aerospace ATPF, 2 Indonesian Aerospace 212-100, 2 Shorts 330-100, 2 Shorts 360-300, 1 Shorts SC-7 Skyvan, 1 further British Aerospace ATP (August 2017)
Wings Air (part of Lion Air)		11 domestic destinations	no data	no data	20 ATR 72–500, 34 ATR 72–600
Dirgantara air Service	1971	7 cities in Kalimantan only	Ceased (2009)	Two C-212, Two 212-100	15 before operation ceased in 2009
Malaysia					
Malaysia Airlines	1937	32 domestic destinations, 78 international destinations	118 Domestic and 114 International (2017)	17 B747-400P, 8 B747-200F, 15 B777-200, 10 A330-300 and five A330-200. 39 B737-400, 10 F50, five DHC6	75 as of 2014: 6 A380-800, 15 A330-300, 54 B737-800
Air Asia	January 2002	25 international and domestic destinations	74 excluding subsidiaries	B737-300	74 Airbus A320-200, 18 Airbus A320neo
Philippines					
Air Philippines	February 1995	13 domestic destinations	6 Domestic, 33 international	B737-200	30 as of Dec 2017: 10 Airbus A320-200, 6 Airbus A321-200, 4 Bombardier Q300, 5 Bombardier Q400, 5 Bombardier Q400 NextGen
Cebu Pacific Air	1996	19 domestic destinations	37 Domestic 26 International	no data	no data
Cebgo	1995	No data	25 Domestic (May 2017)	no data	17 as of April 2018: 8 ATR 72-500, 9 ATR 72-600
Singapore					
Singapore Airlines	October 1972	59 cities in 32 countries around the world	64 routes in 32 countries	no data	144 as of March 2018: Airbus A330, Airbus A350, Airbus A380, Boeing 777, and Boeing 787
Silk Air	February 1989	25 domestic and international destinations in Asia	52 routes in 16 counties	no data	34 as of April 2018: 3 Airbus A319-100, 9 Airbus A320-200, 17 Boeing 737-800, 5 Boeing 737 MAX 8
Tiger Air	December 2003	4 international destinations	38 routes (2017)	no data	40: 24 Airbus 320s and 16 Boeing 787 Dreamliners
ValuAir	May 2004	4 international destinations	11 until operation ceased in 2014	1 A320	1 A320
JetStar Asia	2004	No data	30 Routes in 12 countries in Asia and in Australia	A320-200	18 Airbus A320-200

Thailand					
Thai Airways	1960	61 destinations in 34 different countries around the world and 13 domestic destinations.	91 routes in 37 different countries	18 747-400, two 747-300, four MD-11, six B777-300, eight 777-200, 12 A330-300, 21 A330-600, 10 B737-400, two Atr-72	82 as of 2017: 15 Airbus A330-300, 12 Airbus A350-900, 6 Airbus A380-800, 1 Boeing 737-400, 8 Boeing 747-400, 6 Boeing 777-200, Boeing 777-200ER, 6 Boeing 777-300, 14 Boeing 777-300ER, 6 Boeing 787-8, 2 Boeing 787-9
Orient Thai	1990	9 International destinations	2 Domestic and 4 International (China)	ATR 72, B717-200, A320-232	17 as of 2018: 6 Boeing 737–300, 2 Boeing 737–400, 3 Boeing 747–300, 5 Boeing 767-300, 1 Boeing 767-300ER
Bangkok Airways	1968	20 domestic and international routes	28 routes domestic and International (2017)	Three ATR 72-200s, six ATR 72-500s, four B717-200 twinjets and two brand new A320-232	36 as of 2018: 13 Airbus A319-100, 9 Airbus A319-200, 5 ATR 72-500, 9 ATR 72-600
Nok Air	2004	5 domestic routes	31 routes Domestic and International	737-400	30 as of April 2017: 2 ATR 72-500, 20 Boeing 737-800, 8 Bombardier Dash 8 Q400 NextGen
Thai Air Asia	2003	8 domestic routes and 5 international routes	48 without AirAsia subsidiaries	no data	58 as of 2018: 50 Airbus A320-200, 8 Airbus A320neo