

Airport Development Charges Strategy– Sneak Peeking Into Its Viability For Airport Management In Riding The Competitive and Challenging Business

M A N Rusdin^{1*}, M F N Mohammad², N A Abdul Rahman³ and M. Romeli⁴
^{1,2,3,4}Malaysian Institute of Aviation Technology, Universiti Kuala Lumpur, Selangor, Malaysia
*Corresponding author: azrulnaimaviation@gmail.com

Abstract. Air travelling has become a norm nowadays. The aggressiveness and higher demand for airlines businesses have dictated the growth and require poise action from the airport entities. Indeed, airlines and airport are two businesses that are growing and shrinking in parallel. In ensuring continuous businesses and support for the growth of airlines passengers, airport management needs to source out for consistent revenue in ensuring optimal operations. Preliminary analysis shows that the airport revenue streams comes from various sources such as government, upstream and downstream businesses, passenger charges and many others. One of the potential revenue streams that might be considered by the airport management highlighted in this study is airport development charges. Interestingly, analysis on limited number of airports within South East Asian region have shown that quite limited number of airports have implemented the charges. Hence, this conceptual study adamant to set a preliminary discussion on the initiatives taken by airport management so far as well as the business model adopted by previous studies. This study has its novelty in term of selection of the topics as well as the environment of the study. Methodologically, this study adopts the nine components of Osterwalder approach - customer relations, distribution channel, customer segment, key resources, value proposition, key activities, cost structure, partners and revenue streams to support the preliminary analysis. The concerted effort by airport management has generated interesting topic for future opportunities in analysing the financial structure and revenue of airport from the perspective of academic research in the university.

1. Introduction

In general, most of the airports throughout the whole globe have a similar way to generate income, there are aeronautical and non-aeronautical approach. Technically, aeronautical approach consists of fees of landing, parking fee, ground service chargers and hangar fee. In a simple word aeronautical revenue are basically the initiative or activities that occurred in an area of airport terminal sides where operations of an airlines using the aircrafts happened (Battal & Bakir, 2017). While on the other side of generating income, non-aeronautical charges is basically the revenue that is coming from the airport operation that does not include in aircraft operation or any aviation related such as car parking and also vendor rent. In a simple explanation, this approach are being derived by source of income coming from concession free zones and also premises or outlet rental [2].

Preliminary analysis on airport charges mechanisms have shown that various methods have been used in generating their revenue streams such as Passengers Service Charges (PSC), Airport Development Charges (ADC), Security Chargers, Noise Emission chargers and others. On top of various methods, the charging mechanisms are also charged to a different types and sectors of passenger. There are some charges that are applicable to departing passenger but not to arriving passengers, likewise, to either domestic or international passengers. For instance, PSC that are currently charged to the passengers are also known as airport tax previously were only charged to the departing passengers at the airport. From the perspective of researcher, the above has laid an interesting topic yet compelling to be studied on the important mechanisms used and adopts by airport operators in generating income.

In highlighting the above issues clearly, therefore this study puts forward the following objectives:

- a. To investigate the advantages of ADC existence in Airport Development
 - b. To analyse the current practices of ADC implementation among airport operators.
- Therefore, based on the above objective, the following questions were outlined to guide this study as follows:
- a. What are the benefits of ADC implementation to airports in term of aligning with industry growth?
 - b. What is the impact of the current implementation of ADC among airport operators?

2. Background of Study

Modern airport nowadays are technically no longer preparing or even offering infrastructure for an airline and passengers, but instead modern airport at this current situations are evolving towards more sophisticated and using a various and also variety of revenue stream [3]. Airport Development Chargers is a fee that are charged by airport management to the passenger for the purpose on generating an income revenue specifically for the development of airports. According to Civil Aviation Authority (CAA) in its official website, airport development fees are additional chargers to passengers once they are at the airport and using it. This involve in purchasing tickets that allows the passenger to go through airport security .Airlines will make sure that they are aware of these fees upon purchasing tickets[4].

However, in the airport industry, there are limited cases of ADC charges being implemented by airport operators especially in ASEAN countries. In ASEAN, review of study has shown that ADC is currently implemented in Changi International airport, Singapore. Meanwhile, other airports in other continent that have implemented the charges such as Hamad International Airport in Qatar, Hong Kong International Airport in Hongkong and Velana Airport in Maldives. Based on statistics, these airports have their development and expansion plan and have been growing steadily for the past few years. As an example, according to Civil Aviation Authority of Singapore (CAAS), the usage or the purpose of existence Airport Development Levy in Singapore is for the purpose of making sure the airport users are participating in the future growth of Changi Airport. This will be a joint contribution by Government of Singapore, Changi Airport Group as an airport operator and lastly is the airport users such as passengers.

