

Operational Efficiencies of Thai Airports from the Perspective of Low-Cost Carriers

Sukhuman Klamsaengsai^{1*} and Therdchai Choibamroong²

¹*Walailak Management School (WMS), Walailak University, Nakhon Si Thammarat, Thailand*

²*Graduate School of Tourism Management, National Institute of Development Administration (NIDA), Bangkok, Thailand*

ABSTRACT

The expansion of low-cost carriers (LCC) in the past two decades has increased the number of air passengers and visitors to countries around the globe. The resulting growth of the tourism industry worldwide has challenged airports in shaping their operations. Thus, the purposes of the study were to: 1) investigate efficient areas in airport operations; and 2) investigate inefficient areas in airport operations of Thai airports. Semi-structured interviews were adopted to collect qualitative data from 30 LCC staff. The research results showed that Thailand airports had efficiencies in providing a number of security check points, cooperation of security agencies, standard safety equipment, wide ranges of ancillary services, friendly staff and regular arrangement of airport meetings with airline representatives, whereas capabilities of security staff, airlines and passenger facilities, language ability of airport staff, attitudes of airport staff, service allocation, unequal treatments, price of food and goods and terminal function designs are areas of inefficiencies.

Keywords: Airport operations, low-cost carriers, operational efficiencies, Thai airports

INTRODUCTION

Development in air transportation has enhanced the growth of commercial airlines. Global commercial airlines

served 538 million passengers in 2012, with an 8.24% increase in 2011 (IATA Economics, 2013). Commercial airlines are flourishing. Full-service carriers (FSC) and low-cost carriers (LCC) continuously demonstrate positive increments every year. Today, LCCs have grown to become the preferred mode of air transport in US, Europe and Asia. More interestingly, the market share of the world's domestic FSC

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E-mail addresses:

ksukhuma@gmail.com (Sukhuman Klamsaengsai),

tedchoibamroong@hotmail.com (Therdchai Choibamroong)

* Corresponding author

flights has been continuously replaced by LCCs (O'Connell & Williams, 2005) in the past several years. Several factors have contributed to the emergence and rapid growth of LCCs. A significant feature of the LCC is low fare (Williams, 2001; Barrett, 2004; Francis, Humphreys, & Ison, 2004; O'Connell & Williams, 2005; Barret, 2008; Nilsson, 2009; Fabian, Jung, Montealto, Yu, & Gueta, 2013). Offering low fares is cited as one of the factors behind the exponential growth of the LCC concept around the

world. In summary, low-cost carriers have specific characteristics different from full-service carriers. That is, the low-cost carrier is a specific type of air carrier that focuses on low costs, low fare tickets, basic in-flight services, lack of seat allocation, point-to-point routing, high flight frequencies, short turnaround times, a single aircraft type, high capacity aircraft, high number of seats per aircraft and an online booking system. The summary of the characteristics of LCC is presented in Table 1.

TABLE 1
Characteristics of Low-Cost Carriers and Full-Service Carriers

Product Features	LCC Characteristics	FSC Characteristics
Aircraft	Single type: commonality	Multiple types: scheduling complexities
Aircraft utilisation	Very high	Medium to high: union contracts
Airports	Secondary airports (mostly)	Primary airports
Ancillary revenue	Advertising, on-board sales	Focus on primary product
Brand	One brand: low fare	Brand extensions: fare + service
Check-in	Ticketless	Ticketless, IATA ticket contract
Class segmentation	Single class (high density)	Two class (dilution of seating capacity)
Connections	Point-to-point	Interlining, code share, global alliances
Customer service	Generally under-performs	Full service, offering reliability
Distribution	Online and direct booking	Online, direct, travel agents
Fares	Simplified: fare structure	Complex fare: structure + yield management
In-flight services	Pay for amenities	Complementary extras
Operational activities	Focus on core (flying)	Extensions: e.g. maintenance, cargo etc.
Product	One product: low fare	Multiple integrated products
Seating	Small pitch, no assignment	Generous pitch, offers seat assignment
Turnaround time	25 minutes turnaround time	Longer turnaround time: congestion/labour

Source: O'Connell and Williams (2005)

In Thailand, the first entry of LCCs was marked by the entry of low-cost One-Two-Go. In December 2003, One-Two-Go was launched in Bangkok and major cities in the country (O'Connell & Williams, 2005;

AOT, 2011a). In 2004, Thai AirAsia and Nok Air propelled themselves into the low-cost market, displaying the usual growth and rapid development of other LCCs around the world (The Nation, 2004).

