

AN ASSESSMENT OF A CORPORATIZED AIRPORT COMPANY REVENUE STREAMS: PART 1 - AIRPORTS OF THAILAND AERONAUTICAL REVENUES

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Abstract: In the global airport industry, airports typically earn revenues from two discrete sources; aeronautical revenue and non-aeronautical revenues. Also, airport operator may manage a network of airports that service the territory or alternatively only some of these airports. This study has examined the trends in the Airports of Thailand PLC, an airport network operator, aeronautical revenues for the period 2005 to 2019. The study was underpinned by a qualitative longitudinal research design. The data collected for the study was examined by document analysis. The case study revealed that the Airports of Thailand PLC (AOT) aeronautical revenues have grown substantially throughout the study period. Aeronautical revenues have averaged around sixty per cent of the company's annual revenues. The Airports of Thailand PLC (AOT) three aeronautical revenue sources all grew strongly over the study period. The most significant growth was recorded in departure passenger service charge revenue (+369.82%), followed by aircraft service charge revenue (+169.56%), and aircraft landing and parking charge revenues (+128.08%). The strong growth in passenger volumes and the growth in aircraft movements underpinned the significant increases in the company's aeronautical revenues.

Keywords: aeronautical revenues, airports, airport aeronautical activities, airport management, Airports of Thailand PLC (AOT), business performance, case study.

1. Introduction of the State of the Operator

One of the most significant trends in the global airport industry over the past thirty years or so has been the privatization or corporatization of airports by governments all around the world (Vogel, 2019). Following the privatization or corporatization of the airport typically adopts a commercial business model whereby airports aim to optimize their revenues, irrespective of whether they are generated through

aeronautical revenues or non-aeronautical revenues sources (Abeyratne, 2014). The commercialization of an airport leads to a transformation from a public utility into a commercial enterprise and includes the adoption of more businesslike management practices (Freestone, 2009). As a result of the adoption of a commercial management focus, airports in recent times have been significantly transformed into what has become a dynamic and competitive industry (Fasone and Maggiore, 2014).

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Airports may be managed and operated as a single entity (Doganis, 2005) or alternatively they may be part of a multi-airport system (de Neufville, 1995; Postorino and Praticò, 2012, Xia *et al.*, 2019), in which multiple airports are managed by a business enterprise. An airport network is a group of airports that are located throughout a State that are operated under a single ownership and control structure. An airport network may include all airports serving the territory of this State or alternatively only some of these airports (International Civil Aviation Organization, 2013a).

One such airport company that manages and operates multiple airports and which has evolved from being a public utility into a fully commercialized enterprise is Thailand-based Airports of Thailand PLC (AOT). The company selected for the study is Airports of Thailand PLC (AOT). Airports of Thailand PLC manages and operates six major airports in Thailand, including Bangkok's Suvarnabhumi Airport, which is an important regional aviation hub (Moh and Lin, 2005). The principal objective of the study is to examine how have Airports of Thailand PLC (AOT) aeronautical revenues have developed over the period 2005-2019 following the company's adoption of a corporatized business model. A secondary aim is to analyze the annual trends in Airports of Thailand various aeronautical revenue sources. A final aim is to identify which aeronautical revenue stream has experienced the most significant growth for AOT during the study period.

The remainder of the paper is organized as follows. The literature review is presented in Section 2. The research methodology is outlined in Section 3. The case study based on an examination Airports of Thailand PLC

aeronautical revenues is presented in Section 4. The results of the study are presented in the conclusions section of the paper.

2. Background – Airport Aeronautical Revenues

Airport income is generated from both aeronautical and traffic-related activities and from non-aeronautical or commercial sources (Halpern and Graham, 2013; Lin, 2016; Yokomi *et al.*, 2017). Aeronautical charges are levied on airlines by the airport operators for using their facilities (Janić, 2016). Aeronautical revenues include aircraft landing fees, the use of airport terminal facilities and aircraft parking fees (Graham, 2017; Weber *et al.*, 2016), passenger service charges (PSC), and air traffic control (ATC) charges (if the service is provided by the airport authority) (Doganis, 2005). Airport operators derive their aeronautical revenue from the provision of both airside and land-side services and facilities (Vasigh and Hamzaee, 1994; Graham and Morrell, 2017). The *airside* means the movement area at an airport, adjacent terrain and buildings/infrastructure, or portions, the access to which is restricted. *Landside* means those parts of an airport as well as the adjacent terrain and buildings or portions thereof that are not in the airside precinct (Rossi Dal Pozzo, 2015).

