

TRANSFORMATION OF AIRPORT INDUSTRIES: A FRESH REVIEW OF GLOBAL CHANGES

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Abstract

This paper reviews and discusses the recent trend of airport industries through a current literature review. This method provides a more structural explanation for the most significant global changes in airports industry that influences airport business. The findings from current literature review show that airports have witnessed dramatic changes in their functions. Traffic growth, commercialization, airports city, competition, marketing and quality of services are the most features that emerge in airport industries recently. The commercial orientation has been the important driver for changing in airports industries. Results of this study can provide airports with useful references for formulation of development strategies and effective management to cope with the newest global trend and achieve sustainable growth.

Keywords: *Airport Transformation, Airport Commercialization, Airport Competition, Airport Marketing, Service Quality*

INTRODUCTION

Over the years, there is a rapid rate of growth in passenger's aircraft in service and aircraft movements in the world. A report by the Air Transport Action Group (ATAG, 2012) reveals that the number of passengers has tremendously increased from 1.2 billion in 1990 to 2.7 billion in 2010 with a projected rise up to 5.9 billion in 2030. The same report asserts that aircraft movements rose from 14.8 million in 1990 to 26 million in 2010 and expected to rise up to 48.7 million in 2030. The IATA report (2012) vision 2050 confirmed that traffic grew continuously from 2.7 billion passengers in 2010 to a projected 16 billion passengers in 2050. For example, the Middle East region has witnessed a sharp rise in traffic growth. IATA report (2009) predicted that the Middle East will witness the highest annual growth rate of international traffic between 2010 to 2015 by 7.9 %. This made the governments of some Gulf States to invest in the airport industry. Kuwait Financial Centre (Markaz, 2011) predicted that the Gulf States will invest approximately 104 billion dollars in the promotion of airports during the next few years. These investments will produce global airports cities such as Dubai International Airport.

Additionally to the continuous growth in passenger's aircraft in service and aircraft movements globally, import industry has witnessed a series of changes since the British Airport commercialization occurred in 1987 (Ison, Francis, Humphreys, & Page, 2011). This event has resulted in the launching of a global change in the airport environment towards marketization. Subsequently, airport industry has considered that is one of the important sectors which contribute to national economy (Ison et al., 2011). The airports market has changed significantly (Bush & Starkie, 2014). They are nowadays subject to competitive constraints from a number of sources (Bush & Starkie, 2014). Hence, there is a dramatic change in their strategic management recently. However most previous studies in the area have not revealed what are the most issues which has changed in airport industry. Therefore, this paper looks closely the recent trend of airports industry that influence public airport to shift to a commercial business model.

Airport Commercialization

Modern airports have been viewed as a profitable entity thence commercialization activities have become one of the most features in airport industry. There are two ways of generating revenues in the airport industry (Graham, 2009). Firstly, aeronautical revenues are generated from core functions such as landing and take-off as well as passengers and cargo flights. Secondly, revenues are generated from non-aeronautical activities. A number of governments in developed or developing countries have tended towards airport commercialization. For instance, more than 80% of European airports have been commercialized or corporatized and most of public airports

have been managed as commercially oriented (Copenhagen Economics, 2012). The main factors behind commercialization of airports are to improve the profitability of airport assets and alleviate the burden of government subsidies (Ison et al., 2011). Therefore, governments, such as UK have realized the importance of commercial business in airport sector and have placed their airports on a commercial orientation to gain financial sustainability and profitability (Ison et al., 2011). Almost half of the total revenues of UK airports are generated from core businesses (Graham, 2009). However, there is an increase involvement in the commercial business revenues have become important in UK airports (Morrison, 2009). This trend has made airports to become more commercially and customer oriented (Ison et al., 2011). This has led airport management to concentrate on commercial revenues from non-core business (Tovar & Martín-Cejas, 2009), for instance, non-aeronautical businesses of Chinese airports have become more important (Chi-Lok & Zhang, 2009). In addition, pressure from airlines to keep aeronautical charges to a minimum (Graham, 2008, 2009) and pressure from the international organization such as International Civil aviation organization (ICAO) and International Air Transport Association (IATA) has led to the expansion of non-aeronautical commercialization activities. This has motivated modern airports to move towards diversification of commercial business.