Today, Air Asia, One-Two-Go and Nok Air are the major LCC players in Thailand, transporting thousands of air travellers to major cities within the country.

The growth rate of LCC passengers in 2013 increased tremendously by 28.89% compared with the year 2012. In 2013, the LCC market share in six major Thai airports was 31.99% (28.24 million of 60.05 million passengers) (AOT, 2014b, 2014c). Also, the market share for LCCs, for both international and domestic passengers, increased every year from 2008 to 2013 (AOT, 2010; 2011a; 2012a). For LCC routes, the proportion of domestic passengers to international passengers generated in 2013 was 63.67 to 36.33. Thus, low-cost carriers mainly overshadowed domestic flights and domestic passengers in Thailand. The growing numbers of LCC passengers in Thailand had a direct effect not only on the passengers themselves or the varieties of routes, but on one of the most significant partners in the industry, namely, airports.

The growth and expansion of LCCs has necessitated the need to reexamine

the operation of Thai airports. Further, Thailand does not have specific low-cost terminals like other countries (e.g. USA, Finland, Hungary, France, Italy, China and Singapore) (Hanaoka & Saraswati, 2011). Airport design that can accommodate a high volume of passengers is one of the LCC requirements for an airport. Low fare is a significant feature of LCCs (Atalık & Özel, 2008), so many LCCs strive to obtain operational efficiency and economies of scale to lessen costs significantly (O'Connell & Williams, 2005; Echevarne, 2008; Graham, 2008). Consequently, LCCs expect airports to have an efficient design that can accommodate a growing number of flights (Graham, 2008; Forsyth, 2009; Fabian *et al.*, 2013). The design of airports should accommodate large volumes of passengers. The requirements of LCC are reviewed in Table 2. Most Thai airports are faced with the challenge of responding to the whole market. The rapid growth of LCCs has called for a paradigm shift in the operation and design of airports.

TABLE 2
LCC Requirements on Airport Services

Operational Areas	LCC Requirements
Accessibility & Car Parking	Airports with public transportation systems High demand for car parking facilities Secondary airports
Check-in	Fewer check-in desks (one single class and web check-in)
Baggage handling systems	Very simple as flights are point-to-point
Office accommodation	Simple & functional (low operating costs)
Airline lounges	Not needed
Transfer facilities	Not needed
Aerobridges	Not needed (LCC prefer steps for quicker boarding and disembarking)
Airfield buses	Not needed (LCC prefer steps for quicker boarding and disembarking)

Source: Graham (2008, p.99), Echevarne (2008, p.187) and Williams (2001, p.279)

A number of studies have explored customer service satisfaction towards service at different airports in Thailand (Sachar Thanasrivanitchai, 1998; Suthon Prakobpetch, 2005; Thawhan Theanthong, 2006; Tana Kanjanasirikul *et al.*, 2007; Chalermphon Kitrungruang, 2011; Paisit Piriyapong, 2011). Most of the studies had relied on passengers' opinions of airport services whereas the views of primary customers i.e. the air carriers were still overlooked. Consequently, this paper was aimed at investigating 1) areas of efficiencies and 2) areas of inefficiencies of Thai airports from the view of low-cost carriers.

Operational efficiency refers to the readiness state of the airport to provide the operational facilities appropriate to the types of airline and aircraft using the airport (Ashford, Stanton, & Moore, 1997, p. 115). In this study, the efficiency of the operation of airports refers to how airport operators can efficiently utilise their resources to perform operational attributes and procedures.