The airfield or airside of the airport produces revenues from sources that are related to aircraft operations: Scheduled and unscheduled airlines, itinerant aircraft, military or governmental aircraft are charged aircraft landing fees (Young and Wells, 2011). Aircraft landing fees are the most universal type of aeronautical user charge. It is the fee that airlines pay for the use of the airfield, that is, the runway and taxiways of an airport (de Neufville and Odoni, 2013; Odoni, 2016).

Passenger service charges are the other primary source of aeronautical revenue for airports. These charges are mostly levied by airports for each departing passenger. At most airports around the world, there tends to be a lower charge for domestic passengers to reflect the lower costs associated with these types of passengers (Doganis, 2005; Graham, 2018). The passenger charge is levied by airports in one of three ways: it can be paid directly by the passenger to the airport authority upon departure; such a practice requires a dedicated collection desk or facility in the passenger check-in area; secondly, it can be collected by the airline on behalf of the airport, from passengers when they purchase their ticket or check-in upon departure; the airline then pays the airport or thirdly, it can be levied directly by the airport on the airlines who incorporate the charge into their air fare; thus no separate charge is levied upon the passengers themselves (Doganis, 2005, p. 68).

Airport security charges are a further revenue stream for airports. However, the responsibility for the provision and financing of airport security services does vary substantially between countries. The provision of security services may be provided by the airport's own employees, or by a private firm under contract to the airport, the airlines, or through a government agency. The government through general taxation or via a special government departure tax may pay for the airport security services. In some countries, security costs are financed directly by the airport authority. This cost is recovered by special security level. In some cases, the cost may be included in the airport's passenger service charge. Sometimes there is a security charge based on passengers and the aircraft weight (measured in tonnes) (Odoni, 2016).

Aircraft parking charges are charged for the use of paved and unpaved areas. Parking and hangar charges are usually proportional either to the weight of the aircraft or to its dimensions, for example, the aircraft wingspan (de Neufville and Odoni, 2013). The parking charge may also be based on the size of the airport's parking stands, or alternatively, as a percentage of the aircraft landing fee. Airports generally have an hourly or daily aircraft parking charge. Many airports may have a free parking charge. These typically may range from 1 to 4 hours in duration and are timed to enable the airline to turnaround their aircraft at the airport without incurring any charges (Graham, 2018). Airports may also impose a fee for the overnight parking of aircraft (Odoni, 2016).

Ground handling and fuel flowage fees – airlines incur three forms of charges when they use an airport. First, they are required to pay aircraft landing and passenger fees. In some cases, other airport charges will be assessed. Airlines are also required to pay ground handling fees which the airport operator may charge if the airport itself decides to offer ground handling services themselves rather than leaving them to ground handling companies, such as, Swissport, or airlines to perform (Graham, 2018). Finally, there may be fuel fees that are levied by fixed based operators (FBOs) and other aircraft fuel suppliers operating at the airport (Odoni, 2016; Young and Wells, 2011).

3. Research Methodology

3.1. Research Method

A qualitative longitudinal research design was used in the present study (Derrington, 2019; Hassett and Paavilainen-Mäntymäki,

2013; Neale, 2018). In addition, the study was exploratory in nature (Stebbins, 2001; Yin, 2018). Exploratory research is a methodological approach that is primarily focused on discovery and with the generation or development of theory (Jupp, 2006). The key objective of case study research is to expand and develop theories and not to perform statistical analysis to empirically test a certain hypothesis (Rahim and Baksh, 2003).

3.2. Data Collection

The data collected for the study was sourced from Airports of Thailand PLC (AOT), and included the airport's annual reports, and company materials available on the internet. These documents were the sources of the study's case evidence. A comprehensive source of the leading airport-related journals and airport industry magazines was also conducted. The study also included a search of the SCOPUS and Google Scholar databases.

The key words used in the database searches included "Airports of Thailand PLC (AOT) aeronautical revenues", "Airports of Thailand PLC (AOT) aircraft service charge revenues", "Airports of Thailand PLC (AOT) departure passenger service charge revenues", and "Airports of Thailand PLC (AOT) landing and parking charges revenues".

Secondary data was therefore used in the study. Following the guidance of Yin (2018), the study incorporated the three principles of data collection, that is, the use of multiple sources of case evidence, creation of a database on the subject, and the establishment of a chain of evidence.

