

Application of Public Private Partnerships to the Spanish Airport System

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Abstract The current deficit situation of the Spanish airport system suggests the need to manage this in a more efficient and profitable way. One of the possible options is through private management and being able to do this through Public Private Partnerships (PPP). This study analyzes the situation of the sector and its economic importance and the different possibilities for introducing private management in a public company, specifying the situation in the case of airports, presenting the advantages and disadvantages of these possibilities, and aiming at results obtained in other places where it has been applied. It is proposed that the ideal model for the introduction of private management would be through PPP models tailored to each airport, but having common characteristics according to the group they belong to. Finally, we observe that not all airports are commercially attractive, so that the PPP concept does not apply to all of them. In some cases even the operability itself is not viable at all, and that should be considered separately in order to avoid creating a private monopoly while trying to enhance competition among them.

Keywords: Airport, Privatization, Efficiency, PPP, Management.

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1 Introduction

The purpose of this paper is to analyze more efficient options for managing the Spanish airport system through the PPP approach in order to reach a sustainable economic situation.

Given the difficult financial situation faced by many European countries, including Spain, it is almost impossible to imagine that a public airport management company may have a permanent budget deficit situation. An alternative to privatization is the PPP approach, which can provide economic management benefits without losing control of the ownership of public assets. We begin by studying the situation of the sector and what the PPP concept implies. The bases for these studies are all secondary data taken from research databases and reports from organizations or government agencies. With these data we propose a possible model for the different airports and we warn that some of them will not be possible to operate even under private management. We also warn of the dangers that may appear by taking this action, including the possible creation of a private monopoly.

2 Situation of the Spanish Airport System

Currently the Spanish airport system is managed by a public company called Aeropuertos Españoles y Navegación Aérea (AENA) which manages the provision of airport and air navigation services. AENA is responsible for providing air navigation services in Spain and other parts of the world.

In this paper, the analysis will focus on the part related to AENA Aeropuertos SA, which manages 47 airports and 2 heliports in Spain. Since the outset we can consider separately air operations and ground operations, given the possibility of having separate management, as it has been shown in the recent separation of Aena Aeropuertos SA, as mentioned in Ley 9/2010 de 14 de Abril. Since the establishment as an independent company Aena Aeropuertos SA has allowed the entry of private capital in its shareholding. In fact, in 2011 it was envisaged an IPO of 49% of the company, which has not been implemented, although it is still in the ideology of the political management the flotation of the company in one or two years, as stated by the Secretary of State for Infrastructure, Transport and Housing, Rafael Catalá in July 2012 (Preferente.com 2012).

Given the importance of tourism in Spain, which represents 10.2% of GDP and 11.5% of employment, according to 2010 data provided by the OECD, and according to the Balance of Tourism 2011, conducted by the Instituto de Estudios Turísticos, 80% used as transportation means the plane, and within that group 56.9% have made their displacement in a low-cost carrier, which represents a growing trend. Thus, an efficient airport system is absolutely necessary in Spain, for its heavy reliance on tourism, and the dependence on the low cost airlines. But

instead AENA approved an average increase rate of 19%, which represents at the two busiest airports, Madrid Barajas and Barcelona El Prat, a maximum of 50%. In previous years these airports have undergone a deficit, and the company has accumulated a debt for the whole system, of 14,000 million euros, while navigation charges dropped by 7.5% (Galindo 2012).

Of all 47 Spanish airports managed by AENA, (AENA 2012b), and according to a report by the Fundación de Estudios de Economía Aplicada (Fedea 2012), only eight are profitable. These airports are: Fuerteventura, Alicante, Ibiza, Palma de Mallorca, Sevilla, Valencia, Lanzarote and Málaga. This report also indicates, that more than half of the airports have another airfield within a radius of 130 kilometers, and in some cases such as Galicia three airports are less than one and a half hours by road, for a population of 2,778,913 inhabitants in 2012. Within the network, there are airports those have no airlines operating in them, such as Ciudad Real and Lleida, or have never operated such as Castellón.

To reach this efficiency at airports one of the measures that can be introduced is private management. This can be attained from outsourcing the management of a company, to the complete sale of the infrastructure, and a number of possible intermediate steps. Within this intermediate steps between full public ownership and management, to complete private ownership is the PPP concept.