MATERIALS AND METHODS

Unit of Analysis

According to the Department of Civil Aviation (2014a, 2014b) and AOT (2014c), there were 35 Thai airports still operating for civil aviation in 2013. Among 34,843,693 domestic passengers using scheduled airlines at 32 airports in 2012 (three DCA airports, Pitsanulok, NakhonRatchasima and HuaHinairports, were excluded), AOT, which operated six international airports, showed the highest percentage (78.03%) (27.18 million) in serving domestic

passengers while the 25 airports operated by the Department of Civil Aviation (DCA) served only 16.66 %. The other 5.09% and 0.22% were served by Bangkok Airways Company Limited and the Royal Thai Navy, respectively. Suvarnabhumi Airport served 32.61% of Thailand's domestic passengers in 2012. Excluding Suvarnabhumi Airport and Don Mueang International Airport, which are both located in a metropolitan area, four regional airports operated by AOT served 32.13% of Thailand's domestic passengers in 2012 (Ministry of Transport, 2013a).

Since airports operated by Thailand Public Company Limited showed the highest potential to support domestic flights and domestic passengers in Thailand, this study specifically focuses on airports of AOT. One essential reason for selecting the chosen airports is the opportunity to access and retrieve data from both primary and secondary sources. Among the six airports, Suvarnabhumi Airport and Don Mueang International Airport are exceptions in terms of scale, location and service pattern.

Thus, four airports, Phuket (HKT), Hat Yai (HDY), Chiang Mai (CNX) and Mae Fah Luang Chiang Rai (CEI), are included in this research as representatives of Thai airports. Additionally, these four airports have a high volume of domestic aircraft movements and domestic air passengers, including both full-service and low-cost carriers. The growing tendency of LCC passengers at each airport is evident. Total numbers of LCC passengers have been increasing every year. The five-year growth rate (2009-2013) achieved more than 100% growth at all airports (AOT, 2010; 2011a; 2012a; 2013a; 2014d) (Fig.1).

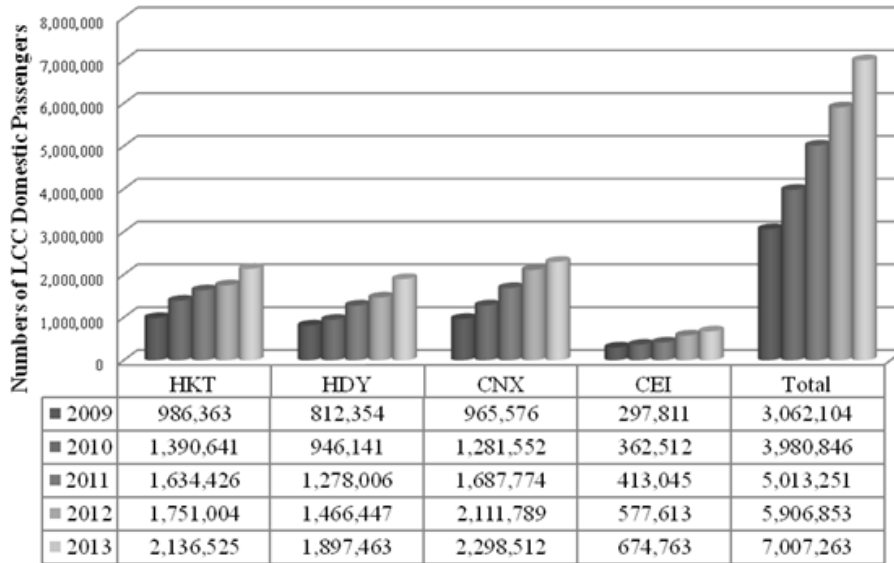


Fig.1: Domestic LCC aircraft movements at 4 AOT airports in 2009-2013.
Source: AOT (AOT, 2010, 2011a, 2012a, 2013a, 2014d).

Population

There are three low-cost carriers including Thai AirAsia, Nok Air and Orient Thai Airlines, which operate flights at the four target airports (Airports of Thailand Public Company Limited, 2013a). As low-cost carriers are primary customers of airports, low-cost carriers are involved in evaluating the operational efficiency of airports. Therefore, a population was derived from LCC staff who had been working at the four airports for at least one year and had dealt with domestic flights.