Diversifying into non-aeronautical activities has become the characteristic for commercialized airports (Morrison, 2009; Oum, Adler, & Yu, 2006). Expanding non-aeronautical activities such as retails, hotels, car parking, restaurants and banks have increased in airports industry. In addition, emerging airport cities and hub airports have resulted in airport commercial innovation. Marketing services, advertisements, conferences, training centres, free trade zone, entertainment and leisure places are exciting examples of this innovation in modern commercial airport. Furthermore, innovation in airport diversification of non-aeronautical activities has gone beyond the boundaries of the airport. Exporting management expertise and commercial practice under management contract has become one of the businesses of commercialized airport. There have been numbers of professional players in this field such as Fraport Airport Germany Group and Singapore Changi Airport Group. For instance, in 2008 Fraport AG signed with General Authority of Civil Aviation (GACA) in Saudi Arabia a management contract for King Abdul Aziz International Airport (KAIA) and King Khalid International Airport (KKIA), whereas Singapore Changi International Group signed management services contract for King Fahad International Airport (KFIA) (GACA, 2011). Generally, the increasing trend for airport commercialization has contributed to gaining more profits and subsequently competition between airports. These are the examples of the innovation that enhanced business prospects for airport industries.

Airport City

The modern airports business model have adopted the airport city approach(Charles, Barnes, Ryan, & Clayton, 2007), to implement the commercialization strategies and to cope with the growth of air passengers. Airport city involves non-aeronautical facilities and commercial activities besides focusing on the core function of airport (Appold & Kasarda, 2011; Kasarda, 2004, 2008a, 2008b). The author argued that airport city concept is going beyond the core function of airport. It is a huge area which included travel facilities and distribution facilities, cargo and office, hotels and attractions. Xia and Li (2006)identified six main characteristics of airport city which include airport oriented, industrial cluster, space gradient, market efficiency, global accessibility and technological preeminence. The Airports Council International (ACI)(2011)considered that the main factor behind “Airport Cities” is the high revenue from non-aeronautical activities while Kasarda (2008a) has identified these four major drivers behind airport city:

1. Looking forward to finding new revenue sources of non-aeronautical sources and improving the services to be competitive.
2. Continually increase passengers and freight traffic globally.
3. Affordable and accessible land magnet for commercial sectors to invest.
4. Airports city has become attractive opportunities for business. For example, duty free shops, restaurants and retail, leisure and entertainment attractions, hotels, banks and currency exchanges, business office, conference and exhibition centres, training centres and courses, logistics, storage and distribution, catering and other services, Free trade area and so on.

In furtherance, Wang, Hong, Chen, & Jiang (2011) provided a useful framework model for categorizing Airport-city into three patterns including Core Industry, Dependent Industry and Related Industry which link with the air transportation business. Kasarda (2008a) reported that Asian countries lead the world development of airport city by their modern constructions. China announced its plan to establish the biggest aerotoropolis airport in the world which will be ready to operate in 2017 (Knowles, 2012). A new Beijing International Airport will become the busiest airport in the world because it has capacity for 130 million passengers a year. Its capacity exceeds the total number of passengers in London Heathrow combined with New York JFK by 23 million. In addition, there are many other airport cities in Asia such as Singapore Changi Airport, Hong Kong International Airport City (HKIA), Incheon Korea’s Airport City, Kuala Lumpur International Airport City, Dubai International Airport city. These airport cities are playing important roles not only in aviation development or national economy of the country but also for the world economy(Kasarda, 2008a, 2008b).