3.3. Data Analysis

The data collected for the case study was examined using document analysis. Document analysis is a research technique that is quite frequently utilized in case study-based research. Document analysis focuses on the information and data that is contained in formal documents and company records (Oates, 2006; Ramon Gil-Garcia, 2012). In this study all the gathered documents were examined for their authenticity, credibility, representativeness, and meaning (Scott, 2014; Scott and Marshall, 2009).

The study's document analysis comprised six phases. The first phase involved planning the types and required documentation and ascertaining their availability for the study. In the second phase, the data collection involved sourcing the documents from Airports of Thailand (AOT). This phase also involved the development and implementation of a scheme for managing the documents collected for the study. The documents were carefully examined to assess their authenticity, credibility and to identify any potential bias in the third phase of the document analysis process. In the fourth phase, the content of the collected documents was carefully examined, and the key themes and issues were identified and recorded. The fifth phase involved the deliberation and refinement to identify any difficulties associated with the documents, reviewing sources, as well as exploring the documents content. In the sixth and final phase, the analysis of the data was completed (O'Leary, 2004).

In the present study all of the study's documents were downloaded and stored in a case study database (Yin, 2018). In addition,

the documents collected for the study were all in the English language. Each document was carefully read, and key themes were coded and recorded (Baxter, 2020).

4. Results

4.1. Research Method

4.1. An Overview of Airports of Thailand PLC

On September 30, 2002, the Airports of Thailand Public Company Limited (AOT) was corporatized from a state enterprise, namely the Airports Authority of Thailand (AAT), to be a public limited company. The new business entity assumed all the businesses, rights, liabilities, responsibilities, assets, and staff that previously belonged to the Airports Authority of Thailand. The Ministry of Transport and Communications previously owned all the shares in the company. The Ministry of Transport and Communications decided to raise AOT's capital through the issue and sale of new shares to the Ministry of Finance. In 2004, new shares were also issued for the public, foreign financial institutions were also able to acquire shares. AOT has been publicly listed since its corporatization, and the Ministry of Finance has been its largest single shareholder holding a 70 per cent stake, with the remaining 30 per cent held by institutional and retail investors (International Civil Aviation Organization, 2013b).

The principal business activities of AOT's are the management, operations, and developments of the airports within its portfolio. AOT currently manages 6 major airports that are located throughout Thailand; Don Mueang, Phuket, Chiang Mai, Hat Yai, Chiang Rai and Bangkok's

Suvarnabhumi International Airport, all of which accommodate both domestic and international flights. Following the opening of commercial operations on September 28, 2006, Suvarnabhumi Airport serves as Thailand's primary airport replacing Don Mueang International Airport. This was because Don Mueang International Airport was restricted in its ability to accommodate the significant air traffic growth experienced at the airport (Airports of Thailand, 2018a). In addition, AOT is also responsible for the construction, maintenance, and operation of Thailand's major airports (Asian Development Bank, 2014).

Don Mueang Airport is Thailand's major low-cost carrier (LCC) airport (Taneja, 2017). The low-cost carriers launched domestic services throughout Thailand in 2004 and have subsequently increased the size of Thailand's air travel market, and consequently, the LCCs now play a key role in Thailand's aviation industry (Thanasupsin *et al.*, 2010). During 2018, the total number of low-cost departure seats in Thailand's air travel market overtook the number offered by full-service carriers for the first time ever (Casey, 2019).

Figure 1 presents the total annual enplaned passengers at the airports managed and operated by the Airports of Thailand Public Company Limited (AOT) from 2005 to 2019. One passenger enplanement measures the embarkation of a revenue passenger, whether originating, stop-over, connecting or returning (Holloway, 2016). As can be observed in Figure 1 there has been very significant growth in the passenger volumes, which have increased from 47,338,682.00 in 2005 to 141,871,016 in 2019. Figure 1 shows that there was a decline in enplaned passengers in 2009. This decrease could

be attributed to the downturn in airline passenger demand due to the 2009 global financial crisis (Belobaba, 2016). From 2010 to 2019, there has been a consistent increase in the annual volume of enplaned

passengers (Figure 1). In recent times, the growth in Thailand’s air travel market has been influenced by the strong growth in both Russian and Chinese tourists visiting Thailand (Kontogeorgopoulos, 2017).