Sample Size and Sampling Techniques

Purposive and snowball sampling techniques were applied to choose proper interviewees to take part in semi-structured interviews. LCC staff from both operational and management levels with

at least one year of work experience at the airports were identified to be interviewees. Through purposive sampling, 30 LCC staff was selected (eight supervisory staff and 22 operational staff) (Table 3). In addition, the researchers used the snowball technique to better reach targeted staff in the same carrier. Data were collected from November to December 2013 at Phuket International Airport, Hat Yai International Airport, Chiang Mai International Airport and Mae Fah Luang Chiang Rai International Airport.

Research Tools and Data Analysis

A semi-structured interview was initially conducted to obtain data for the two research objectives, as previously mentioned. The interview contained two major questions: 1) 'Could you please tell

me anything that impresses you about this airport or anything that you think that the airport could efficiently perform?’ and 2) ‘Could you please raise areas or issues that the airport needs to improve for carriers or

passengers?’ Data gathered from personal interviews were analysed using the content analysis method which emphasises themes and issues of the operation of airports.

TABLE 3
Interviewees’ Profiles

Name	Gender	Age	Task/Position	Work experience
L1	Male	41	Station Manager	9 years
L2	Female	34	Station Manager	9 years
L3	Female	36	Station Manager	9 years
L4	Female	40	Station Manager	9 years
L5	Female	37	Supervisor	9 years
L6	Female	40	Duty Executives	10 years
L7	Female	34	Station Manager	9 years
L8	Male	39	Station Manager	10 years
L9	Female	21	Ground Attendant	1 year
L10	Female	22	Ground Attendant	1 year
L11	Female	33	Ticketing	9 years
L12	Male	29	Passenger services	4 years
L13	Female	30	Ground service agent	8 years
L14	Female	31	Ground service agent	8 years
L15	Female	36	Passenger services	15 years
L16	Female	38	Ground service agent	8 years
L17	Female	25	Ground service agent	2 years
L18	Male	30	Guest service	2 years
L19	Female	30	Ground service agent	8 years
L20	Female	26	Ground service agent	1 year
L21	Male	29	Ground service agent	9 years
L22	Male	32	Ramp master	8 years
L23	Female	38	Ground service agent	6 years
L24	Female	27	Ground service agent	3 years
L25	Female	26	Ground service agent	2 years
L26	Male	26	Ground service agent	1 year
L27	Male	25	Ground attendant	2 years
L28	Female	38	Ground attendant	10 years
L29	Male	33	Ground attendant	8 years
L30	Male	36	Ramp master	5 years

Note: L = Low-cost carrier staff

RESULTS AND DISCUSSION

Operational efficiencies of Thai airports were evaluated by low-cost carrier staff and their results are variously shown. Both positive and negative ways were derived. Surprisingly, when the interviewees were asked in which areas Thai airports had excelled, more than a few interviewees said that there was no special area in which Thai airports excelled, as shown in their statements below:

“Um...no.” (L1)

“I don’t think there is.” (L2)

“Everything is normal, nothing is special. It’s just acceptable.” (L12)

“Everything is acceptable with nothing outstanding.” (L16)

“Nothing.” (L17)

“I think it’s nothing.” (L27)

Ultimately, several operational themes including safety and security, facilities and equipment, staff, management, services and infrastructure and condition emerged. Two directions of results were revealed as areas of efficiency and areas of inefficiency. Four themes (safety and security, facilities and equipment, staff and management) had both efficient and inefficient results with different issues. That is, a specific theme can comprise both efficient areas and inefficient areas (Table 4). However, in these two themes, airport services and airport infrastructure and condition, only inefficient areas were found.

Airport Safety and Security

Areas of efficiencies. Thai airports efficiently operate well on security check

points. In terms of quantity, Thai airports provide enough security check points so that customers feel comfortable once they arrive. A good numbers of the interviewees were happy with the fact that Thai airports had collaborated with various effective partnerships including security agencies, emergency service providers and fire departments so as to provide safety and security. A good number of the interviewees were happy with the security systems and procedures that were installed in the airports. This is seen in their statements below,

“The good point is the security.