Emergence of New Ownership and Governance Structure

Due to the development of airports cities and attractive opportunity for commercial activities as discussed in the previous sections. Many governments understood the potential of the airport industry, thus started to be managed with a market-oriented perspective and regarded as revenue-generating assets, rather than solely being public service providers (Pena, 2011). In addition, the zest for private sector to invest in airport industry has given birth to new ownership patterns (Ison et al., 2011). Accordingly, several modifications imposed to the airport industry in their institutional and governance (Gillen, 2011). United Kingdom as one of the first countries has given credit to a revolution of new forms of ownership, management and operation in airport industry. Then it has been moved to different ownerships in different parts of the World including Australia and New Zealand, Germany and France, Argentina and Brazil, China, Malaysia, and recently in Saudi Arabia. Gillen and Morrison (2003) summarized airport ownership structures into six forms which include:

- I. Airport owned and operated by Government.
- II. Airport owned by Government, but operated by private sector
- III. Airport with Public-Private Partnerships (PPP)
- IV. Independent Airport not-for-profit corporations
- V. Fully privatized airport either via IPO or Trade sale.
- VI. Partially privatized airport for-profit either with private majority or minority ownership controlling interest.

Since there is no dominant model, the choosing of which model should applied based on government goals, opportunities, strategic priorities and challenges and policy (Qin, 2010).

Airport Competition

Airports were traditionally not viewed as being competitive because they were initially monopolized by the public sector. However, the changing in nature of airport industry, ownership governance and the movement to market oriented industry has created competition between airports (Starkie, 2002). Competition between airports has taken different forms, it existed amongst the airports for flight destination or base for airlines (Morrell, 2003). Gillen and Morrison (2003) pointed to the competition between adjacent airports. Also, regional airports may compete for low cost carrier (LCC) (Forsyth, 2010). Expanding of airlines network in the market has resulted in airports competition either directly for airlines especially low cost carriers (LCC) or indirectly for passengers and airfreights (Scotti, Malighetti, Martini, & Volta, 2012). Forsyth (2006) stated that the remarkable form of competition is between major and secondary airports which are located at the same city. The author described the existence of this

competition as a result when secondary airport aims at attracting LCC by offering them lower charges, and thus some major airports try to respond by offering lower charges to retain the amount of traffic taken by secondary airport.

Another form of airport competition is when there are two airports or more located at overlapping geographical area which lead to competition between them for a shared local market(Forsyth, 2006). The best example for this type of competition is between five airports located at overlapping zone in London Heathrow, Gatwick, Luton, Stansted and London City Airport. An important factor which contributes to this type of competition is the willingness of passengers to choose and change between alternative airports. The UK Civil Aviation Authority survey (CAA) (2011)reported that air passengers in London city have taken Heathrow, Gatwick and Stansted airports as alternatives. More still, the competition may extend to airports not only located at overlapping areas but also within a continent. According to a study by Copenhagen Economics(2012), there is a significant potential for competition between European airports located close to potential passengers. The study reveals that at least, two airports are potential to (63%) of passengers within two hour drive; and three airports are potential to (38%) within two hour drive and four airports or more are potential to (23%) within two hour drive. Competition between hub airports for transfer passengers is another form. For example, hub airports in Europe such as London Heathrow, Frankfurt and Paris Charles de Gaulle are options for transfer passengers. According to Copenhagen Economics(2012), it indicates that (62%) of the passengers in Europe have one or more options of connection airports to fly with, and about 45% have two or more, 40% have three or more, and 25% have four or more alternative connection airports. In addition, there was an increase by 5% of the transfer passengers between 2002 and 2011 with alternative hub European airports especially for passengers with four or more options of alternative airports(Copenhagen Economics, 2012).

Completion between airports will bite differentially according to the circumstances of individual airports(Bush & Starkie, 2014). Airport possession of significant market power can no longer be casually assumed, nor can the need for economic regulation. As a result of competition between hub airports, there is a dramatic change in the top best connection airport in Europe for transfer passengers between 2002 and 2011(Copenhagen Economics, 2012). For instance, Copenhagen and Helsinki airports are the most attractive in 2011 for transfer passengers instead of Frankfurt and Zürich airports in 2002. Attracting airfreight traffic is another form of competition between airports(Forsyth, 2006). According to ACI(2010), five airports out of top ten in south east of Asia were ranked as the busiest airports for airfreight in the world. They are Hong Kong International Airport (HKIA) and Shanghai in China, Incheon in

Korea, Dubai in UAE and Tokyo Airport in Japan which are all located at the same geographical region with the exception of Dubai. Hence, this is cause a strong competition amongst them.