In its website, CAAS stated that this joint contribution will be assisting the development of three elements (“CAAS on New Airport Development Levy,”) :

- a) To allow Changi Airport to cater and handle more flights, there will be building a three runway system which involving the expansion and extending the existing military runway and also taxiway.
- b) Building and upgrading the a network of system and also tunnels that automatically includes the handling system of a baggage that can actually allow the passengers transfer to be more efficient.
- c) The building of Terminal 5 that will enable Changi Airport to cater to an additional of passenger per annum by 50 million passenger which in general will increase the capacity of Changi increases up to 60%.

Regardless of having ADC, there are still airports that able to operates without the existence of ADC in their airport. For an example, Heathrow International Airports are having a different way of handling their development plan or initiative. Heathrow International Airport, airlines and CAA recognised that agreeing investment plans at the time of the price review for the next five to six years does not reflect the need for flexibility. Therefore, it was agreed that a two-tier approach would be adopted where capital investment would be classified as either Development or Core, to ensure flexibility of the capital investment programme (H.Limited, 2011). Technically they will a have a calculation where they can allocate and project a forecast on what are the additional revenue that is required for the project ahead of upcoming year. Once the calculation has been made it will project a forecast on the revenue needed by Heathrow Airport to be generated to support project or development purposes.

However, the development and growth of airports does not only rely heavily on charges but depending on other factors as well. Although, there are no significant remarks that ADC have contributed fairly to the development, regardless, it is worth to sneak peek into the impact and advantages that airport operators will benefit from ADC implementation. This is because according to a study by [7], airports have been facing with a completion of obtaining fund for expansion and development or upgrade which resulting the airports are in need of significant investment. In fact, to the best of researcher knowledge, there is no such studies have been conducted in analysing the impact and benefits of ADC implementation at least from the academic research at university level.

2.1 Osterwalder Approach

Key Partner	Key Activities	Value Proposition	Customer Relationship	Customer Segment
	Key Resources		Channels	
Cost Structure			Revenue Stream	

Figure 1. Osterwalder Business Canvas

Table 1. Concept of Osterwalder Approach

Components	Description
Customer Relationship	The type of relationship company established with specific Customer Segmentation
Distribution channel	Mainly regarding of how the company communicates
Customer segment	Describe as the different group of people or organization towards the aim to reach and serve
Key resources	Describe about making business model work by figuring out what are the important assets.
Value Proposition	Describe the bundle of product and service that create value for specific customer segment
Key activities	What are the most crucial things that company should do to make the business d
Cost structure	Explain about in order to operate business what will incur cost
Partners	A relationship between network of suppliers and also partnership that can help the business
Revenue Streams	Represent the company cash that is being earned or generated through customer segmentation

The Osterwalder Approach is mostly famous by the name of The Business Model Canvas is basically contains variables representing the value of a company. Osterwalder can be deployed or can be utilized for strategic tools for organization development. In general this approach or concept will be giving the business or airport in this case to share the same language that allows us the management side to describe easily, create a new strategic analysis and also business manipulating decision [8]. This is because without the existence of the same language it is hard to systematically assumed challenge to innovate in flying colours. According to [8], the concept of Osterwalder Approach, are using nine component as above.

2.2. Type of business model for Airports

An airport organization have to realize that in order to set up a foundation and also setting of their operations in an airport, they need to decide what kind of management approach that they will be using. Choosing the management system complied with the company development needs must be based on the detailed investigation of property structure, organization and personnel structure, strategic objectives, enterprise policy environment, internal and external resource

conditions, and the system conclusion of advantage and disadvantage of the management system and existing problem [9]. Based on this study, each model of management is focus on the type of purpose the airports likely to focus on. Figure 2 shows the four quadrants concept of airports management described by Kong Yue on 2010.