There are many organizations to cooperate with in security functions.” (L5)

“This airport tries to maintain security measures.

There are not much serious accidents in this airport.” (L10)

“Safety measures here are quite strict.” (L18)

At the four airports explored, security check points are set at the front gates leading to the airport terminal. All persons and their belongings are checked through the screening machines. In general, airport passengers must pass the security check at least three times at the following places: 1) terminal entrance, 2) departure gate entrance and 3) inside the departure hall. All airports have provided security equipment with minimum standards appointed by the International Civil Aviation Organisation (ICAO). In addition, there is another security check point prior the airport

entrance at Hat Yai International Airport. At Hat Yai International Airport, there is good cooperation between military forces and the Explosive Ordnance Disposal (EOD). The good cooperation between security agencies is clearly shown in both Hat Yai and Chiang

Mai International Airports. Police and soldiers from both the Royal Thai Air Force and the Royal Thai Army work in the same service unit at Chiang Mai International Airport. Moreover, all Thai airports have a fire unit in case of emergency.

TABLE 4
Operational Efficiencies of Thai Airports from the View of Low-Cost Carriers

Operational themes	Areas of Efficiency (+)	Areas of Inefficiency (-)
Airport safety & security	Security check points, agencies cooperation, standard equipment	Restrictiveness of security staff Capability of security staff
Airport facilities & equipment	Wide range of airport services	Number of connecting gates Space of parking lots Wi-Fi services Toilet services (number & condition) Number & position of baggage claiming belts Location of check-in counters Condition of check-in counters and feed belts Less seats in waiting areas Handicapped facilities (lifts, ramp) Information signs (Clearness & multi-language)
Airport staff	Friendly staff	Staff's communication & languages Staff's attitudes
Airport management	Airport meetings with all parties	Allocation of slot, connecting gate and check-in counters Congestion management (carrying capacity) Relationship between airport tax/fee and provided services
Airport services		Unequal treatment to all airlines Choices of food, goods and restaurants Reasonable food prices
Airport infrastructure & condition		Interior design on airport terminal Corridor

Areas of inefficiencies. Even some areas on safety and security were accepted, security staff did not totally perform well on restrictiveness and their capabilities. It was still found that security staff do not seriously check all persons who get inside airports. They sometimes skip some persons they are familiar with. Most of the time security staff keep talking to each other while they are working. Though they work with their hands, their eyes do not see the things or persons they check. Staff of low-cost carriers feel that the high number of security staff turnover might lead to unqualified security staff being on duty. Thus, intensive training and conduct are necessary.

“Another thing about the security is about the security staff at each check point.” (L2)

“Even the security is quite good here, it still needs strictness.

All airport staff should pay attention to safety and security as the first priority. We are still afraid of terrorism.” (L6)

“The security checks should be stricter...” (L9)

“The security check should be stricter. Security staff should not talk to each other while working.” (L25)

“I cannot trust security staff. They are always new to me.” (L26)

Airport Facilities and Equipment

Areas of efficiencies. The only good thing about airport facilities is that they provide a wide range of services. Thai airports have a wide range of services. Both basic facilities

and ancillary services are provided at airports. See the interviewees’ statements below:

“This airport provides variety of services such as shops, banks, post office, rental services and so on.” (L13)

“It’s OK that the airport has a variety of services such as banks, post office, prayer room, rental facilities.” (L15)

“Another service that eases our work is the post office.

We don’t need to go outside for sending parcels or mails.” (L23)

The airport has basic facilities and equipment needed for airlines and passengers. Basic facilities are such as parking areas, security check points, trolleys, check-in counters, seats, waiting areas, toilets, departure hall, baggage claim belts, flight monitors, health services or airline offices. Moreover, ancillary services are also provided, such as convenient stores, souvenir shops, restaurants, post offices, bank services, car rental services, tour/hotel services, public telephone or even massage shops. In short, Thai airports have many services.