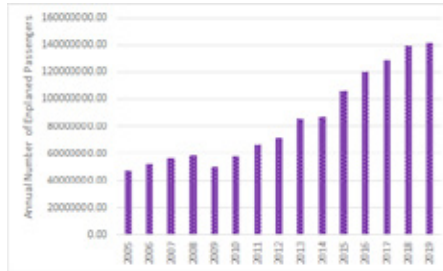


Fig. 1.
The Annual Number of Enplaned Passengers at the Airports of Thailand Public Company Limited Managed and Operated Airports: 2005-2019
 Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

The annual number of aircraft movements at the airports managed and operated by AOT from 2005 to 2019 is presented in Figure 2. Figure 2 shows that there has been very substantial growth in aircraft movements, which have increased from 330,346 in 2005 to 896,097 in 2019. As can be observed in Figure 2, there was a decrease in the number of aircraft movements handled at AOT’s airports in 2008 and 2009. This decrease could be attributed to the adverse

downturn in airline passenger demand that was recorded during the global financial crisis (Belobaba, 2016). From 2010 to 2019, there has been a consistent increase in the annual volume of aircraft movements (Figure 2). As previously noted, the low-cost carriers have greatly expanded the scope of their operations in Thailand, and this has positively influenced the level of aircraft movements at AOT’s managed and operated airports throughout the study period.

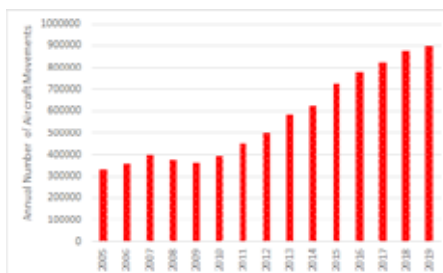


Fig. 2.
The Annual Number of Aircraft Movements at the Airports of Thailand Public Company Limited Managed and Operated Airports: 2005-2019
 Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

4.2. Airports of Thailand PLC Annual Aeronautical Revenues

The Airports of Thailand Public Company Limited (AOT) (hereafter AOT) annual aeronautical revenues and the year-on-year change from 2005 to 2019 are presented in Figure 3. As can be observed in Figure 3, AOT's annual aeronautical revenues have principally exhibited an upward growth trend over the study period. This trend is demonstrated by the year-on-year percentage change line graph, which is more positive than negative, that is, more values are above the line. Figure 2 shows

that there was a spike in the annual non-aeronautical revenues in 2007, when such revenues increased by 28.36% on the 2006 levels. This was the largest single annual increase in aeronautical revenues recorded throughout the study period. The second highest single annual increase in non-aeronautical revenues was recorded in 2011 (+22.58%). Figure 3 shows that throughout the study period that there were two years when AOT's annual aeronautical revenues declined on a year-on-year basis. These decreases in aeronautical revenues were recorded in 2009 (-19%) and in 2014 (-0.39%), respectively (Figure 3).



Fig. 3.

Airports of Thailand Public Company Limited Annual Aeronautical Revenues and Year-on-year Change: 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

An important indicator of an airport's financial viability is the share of aeronautical revenues of the total revenue generated by the airport (Tohamy, 2001). Figure 4 presents AOT's aeronautical revenues as a portion of total revenues produced over the study period (2005-2019) and shows that aeronautical revenues are the company's major revenue stream accounting for more than 50% of the company's annual revenues. From 2005 to 2019, AOT's aeronautical revenues averaged around 60.0% of the annual revenues generated by the company. Fu and Yang (2017) have noted that the

average share of aeronautical revenues (in total airport revenues) is 52.8% for Asia-based airports, thus, AOT's result is slightly more favorable than this average. The highest annual aeronautical revenues as a portion of total revenues were recorded in 2008 (68.4%), whilst the smallest share of aeronautical revenues of total revenues was recorded in 2019 (55.8%) (Figure 4). The annual growth in AOT's aeronautical revenues as a portion of total revenues oscillated throughout the study, with the highest annual growth being recorded in 2007 (6.9%), whilst the most significant

annual decrease occurred in 2009 (-17.1%) (Figure 4). Figure 4 also shows that from 2013 to 2019, there has been a steady decrease in the share of aeronautical revenues as a

portion of total revenues. In these latter years of the study, other non-aeronautical revenue sources, such as, concession revenues, have assumed greater prominence.

