The airport business in a competitive environment

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Abstract

Airports have traditionally been considered as public utility providers, with little potential to develop significant market opportunities. Liberalisation of the air transport market around the globe has introduced new dynamics into the airport industry. The emergence of competition and the transition in ownership (towards privatisation or commercialisation) demand a different perspective in airport management. This paper aims at explaining the complexity of the airport business, in particular in what concerns the role of the airport as a firm that operates in a network of stakeholders, to produce a set of service packages targeted at several types of customers.

Keywords: Airport management; Airport strategy; Airport competition.

1. Introduction

Before liberalisation spread around the world, the air transport market was heavily regulated by the Chicago Convention of 1944 (which still applies for many international services). In such context, the lack of competition between airlines was echoed at the airport level (Barret, 2000), and an apparent sense of certainty about future demand dominated airport planning and management as planners and operators followed a narrow technical focus almost exclusively (De Neufville & Odoni, 2003). Yet the current environment in the air transport industry is radically different, and the transformations have directly impacted the airport business in the ways we intend to describe in this paper.

This analysis is based on a comprehensive review of scientific literature and documentation released by airport operators, mainly regarding airport planning and airport marketing. Such review was complemented by non-structured interviews with key informants within the airport industry (e.g., ANA Aeroportos de Portugal, Fraport, ...
the Schiphol Group, and the Athens International Airport) and, in addition, technical visits to a wide range of airports, such as Munich, Vancouver, Dallas (Forth Worth), Atlanta, Frankfurt am Main, Schiphol Amsterdam, Zurich and Athens.

The following sections describe the competitive environment that we claim to exist in the current context of the airport industry, the actors and the structure of what we call “the airport business network”. A redefinition of the current approaches to the airport business is also presented. Conclusive remarks and recommendations close the body of the document.

2. The competitive environment

Airport competition is a rather new concern among researchers. Earlier works (as summarised by Lian and Rønnevik (2011)) focus almost exclusively on traffic leakage, a term coined to describe competition when the catchment areas of two or more airports overlap, especially in the case of multi-airport systems in metropolitan regions. Indeed, it is commonly accepted (De Neufville & Odoni, 2003; European Commission, 2002; Forsyth, Gillen, Müller, & Niemeier, 2010; Graham, 2003) that airports compete at least in two cases: when their catchment areas overlap or when they effectively work as alternative transfer hubs.

Developments in recent decades render that vision insufficient. Remarkably, liberalisation of the air transport market propelled both the growth of low-cost carriers (LCC) and the change in airport ownership and/or the change of management perspective towards privatisation of commercialisation (Bush, 2010; de Neufville & Odoni, 2003; Graham, 2003). Moreover, the widespread use of the internet allows for an easier, quicker and cheaper promotion of new services by airlines and airports, thus favouring competition (Copenhagen Economics, 2012).

Since our previous research (Jimenez, Pinho de Sousa, & Claro, 2011) we have been expanding our perspective on the subject of airport competition. Recent reports on the airport practice confirm our position, in many aspects (Copenhagen Economics, 2012). As a result of this perspective, the airport industry nowadays faces a competitive environment that can be described by the seven areas of competition that Fig. 1 presents.

![Diagram of airport competition areas](image.png)

Fig. 1. The areas of competition within the airport industry.
2.1. Provision of services to airlines

As Morrel (2010) suggests, airports compete to attract and retain airlines. Not only do they provide direct aeronautical revenues, but their services attract passenger and cargo shippers that complement the airport business. However, airlines use different business models and can use an airport with different kinds of operations. Both aspects are paramount to determine the types of services and infrastructure that airports should offer to the airlines.

In general, airlines can operate in an airport as its hub, a traffic node, a station (Burghouwt, 2007), or a base. The characteristics of the airport should match the requirements of the airline according to the type of desired operation. For instance, peak capacity is a crucial factor for a hub; the attractiveness of the catchment area, in terms of potential demand, is very important for an airline station or a traffic node; airport fees and efficiency to guarantee quick turnaround times are paramount for LCCs, whilst FSCs (Full Service Carriers) may demand larger spaces and business lounges.

2.2. Outbound traffic (catchment area)

As mentioned before, airports that share similar catchment areas compete for passenger demand within their zones of influence. In brief, the ability to compete in this area can be determined by the following factors: the network of destinations offered at the airport (especially in terms of non-stop connections); the ease of connection to surface transportation that gives access to the airport (Morrel, 2010); the availability of low fares for the air tickets, quite relevant in the case of airports serving LCCs (Barbot, 2006; Malighetti, Paleari, & Redondi, 2009); and the convenience that the airport offers to some passengers in terms of location, total travel time or services offered (De Neufville, 2008).