Areas of inefficiencies. A number of areas on facilities and equipment were raised as inefficient areas. Connecting gates were popularly mentioned as low-cost carriers prefer using connecting gate-bays to remote bays in order to save their operating costs. The results contrast with those of a study by Echevarne (2008) and Graham (2008), where aerobridges were not needed for the low-cost carriers. Using connecting

gates consumes less turnaround time for each flight, so low-cost carriers can save on costs. It clearly shows that low-cost carriers are concerned about economies of scales (O'Connell & Williams, 2005; Atalık & Özel, 2008; Echevarne, 2008; Graham, 2008). In low-cost carriers, since airport customers have to pay for all the services they desire to use, they need invaluable services. The number of connecting gates is not yet enough for all flights at the airports and the allocation at the gates is not consistent. See the interviewees' statements below,

"This airport provides us with the connecting gate but 1 gate is used to serve 4 airlines, which is not appropriate." (L1)

"When we have to use the remote bay, we need to allow passengers to walk to the terminal without bus services. Normally, shuttle buses are provided in the big and congested airports.

"Parking area is not sufficient." (L9)

"The airport should add or manage the aerobridges for all airlines or provide transferred bus services from bay." (L11)

Besides the connecting gates, low-cost carriers need good check-in counters as other airlines have. Some check-in counters of some low-cost carriers do not have automatic feed belts to load checked baggage whereas the full-service airlines' counters have. Low-cost carriers do prefer convenient check-in counters with full options, not just the simple check-in counters previously mentioned by some

authors (Echevarne, 2008; Graham, 2008). In addition, the position of check-in counters is unfairly located in the airlines. Those of the low-cost carriers are placed in hidden positions. In terms of baggage belts used on arrival, if there are two belts, flights of low-cost carriers are usually assigned to use the second belt, which requires passengers to walk a longer for their baggage. At the same time, full-service carriers always get the good position of check-in counters and baggage claiming belts.

A growing number of low-cost carrier passengers frequently cause airports to become congested. Airports cannot manage their space well and do not have enough seats. Often, since all waiting seats are occupied, low-cost carrier staff interviewed for this study found that some passengers had to stand while waiting for their flights in the departure hall. Low-cost carrier staff perceived that there were several areas in which airports do not efficiently operate (i.e. Wi-Fi, toilets, parking space, handicapped facilities and information signs). See the interviewees' statements below:

"Most passengers ask for free Wi-Fi service since they have paid for airport tax or passenger service charge already." (L4)

"Toilets are quite less compared to huge numbers of passengers.

Wi-Fi is also necessary for present travellers." (L11)

"Insufficient parking areas, defective baggage transfer at check-in, belts on arrival, connecting bridges,

insufficient seats at departure hall, and WI-FI must be improved. Those things affect both passengers and airlines' processes." (L15)

"There is no lift for those passengers in the terminal. In addition, there is no Wi-Fi connection." (L19)

Airport Staff

Areas of efficiencies. Only the friendliness of airport staff was perceived to be good for low-cost carriers. Undoubtedly, since airport staff and airline staff have to work together to make their operation successful, working with friendly staff facilitated working with low-cost carrier staff. See the interviewees' statements below:

"Some of the airport staff are very helpful. They understand our procedures.

Sometimes they offer helps to us." (L3)

Areas of inefficiencies. Low-cost carrier staff found that most airport staff working for service substances were not able to speak foreign languages. Airport passengers comprised not only domestic Thais but also foreigners. Information staff should be able to use at least Thai and English. It would be fruitful if airport staff could facilitate foreign passengers with their capability on other foreign languages. Also, airport staff do not have a positive attitude towards low-cost carriers. This is because low-cost carriers and full-service carriers are treated differently.

"They should be well trained to strictly screen all airports' users equally.

I know that there are high staff turnover for that job." (L2)

"I am not sure that all airport staff who work on security task are well trained or not.