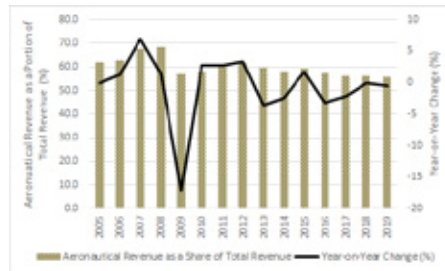


Fig. 4.

The Airports of Thailand Public Company Limited Annual Aeronautical Revenues as a Portion of Total Revenues and Year-on-year Change (%): 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

An important measure of an airport's revenue performance is the annual aeronautical revenue per aircraft movement. The annual aeronautical revenue per aircraft movement is the average of aeronautical revenues collected per aircraft movement and includes the use of airfield (aircraft landing fees, ramp/apron fees), gate charges, terminal space, passenger-related charges, and ground-handling revenue. This revenue performance measure can include passenger facility charges (Airports Council International, 2012) as is the case in this study as AOT records passenger service charges as an aeronautical revenue source. AOT's annual aeronautical revenue per aircraft movement and the year-on-year change (%) from 2005 to 2019 are depicted in Figure 5. As can be observed in Figure 5, AOT's annual aeronautical revenue per

aircraft movement has oscillated quite markedly over the study with the lowest annual revenue per aircraft movement being recorded in 2005 (THB 28,031.3 per aircraft movement) and the highest annual revenue per aircraft movement being recorded in 2008 (THB 40,545.6 per aircraft movement). The largest single increase in the annual aeronautical revenue per aircraft movement occurred in 2008 (+22.61%), whilst the largest single decrease in this revenue stream was recorded in 2014 (-7.05%). As noted earlier, over the study period, there was a substantial increase in both the number of aircraft movements at the airports managed and operated by AOT as well as strong growth in the aeronautical revenues generated which has had an overall positive effect on aeronautical revenues per aircraft movement.

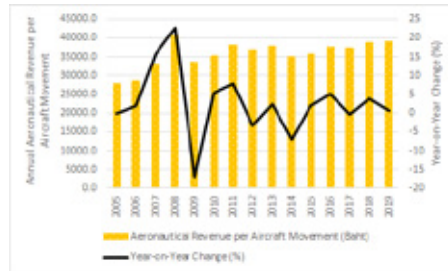


Fig. 5.

The Airports of Thailand Public Company Limited Annual Aeronautical Revenues per Aircraft Movement and Year-on-year Change (%): 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

4.3. Aircraft Service Charge Revenues

Prior to examining AOT's annual aircraft service charge revenue, it is important to note that aerobridges are a key part of the airport airside infrastructure. Aerobridges provide a link from an elevated passenger terminal departure/arrival door with the aircraft boarding door enabling passengers to walk between the two (Jarvis, 2018). There is a usage cost to the airlines for the use of this infrastructure, with airport authorities recovering costs and gaining some revenue (Franzi, 2018). AOT is one such airport company that assesses an aerobridge usage charge. This charge is titled "aircraft service charge". AOT's annual aircraft service charge revenue and the year-on-year change (%) from 2005 to 2019 are shown in Figure 6. As can be seen in Figure 6, AOT's annual aircraft service charge

revenue has increased from THB 312.3 million in 2005 to THB 841.84 million in 2019. The strong growth in aircraft service charge is demonstrated by the year-on-year percentage change line graph, which is more positive than negative, that is, more values are above the line than below. Figure 6 shows that over the period 2005 to 2019, there was only one year when the company's annual aircraft service charge revenue decreased. This decrease occurred in 2009, when the annual service charge revenue decreased by 4.79% on the 2008 levels. The reason for this decrease was the lower number of flights handled at the airports operated and managed by AOT during 2009. The largest single annual increase in aircraft service charge revenue was recorded in 2007, when the annual revenue from this service increased by 36.46% on the 2006 levels (Figure 6).