2.3. Transfer traffic

Competition for transfer traffic is also referred in the literature as one of the widely recognised forms of airport competition. Indeed, this is dependant on the ability of the airport to attract airlines that extensively use hub and spoke network strategies. In this sense, it is crucial for an airport to provide space and capacity for the airline(s) to grow using infrastructure that facilitates the transfer process. Other particular features may enhance airport competitiveness, for instance: a location that minimises detours; an efficient design that minimises connecting time or shopping; and leisure facilities that increase the desirability of longer layovers.

In addition, airports can benefit from passengers preference or loyalty to their frequent travel programs, thus being more likely they use the transfer airport of their preferred carrier or alliance. Furthermore, the expansion of LCCs makes it possible for smaller low-cost airports to compete for medium-haul transfer passengers by using the concept of self-help hubbing (Burghouwt, 2007). In fact, Malighetti et al. (2008) provide evidence that suggests the potential of such interconnections, and Franke (2004) argues that legacy airlines may reduce the complexity of their hub models following the example of LCCs practices.

2.4. Inbound traffic (destination)

Airports can attract customers, thus competing with other airports, due to the attractiveness of the airport hinterland or of the airport itself. Tretheway & Kincaid (2010) refer to this area as destination competition and highlight that it usually occurs in airports located in large tourist areas that receive a considerable number of inbound traffic. As a matter of fact, tourists can choose a different location for their next holidays, thus exchanging the service of an airport for that of another one.
Moreover, airports can actively target customers to arrive at the airport itself as a destination. Some airports develop supplementary services or activities, by themselves, or in association with commercial partners, that range from hotels and convention centres to concerts, sport events and airport tours. Others are engaged in the development of real estate to diversify the use of the land around the airport and boost traffic.

2.5. Global competition

As the airport business matures in the deregulated era, the industry has entered a phase of globalisation (De Neufville & Odoni, 2003; Graham, 2003). This expansion leads airports to compete for the services they offer at a global scale, especially in terms of management and consulting services, or even directly acquiring other airports or parts thereof.

2.6. Competition for funding

Given that airports require significant capital investments, they are often faced with competition to obtain funds for developing expansions or upgrades, in order to achieve more competitive positions. In general, funds can be in the form of grants with special conditions (such as very low interest rates or long repayment periods), or in the form of tax reductions or subsidies. This area of competition is more evident in airports that belong to the same corporate group, especially if this is a government-owned enterprise (Bel & Fageda, 2009). Notwithstanding this, private airports will also compete for the right to expand, as it can be seen from the case of London airports in search of new runway capacity demonstrates.

2.7. Competition with other modes

Finally, competition between air transport and other modes also has a significant impact on airports. The case of high speed rail deserves particular attention (International Transport Forum, 2009), although there are as many threats for competition as opportunities for cooperation (Givoni & Banister, 2007) in the case of airports and train services. To some extent, competition also occurs between air transport and additional modes, such as private cars and long distance buses. Moreover, airports may also compete inside their hinterlands with local providers of retail, food and beverages (Tretheway & Kincaid, 2010).

3. The agents in the airport business network

Jarach (2001) analyses the airport business from a marketing perspective. His conceptual model identifies a series of actors that interact with the airport “in order to bundle service packages to final audiences”. His approach allows an analysis with multiple customers and airport competition, yet the model is probably too simplified for the complex context of the airport business nowadays.

With Jarach’s concepts as a starting point, we propose a representation of the interactions between the airport and its nearest stakeholders. Such network of interactions results in the creation of six service packages that are targeted at three groups of airport customers. The airport business network (see Fig. 2) provides a tool that is more specific for the current context, yet it is sufficiently general to analyse any airport according to its characteristics.

Central to the model is the identification of the network agents that interact with the airport (as a multi-service firm). Four agents have been identified as the nearest stakeholders in the airport business and crucial to the definition of the airport services and its strategies. The order in which they are presented, however, does not indicate any ranking or relative importance between them.
The **non-user stakeholders** include entities and institutions whose interest is mainly driven by the positive impacts produced by the airport or by the alleviation of negative externalities. The non-business relationship between the airport and the non-user stakeholders is mediated by the airport role as a promoter of employment, tourism and trade opportunities. Besides directly investing in improving the airport infrastructure, non-user stakeholders may as well provide (or cooperate with the airport in the provision of) incentives for air services.