Since there is high turnover of outsourcing staff, I am not sure of the quality." (L6)

"Some staff cannot speak English and might not be helpful enough." (L9)

"In case of emergency, I don't think the security staff can deal with it." (L12)

"The most serious issue is about security staff. I don't know the recruitment progress of such staff but the young staff cannot make me feel trusted and safe." (L13)

Airport Management

Areas of efficiencies. The airports do not only have meetings with relevant airport functions themselves, but there are regular meetings with other related parties (concessionaires, outsourced companies or airlines). This kind of meetings enhances airlines including low-cost carriers to give feedback to executives on airport operation. See the interviewees' statements below:

"Sometimes, airport allows us to use the airport's meeting room. Since we have a lot of airline staff and we don't have enough space to do a monthly meeting, we ask the airport to use the meeting room for free. If the room is available, we can occupy it." (L4)

"And another good thing is that the AOT arranges the meeting for every three months.

There are related entrepreneurs appointed in the meeting.” (L7)

“Normally, we have a chance to join the meeting with airports’ executives every 3 months.” (L8)

Areas of inefficiencies. In relation to all inefficiencies, good management is necessary. Currently, airports do not manage well on resource allocation. Some obstacles on allocating slots, connecting gates and check-in counters were found in this study. Also, congestion must be noted and managed so that everyone can be satisfied. Good design of airports can facilitate low-cost carriers with a huge number of passengers (Graham, 2008; Forsyth, 2009; Fabian *et al.*, 2013). Even if the rates of airport tax and fees are clearly announced and accepted by all airport users, airport management should review what airports get and give and what airport customers give and get. Low-cost carrier staff did not feel airport services gained were valuable compared to paid amounts.

“Moreover, an airport should well consider flight timetable proposed by each airline.

An airport should not allow all proposed flights to be operated at the same time.” (L1)

“The airport should consider the capacity of parking bay with high frequency of flights.” (L16)

“I think that passengers already paid for their services via airports’ tax, they good gain reasonable services.” (L22)

“We prefer using bridge to other choices.

We can manage enplaning and deplaning passengers by the limited time.” (L27)

“Claiming belt is not sufficient. Also, departure hall is small; fewer parking spaces and less trolleys.” (L29)

Airport Services

Areas of inefficiencies. Under this theme, only inefficient areas were found. Airports might not have reached the services as expected by the LCC staff. This is because staff who responded felt that all airport services were ordinary and they still found some inconvenience working with airport staff or services. Only a range of airport services was mentioned as a compliment but it was felt that this too still needed to be improved. Again, unequal services were perceived by low-cost carriers. The low-cost carriers believed full-service carriers always got better services over the low-cost carriers in different ways as mentioned. Other issues were about choices and prices of some services. Even though Thai airports have a variety of services, some services at some airports are still needed. Food services are limited at all Thai airports. There is the concessional restaurant that serves food at each airport. That existing restaurant provides food at a high price so that most low-cost carrier passengers and staff cannot afford it. Apart from the restaurant, all the other stores sell products at too high price. See the interviewees’ statements below:

"We are not the first to be served by AOT but the full-service airline." (L1)

"The airport should equally provide connecting gate to all airlines." (L3)

"Airport should be fair and sincere on managing parking bay." (L4)

"First of all, please know that AOT always keeps TG and Bangkok Airways as the first priority of providing any services. Most of the time, we, the low-cost airlines are always assigned to park at the remote bay instead of connecting bridge." (L15)

"We don't feel we get the same service standard compared to TG." (L19)

Airport Infrastructure and Condition

Areas of inefficiencies. Similar to the previous theme, there were not efficient areas mentioned by LCC staff in terms of airport infrastructure and airport condition as traditional airports have been built and used for years without renovation. Moreover, since the numbers of passengers and flights hugely increased, airline staff expect more functional and modernised airports over the existing ones. The infrastructure (i.e. terminal building or airport roads) of airports does not directly refer to airport operations but is related to other airport operational functions. For example, the existing design of the terminal caused difficulties for both enplaning and deplaning passengers. Moreover, passengers of different flights might have to use the same corridor at the

same time. Thus, it is risky for an airline to let passengers go to the wrong gates or flights. The airlines have changed that circumstance by preparing airline staff and signs at the corridors for every flight.

"If it's possible, I prefer the one-floor terminal for both departure and arrival.