On the other hand, there is an indirect competition with other transports but it may be less important than other competition discussed above. Starkie (2002) revealed the existence of more competition in air transport market than other transport forms such as trains, coaches and cars. According to IATA report(2012), aircraft has the highest occupancy compared to other transportation with 77%, then coach comes second with 60%, train comes third with 40% and car comes last with 30%. This type of competition has an effect on decreasing the number of air passenger. Nowadays, passengers have more alternative transportation when they decide to travel and they have the willingness to use rail instead of airplanes especially in Europe. According to a study by CAA in UK(2009), it revealed an annual rise by 5% of the number of passengers who travelled via express train from UK to Brussels and Paris or vice versa between 2004 and 2007, whereas the number of air passengers who travelled to the same destination at the same period fell by 6% per year.

Competition is one of most key features for modern airports, and there is a strong evidence that airports with more competition are significantly more efficient than the ones without competition(Chi-Lok & Zhang, 2009).Competition has a positive effect on the airport industry such as encouraging or enhancing airports to improve their efficiency maximize productivity and balance price on the market. The increase in airport competition has led to new means and strategies of airport marketing.

Airport Marketing

As a result of airport commercialization and competition between airports as discussed in the previous sections, majority of airports have included functions of marketing as part of their strategic plan. According to a study by the Copenhagen Economics(2012), the number of staff who work full time at the marketing department of Copenhagen Airport increased from 2 employees in 2000 to double in 2005 and reached to 8 employees by early 2012. In addition, there is an increasing amount of expenditure on marketing activities which reveal growth towards the role of airport marketing. For example, Zurich Airport expenditure on marketing increased by double from about 17000 CHF in 1997 to almost 38000 CHF in 2010.

The Airport Standards Manual (ASM) survey (2009) which included 100 airports over the world indicated that almost 94% of airports have undertaken marketing as part of their activities. Results from the same survey reveal that participating and attending conferences regarding route development, visiting airlines in their base and inviting airlines to visit airports are widely used as marketing strategies. These activities attract airlines and passengers which ultimately

contribute to profit maximization via aeronautical or non-aeronautical activities. Therefore, there is an increase of the important role of the airport marketing to attract air traffic (Fröhlich & Niemeier, 2011).

Airport Quality

The tendency of many airports to commercialization, corporatization, marketization and existence of a strong competition has contributed to involve quality of services. There is statistical evidence that airports with competition are more efficient than those ones without competition (Chi-Lok & Zhang, 2009). One of the most significant services which have involved quality in modern airport is improving the quality of services from point to point flights especially by attracting LCCs (Copenhagen Economics, 2012). There is a strong likelihood to build more private terminals characterized by low cost of services and effective service time. European Airports are one of the most likely examples which have special low cost terminals (Njoya & Niemeier, 2011). For instance, Amongst the LC terminals in Europe include Tampere-Pirkkari AP, Budapest AP, Amsterdam AP, Marseille AP, Bremen AP, Lyon AP, Copenhagen AP and Bordeaux AP among others. Another important aim of airport quality is to improve transfer services, to minimize flight connection time (Copenhagen Economics, 2012). Copenhagen Airport aimed to minimize the connecting time from 40 to 30 minutes which subsequently render airports more efficient.

Improving the quality facilities related to customer satisfaction is another approach for modern airports. Many airports in the world have realized the importance of quality and customer satisfaction. For instance, according to Airport Services Quality survey (ASQ) (2013), more than 200 airports from 50 countries participate in ASQ survey every year. Thus, these modern airports are involved in quality assurance to achieve international quality standards and subsequently customer satisfaction.