Figure 2. Models of Airport Management

- a) **Model of Collectivization Management**
Mainly regarding the airport's management are being linked through capital. That resulting into 3 category which are semi closed linked in regards of asset, loosely connected towards agreement and lastly is very connected in term of asset integrated and members of the airport
- b) **Model of Modularization Management**
A type of management where an airport separated the secondary and core business apart. For an example the commercial side of an airport will be going to be an independent management. This is for the purpose of that airport to focus on the airside operation such as flight safety and also airport user safety.
- c) **Model of Multiplication Management**
To secure the scale of advantages, airports will develop a multiplication management to be carried among the similar and also relevant industry. Automatically this will decrease the risk of market with a better cost-efficient initiative. Hence the airport will take the development of the airport as their main business
- d) **Model of Specialization Management**
Improving the management efficiency that is related to the core business of an airport. This can be done by having the expertise or specialist personnel or services to assist the company management. These are not actually suitable for every airport except the airport ownerships are mainly flexible and movement of passengers and cargo are enough for the airport scale.

Based on all of the above model of airport management, to be specific and also generally suitable with the aviation industries in the whole region of the world, the way of managing an airport will be the effect of the airport performance itself. If that particular airports are focusing on the development or the enhancement of customer experience in an airport, they are most likely to be implementing a Multiplication Model. This model will assist the airport to be able on developing the airport right from the way they generate revenue until the feasible way of doing the initiation the strategy. Thus this type of model management can aid the airport to reduce the risk of operating for an example any strategy that will be executed for the purpose of focusing on development must not be contradicted with the aerodrome authority, policy maker or even the regulatory body. Thus, the airport that practices this kind of management will be able to be different from other competitors and offer a better and also eligible product and services.

3. Research Methodology

This study is conceptually designed to investigate various business models implemented by airport operators in identifying the significance of ADC implementation. Methods adopted in this study is by analysing and reviewing past literatures, official websites and established reports and guidelines from official organization and regulators related to aviation and airports industry. Document analysis is a qualitative method conducted to review and evaluate documentation. This will be involving an examine and interpretation of data for the main purpose of understanding and developing an empirical knowledge[10]. As a research method, Document analysis involve a process that produce a thematic and content analysis. These processes consist of skimming, reading and interpretation. This methodology eventually helps us in making sure that each document selected will technically have different type of data that could be analysed. This is because reviewing a document will help us understand by having them providing background information.

4. Discussion

In some other region apart from the globe we can see that Airports are being operated in a different way possible. This is the result of having a variety of airport ownership and government policy. Based on previous section we can see the flexibility of an airport to implement something is depending on the how the airport ownerships are being structured. The more flexible the airport ownership the easier for the airport operators implement anything that would be good for the airport operations and performances. Airports are actually very flexible in earning or making their own revenue as long as it does not against with the regulations and also authority policy that being issued from aerodrome regulator or the policy maker. The implementation of ADC will automatically gives a variety of impact towards the airport itself. Some impact might give a negative impact since there will be arise in airline tickets but at the same times this will be a better way of giving the urge on expectation towards a better development process. Passengers will be given an opportunity to participate in developing the airport by paying an air fares and a portion of it will be directly be a revenue stream for the purpose of airport upgrade and development initiative.

An airport such as Changi International and also Valena International Maldives might have the same implementation of Airport Development Charges, but they might have a different purpose of using that particular revenue stream. For an example, Changi obviously have used ADC for the purpose of having Terminal 5 that have one of the best features. The development of Changi International airports is very complex since the airport's operators are basically turning the way behaviour of people at the airports. This is because they can enjoy Changi Airport as much as they enjoy travelling outside of an airport. While on the side of Valena Airports, the existence of their Airport Development Fee will most probably for the purpose of preparing the airport towards a better service offering airport with the rise of demand flying into Maldives. Valena International will need to make sure that their airside of an airports is ready to receive and also cater new upcoming aircraft. The fact that Velana Airport is consist of 3 different type of terminal which is International, Domestic and also Waterdrome Seaplane Terminal, the existence of ADF in their airport will assist them in maintaining and also upgrading their airports features such as aircraft facilities and also passengers.

5. Future Sugession

This conceptual study puts forward a basis for future research opportunities related to the income revenues of airport operators in aviation industry. As it is still conceptual in nature, more in depth review and analysis shall be conducted. For instance, semi structured interview and empirical analysis can be conducted in validating the application and adoption of ADC at the airport. Empirical analysis provides a benefit of understanding the current industry pattern on operating an airport by observing and comparing each airport that have implemented ADC. By validating and finalized this study with more coherent analysis and model, it will become a good input point for the industry to provide the basis of changing the way airports are being

operated towards a better and more independent way when it comes to development and expansion. These might involve in analysing the methods of other country in implementing ADC, by interviewing industry experts to have an insight.

6. References

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