It would be easy and quick for us and the passengers." (L1)

"Since the arrival passengers and departure passengers have to use the same corridor, it eases the passengers to lose the way or go to the wrong directions. Our airline staff has to stand at different points to make sure that the passengers can go to the right way." (L2)

"If the airport can better position the check-in counters to be in the same area, it will ease passengers for check-in procedures." (L4)

"Besides the airside, the position of check-in counter here is strange.

It's hard to find the check-in counters. A number of passengers have complained on that." (L7)

"At the corridor, there are only two counter-lanes for both arriving and departing passengers which will be confusing to those passengers." (L14)

CONCLUSION

The growth of domestic low-cost carriers has expanded widely in Thailand, and the number of air passengers has continued to grow as well. Airports need to shape their

operational schemes to fit the new wave of air transport, the low-cost carrier (LCC). From reviewed literature, airports need to continuously develop, regarding the changing environment. Efficient airport operation is significant, not only to fulfil customer satisfaction but to maintain business. Since the integration of low-cost carriers and airport operations has emerged, there has not been any research on Thailand airports investigating the links between these issues. This research investigated operational efficiencies of Thai airports from the LCCs' perspective.

To conclude, Thai airports have both efficient and inefficient areas of operation in the view of low-cost carrier staff (Fig.2). Most airline representatives did not mention efficient areas of airport operations since the operations do not impress them very much on specific issues. The airports perform efficiently on overall standard services. Providing security check points with enough staff was accepted. Wide range of

airport facilities cover retail shops, souvenir shops, restaurants, food stores, health, rental services, tour services, exchanges/ATM, post offices or even message. Another point of efficiency is about airport meetings with airline representatives.

Some facilities were required in the eyes of low-cost carrier staff. Numbers of connecting gates, baggage claiming belts, check-in counters or waiting seats had to be regarded. Likewise, car parking space, facilities for the handicapped, toilets and Internet services were a concern with the diverse passengers. Equal treatment for all types of passenger (ordinary and disabled) from airports was also wished for. The high price of fees and tax should be considered in order to give more value services to customers; also, the high price of food and goods at airport retails should be looked into. The existing terminals not designed for the growing number of flights and passengers, especially low-cost terminals, must be renovated or reconfigured for utilisation.

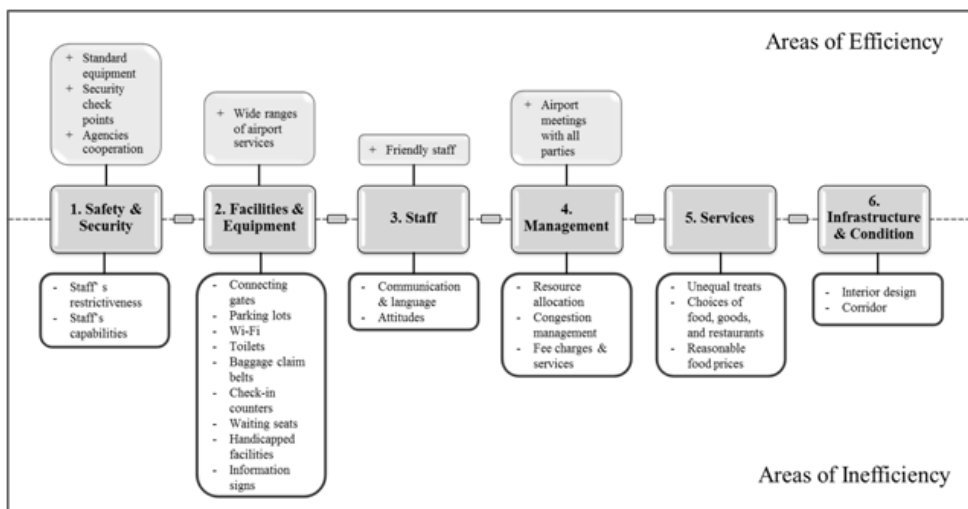


Fig.2: Efficient and inefficient areas of Thai airport operation in the view of low-cost carriers.

The operational efficiency retrieved from this research was based on the perspective of low-cost carrier staff who had raised some meaningful issues about airports. In addition, notable areas of airport operation for low-cost carriers were revealed.

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