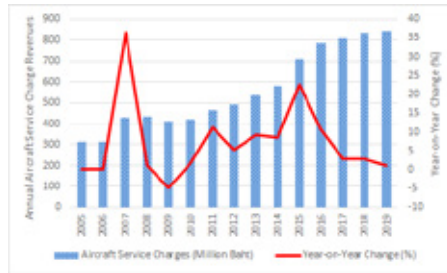


Fig. 6.
The Airports of Thailand Public Company Limited Annual Aircraft Service Charges and Year-on-year Change (%): 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

Figure 7 presents AOT’s annual aircraft service charge revenue as a share of total aeronautical revenues and the year-on-year change (%) for the period 2005 to 2019. As can be observed in Figure 7, there has predominantly been a downward trend in the annual aircraft service charges as a share of total aeronautical revenues over the study period. This trend is demonstrated by the year-on-year percentage change line graph, which is more negative than

positive, that is, more values are below the line than below. The highest annual shares of this revenue source as a share of total aeronautical revenues were recorded in 2005 (3.37%), 2009 (3.37%), and 2012 (3.37%), respectively. The lowest annual aircraft service charges as a share of total aeronautical revenues occurred in 2019 (2.40%). Figure 7 also shows that the annual aircraft service charge revenue accounts for the smallest share of AOT’s annual aeronautical revenues.

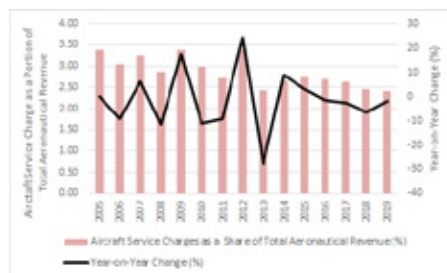


Fig. 7.
The Airports of Thailand Public Company Limited Annual Aircraft Service Charges as a Portion of Total Aeronautical Revenues: 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

4.4. Departure Passenger Service Charge Revenues

AOT's annual departure passenger service charge revenue and the year-on-year change (%) from 2005 to 2019 is presented in Figure 8. Passenger service charges are collected by AOT from all the departing passengers aged two years and over (Airports of Thailand PCL, 2018b). As can be noted in Figure 8, AOT's annual departure passenger service charge revenue has increased from 5,692.04 million THB in 2005 to 26,742.55 million THB in 2019. The large growth in the company's annual departure passenger service charge revenue is a result of the very substantial increase in the number of passengers using AOT's managed and

operated airports throughout the study period. The very substantial growth in departure passenger service charge revenue is demonstrated by the year-on-year percentage change line graph, which is more positive than negative, that is, more values are above the line than below. Figure 8 shows that over the period 2005 to 2019 there were just two years where this revenue source decreased. In 2009, departure passenger service charge revenue declined by 16.7%, reflecting the downturn in the number of passengers handled. There was a small decrease of 4.15% in 2014 (Figure 8). The highest single annual growth in departure passenger service charge revenue was recorded in 2007, when there was a 35.94% increase on the 2006 levels (Figure 8).



Fig. 8.

The Airports of Thailand Public Company Limited Annual Departure Passenger Service Charge Revenue and Year-on-year Change (%): 2005-2019

Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

AOT's annual departure passenger charge revenue as a share of total aeronautical revenue and the year-on-year change (%) for the period 2005 to 2019 is presented in Figure 9. Figure 9 shows that the AOT's annual departure passenger charge revenue is the company's most significant source of aeronautical revenue accounting on average for around 71.67% of total aeronautical revenues during the study period. Figure 9 also shows that AOT's annual departure

passenger charge revenue as a share of total aeronautical revenue increased from 61.47% in 2005 to 76.39% in 2019. Throughout the study period, there was a consistent upward trend in AOT's annual departure passenger charge revenue as a share of total aeronautical revenue with the most significant single annual increase occurring in 2007 (+5.9%). Figure 9 also shows that there were only three years when there was a decrease in the annual departure

passenger charge revenue as a share of total aeronautical revenue. These occurred in 2011, 2012 and 2014 when the annual departure passenger charge revenue as a share of total aeronautical revenue declined by 1.16%, 0.41% and 3.78% on the previous

year's share, respectively (Figure 9). The strong growth in the number of passengers handled over the period 2005 to 2019 has underpinned the favorable growth in departure passenger revenue charge revenues.