In the current context **airlines** should be seen beyond the traditional perspective of key airport customers. Indeed, a business to business (B2B) approach implies a better understanding of the real requirements of airlines in terms of infrastructure and operations. Airlines (scheduled and charter, passenger and cargo) are crucial to define the network of destinations that the airport offers, which in turn, attracts passengers and other customers.

Airlines also interact with a B2B relationship with the third agent in the airport business network, the **aeronautical business units**. These units provide services to the airlines, and to the airport, that are essential for aviation-related activities (such as air traffic control, meteorological services, communications, baggage handling, passenger handling, aircraft cleaning, fuel provision, aircraft maintenance, in-flight catering, airport security and fire fight, and general safety services). There is also a B2B link between the airport and the aeronautical units. This ensures that the airport provides airlines with the access to competitive services, and guarantees a sufficiently attractive environment for the aeronautical units, while fulfilling all applicable regulations.

Finally, **non-aeronautical business units** provide essential services that complement the airport product with non-aviation activities. The tenants and concessionaires of retail shopping, parking or car rental, as well as the providers of security and cleaning services, are part of these units. There is a B2B relationship between these entities and the airport firm. Both the non-aeronautical business units and the airport are linked to customers of retail and non-aeronautical services and activities and events.

4. **Current approaches to the airport business**

As Fig. 2 and Fig. 3 illustrate, six service packages integrate the airport products and are targeted at the three groups of customers. The first two types of packages – infrastructure and aeronautical services, and transport
network – are directly related to aeronautical revenues, and the other four to non-aeronautical revenues. This arrangement highlights the possibilities of increasing income from non-aviation activities.

![Diagram of different approaches to the airport business and the service packages implemented.](image)

The extent to which each airport has implemented the service packages indicates the business approach their managers pursue (see Fig. 3). An airport that offers only its infrastructure and associated aeronautical services adopts the focus of a public utility provider. This may be the case of airports specialised in serving particular niches, such as general aviation, pilot training, aerial services (i.e., aerial footage or topography), rescue services, and sport or leisure activities; or airports in less developed or remote regions that lack enough resources or traffic to implement additional services.

When coordinated connectivity with surface transport emerges, the airport becomes a multi-modal interface that offers air services (for passengers and cargo) for public access. Commercial airlines are essential at this point, since the attractiveness of the airport is strongly linked to its destinations. In this approach airlines are also the most important customers. If traffic increases significantly, airports are more likely to engage in a commercially-orientated approach. In this case, non-aeronautical revenues are important for the airport to sustain income levels and to less depend on the variability of air traffic.

Airports that attract different types of customers, and that decide they can actively influence the preference of those customers, follow a consumer-orientated business approach. According to the space available, or the ability of the airport to acquire surrounding land or partner with its tenants, the business approach may turn into the development of the airport city concept. Finally, some airports can be a truly global business. These airports bid for management contracts or acquisition of other airports, and provide consultancy on airport planning, construction or operation worldwide.

5. Conclusions

The airport business has evolved in such a way that it is far from recognisable in comparison with a few decades ago. New dynamics appear in liberalised markets and strongly impact the airport industry: the opposition of airlines and regulators to increases in aeronautical fees, the trend towards airport privatisation or commercialisation, the pressure from governments for airport self-sufficiency, and the emergence of multiple customers for the airport services, among others.

Airport operators are urged to shift the paradigm of airport planning and management. This paper presents a conceptual model for a new approach to the airport business. It identifies the network of agents with which the airport must cooperate, and their roles in defining the airport product through different service packages.
Furthermore, the study identifies several approaches to the airport business that can be implemented in the competitive context of the present airport industry.

The conceptual model is being validated currently through its application to particular case studies. Nevertheless, along the paper we showed evidence that suggest it would fit to the current developments in the airport industry. Precisely, given the new dynamics presented above, the model of the airport business network represents more accurately the wide scope of airport activities in the competitive environment that airports face nowadays.

Our current research aims at extending the proposed model in order to aid airport managers in the process of strategy formulation. The development of competitive strategies must be based on the proper understanding of both, the interaction among the different stakeholders, and the business approach selected by the managers. In this regard, this paper presents an innovative analysis that is more comprehensive than discussions available in existing literature.

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