DISCUSSION

Airports have traditionally been viewed as public utilities serving the needs of airlines (Gillen, 2011). Recently many developing and developed countries as well have adopted modern businesses and pursuing their own objectives and serving the demands of carriers and passengers. Airports have become attractive opportunities for private sectors to invest. The most outstanding feature that influences the transition from conventional airports to modern business models is the commercialization of airport industries. Several studies show that commercialization activities can generate significant amount of revenues from airports (Copenhagen Economics, 2012; Graham, 2008). Other studies show that airports have become

more commercialized that has led airport management to concentrate on commercial revenues (Chi-Lok & Zhang, 2009; Tovar & Martín-Cejas, 2009). Results from the literature review clearly exposed that a new revolution in the entire industry has emerged where commercialization approaches are adopted. This has motivated modern airports to move towards diversification of commercial business. Diversifying into non-aeronautical activities has become the characteristic for commercialized airports (Morrison, 2009; Oum et al., 2006). Expanding non-aeronautical activities such as retails, hotels, car parking, restaurants and banks have increased in airports industry. Thus it has resulted in the change of management, operation and ownership in the airport industry. Gillen (2011) asserted that the ownership of airports in developed countries have witnessed change in their institutional and governance.

The trends of airport commercialization and privatization have led to airport city approach which is one of the new features in the airport industry to implement airport commercialization strategies. The Airports Council International (2011) reported that the high revenue from non-aeronautical activities is the leading factor of "Airport Cities". Airport cities have become an phenomena and competitive, for instance, Asian countries lead the world development of airport city by their modern constructions (Kasarda, 2008a, 2008b). Also, the result of this study shows that airport commercialization and the expanding of airport cities have led to completion approach between the airports. The competition has taken different forms, such as the competition between adjacent airports, hub airports, and airport cities. For example, there is a dramatic modification in the top best connection airport in Europe for transfer passengers between 2002 and 2011 as a result of competition between hub airports (Copenhagen Economics, 2012). Thus, the competitions between airport to attract the passengers and airlines or airfreight traffic have contributed to airport efficiency airports with more competition are significantly more efficient than the ones without competition (Chi-Lok & Zhang, 2009).

The increase of airport commercialization, airport cities and competition has resulted in a new means of airport marketing and service quality. According to the Airport Standards Manual (ASM) survey (2009) which included 100 airports over the world showed that almost 94% of airports have undertaken marketing. For instance, participating and attending conferences regarding route development, visiting airlines in their base and inviting airlines to visit airports are widely used as marketing strategies. These activities attract airlines and passengers which ultimately contribute to profit maximization via aeronautical or non-aeronautical activities. Consequently, the important role of the airport marketing to attract air traffic has increased in modern airports (Fröhlich & Niemeier, 2011). These strategies have contributed to in a new tactics to improve airport quality. These approaches such as minimize flight connection time and

improve the quality facilities to gain the customer satisfaction. Thus, many airports in the world have realized the importance of quality and customer satisfaction. For instance, more than 200 airports from 50 countries participate in Airport Services Quality survey every year (ASQ, 2013). Within this current result of the literature regarding the global changes in airport industry, future studies might need to provide further validation to the above results. An important extension would be to include in the sample some airports that adapt these strategies. The purpose of such an investigation is to examine the impact of every factor on airport performance. It is also possible to do a comparison study between the various forms of airports ownership in order to identify which is more capable and proactive to adopt these strategies.

CONCLUSION

Airports industry witnesses significant changes in their business and it provides a great business prospect for both developed and developing nations. In the midst of global shifts in the airports industry, a new revolution in the entire industry has emerged where newer and modern approaches are adopted. The zest to integrate their roles has resulted in the changing nature of airports to focus on commercial activities, airport cities, competition, marketing, costumer orientation and quality of services. These factors are the most significant features behind the transformation of airports to a commercialized business model which not applicable in the traditional business model. A practical implementation of these concepts propels both social and business values through effective service delivery. Their roles in transforming the airport sector should not be left to rest to cope with the newest global trend in airport industry. An in-depth empirical research on these strategies to examine their impact on airports performance is required especially on airports that have adopted these strategies recently. This would provide a basis for undertaking effective programmes in airport industry in future.

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