Fig. 9. *The Airports of Thailand Public Company Limited Annual Departure Passenger Service Charge Revenue as a Portion of Total Revenues: 2005-2019*
 Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

4.5. Landing and Parking Charge Revenues

AOT's annual aircraft landing and parking charge revenue and year-on-year change (%) from 2005 to 2019 are depicted in Figure 10. As can be observed in Figure 10 there has been a marked upward trend in the growth in AOT's annual aircraft landing and parking charge revenue due to the increased number of flights operated to and from the airports that are managed and operated by the company. Figure 10 shows that the annual aircraft landing and parking charge revenue increased from THB 3,255.69 million in 2005 to THB 7,425.75 million in 2019. There was only one year when the annual aircraft

landing and parking charge revenue declined when in 2009 there was a 26.12% decrease on the previous year's revenue. This can be attributed to the reduced number of flights operated in 2009 due to the impact of the global financial crisis (GFC). The single most significant annual increase in the company's annual aircraft landing and parking charge revenue occurred in 2011 when the annual aircraft landing and parking charge revenue increased by 28.27% on the 2010 levels (Figure 10). The smallest annual increase in AOT's annual aircraft landing and parking charge revenue was recorded in 2013, when this revenue stream increased by 0.1% on the 2012 levels (Figure 10).



Fig. 10.
 The Airports of Thailand Public Company Limited Annual Aircraft Landing and Parking Charge Revenue and Year-on-year Change (%): 2005-2019
 Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

Figure 11 presents AOT’s annual aircraft landing and parking charge revenue as a share of total aeronautical revenues and the year-on-year change (%) for the period 2005 to 2019. As can be observed in Figure 11, there has principally been a downward trend in AOT’s annual aircraft landing and parking charge revenue as a share of total aeronautical revenues over the study period. This trend is demonstrated by the year-on-year percentage change line graph, which is more negative than positive, that is, more values are below the line than above. The highest annual shares of this revenue source as a share of total aeronautical revenues were recorded in 2005 (35.16%), whilst the lowest annual aircraft

service charges as a share of total aeronautical revenues occurred in 2019 (21.21%) (Figure 11). The largest single annual increase in the annual aircraft landing and parking charge revenue as a share of total aeronautical revenues occurred in 2012, when there was a 38.15% increase on the previous year’s share of total aeronautical revenues. The largest single annual decrease in the annual aircraft landing and parking charge revenue as a share of total aeronautical revenues occurred in 2013, when there was a 38.39% decrease on the previous year’s share of total aeronautical revenues (Figure 11). The annual aircraft service charge revenue is the second most significant source of AOT’s annual aeronautical revenues.

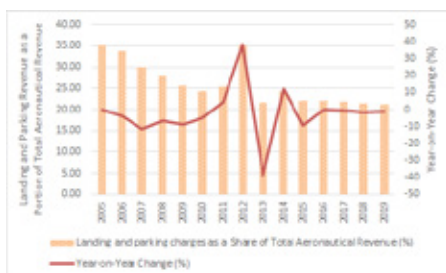


Fig. 11.
 The Airports of Thailand Public Company Limited Annual Landing and Parking Charge Revenue as a Portion of Total Revenues: 2005-2019
 Source: data derived from Airports of Thailand Public Company Limited (2006-2017, 2018c, 2019, 2020)

5. Conclusion

This study has examined the types of aeronautical revenue sources of Airports of Thailand PLC (AOT) from 2005 to 2019. The study used a qualitative longitudinal research design. The data collected for the study was examined using document analysis. The qualitative case study was supported by the case study research framework that followed the guidelines recommended by Yin (2018).

Like other airports around the world, the Airports of Thailand PLC (AOT) earns its revenue from both the provision of aeronautical services and infrastructure and from non-aeronautical services. The aeronautical revenues are comprised of aircraft service charges, departure passenger service charges, and landing and parking charges. The non-aeronautical revenues are comprised of concession revenues, office and state property rents, and service revenues.

The case study revealed that the Airports of Thailand PLC (AOT) non-aeronautical revenues have grown significantly throughout the study period. The company's aeronautical revenues increased from 9,260.03 million/THB in 2005 to 35,010.14 million/THB IN 2019. Throughout the study period, aeronautical revenues have averaged around sixty per cent of the company's annual revenues. The Airports of Thailand PLC (AOT) three aeronautical revenue sources all grew strongly over the study period. The most significant growth was recorded in departure passenger service charge revenue (+369.82%), followed by aircraft service charge revenue (+169.56%), and aircraft landing and parking charge revenues (+128.08%). The strong growth in passenger volumes and the growth in aircraft

movements underpinned the significant increases in the company's aeronautical revenues. Since their inception of operations in Thailand in 2004, the low-cost carriers (LCCs) have stimulated passenger volumes whilst also growing their annual number of aircraft movements, which are scheduled to satisfy the demand for low-cost passenger services.

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