3 Public Private Partnership (PPP) and Privatization in Transport Infrastructure Focus in Airports

There is no clear definition of what constitutes a PPP, as expressed by Carmona (2010), beginning with the controversy for some authors of what “partnership” really means. PPP definitions given by various European bodies such as the European Commission, can be found in the “Green paper on public-private partnerships and community law on public contracts and concessions” that defines PPP as “forms of cooperation between public authorities and the world of business which aim to ensure the funding, construction, renovation, management or maintenance of an infrastructure or the provision of a service”. For another institution as the European Investment Bank, the term PPP covers a wide range of situations. It should be taken as a “generic term for the relationships formed between the private and public sectors bodies often with the aim of introducing private sector, resources and/or expertise in order to help provide and deliver public assets and services”. From the perspective of the latter organization the “key feature of a PPP is that it involves a risk sharing relationship between public and private promoters, based on a shared commitment to achieve a desired public policy outcome”. Therefore as Carmona (2010) notes a factor to determining PPP project is considered a transfer of a sufficient amount of risk to the private partner on a long term basis.

In these definitions the primary purposes for which it resorts to such alliances is made evident, and as Graham (2011) points out and specifies in the case of airports, it is based on a synthesis of the research done on the topic, besides being studied in the country that led to partnerships and privatizations which was the UK, with its large privatization in 1987.

In the same paper Graham (2011) states that the three main objectives of the PPP approach have been improving efficiency, cover the needs for new investment and improved management and diversification. It also includes a possible advantage if, as for the current political situation in the case of Spain, with strong interference and manipulation, more so in public companies as the case of AENA, we obtain the removal of state control over the company due to the transfer of risk and responsibility to the private sector, and the elimination of corrupt practices (Janecke, 2010).

An example of some of the existing models, and their acronyms can provide an idea of the possibilities that this concept offers:

- Build-develop-operate (BDO).
- Design-construct-manage-finance (DCMF).
- Buy-build-operate (BBO).
- Lease-develop-operate (LDO).
- Build-own-operate-transfer (BOOT).
- Build-rent-own-transfer (BROT).
- Build-lease-operate-transfer (BLOT).
- Build-transfer-operate (BTO).

As it can be observed the main activities are design, build, develop, operate, manage, finance, lease, rent and transfer. It may simply be managing or until full license for a project as a private activity is granted, only at the end of a specified time set forth in the previous contract, ownership to the public agency must be transferred, i.e. long-term final possession should always be public. There are other modalities and some authors consider that the final possession can be left to the private company. This is possible given the definitions given, since according to the European Commission, providing a service, which can be seen as outsourcing, could be considered PPP.

These partnerships, as Graham (2011) notes provide some diversification benefits and development of non-aeronautical revenues, new areas for business, increased competition among airlines, airports and increased financial benefits for the state. In case of privatization, as a sale of shares, the greater benefits to be gained are the prompt monetary income derived from the total sale. On the other hand the drawbacks of this alliances and privatizations are the possibility of going from a public monopoly to a private monopoly, changing criteria of increased social benefit to increase economic benefits, which can also lead to excessive airline fees pricing, reduced service quality and under-investment. There is also a tenden-

cy to perceive this as a lack of control of a public asset considered of national interest, which has a major impact on society and the environment.

One of the key factors to avoid these drawbacks is in the legislation, which is a topic addressed in the efficiency and success of a PPP. Another point to prevent private monopoly is granting different airports individually and not as a network. Foster (1984) has studied the problems of network ownership compared to individual ownership, and has emphasized the potential that the latter has to provide competition among them. He even claims that the best type of possession is by local organizations, and that this is preferable to possession by national organizations. Actual outcome is found in different studies such as those performed by Vogel (2006) which prove the existence of significant differences when the owner is a private company showing that there is a better performance. Furthermore Oum et al. (2006) state that airports with private ownership majority reach higher levels of operating margins, and that private minority models are less effective, even less than when they are totally public.

4 Discussion on Improving the Spanish Airport System

In the case of the Spanish airport system it is essential to determine the main objectives to be achieved. It is clear that one of the main objectives is the efficiency gain in airport management, in order to create a competitive system with no deficit. There is also the possibility to combine other objectives that might be interesting within what has been highlighted. For example, it could be important in the Spanish situation, given the current financial crisis situation and the difficulties to get involved in new high-value public infrastructure, to provide funding for certain airports which are near their operational capacity limit, such as Madrid Barajas and Barcelona El Prat, which may require operational enhancements or alternative high capacity airports in the future. Given the characteristics of this sector these funds should be planned for well in advance. These projects could be designed and funded through a PPP approach.

The current situation of AENA with a debt of 14,000 million euros, is another factor to be considered. The difficulty lies in the complexity of making the right choice of model, which may also differ according to the type of airport, and adds further complexity here given the large number of operating airports. It must also be taken into account, as noted above, that the ownership of airports individually is more effective than as a network. This is confirmed by the efficiency study of Spanish airports, conducted by Tapiador and Matthew (2008) who, after measuring the efficiency of all airports individually, concluded that there are major differences between them and that different operating strategies for each should be performed.

After seeing the different possibilities of PPP models, an attempt is made to balance reasonably well the advantages and disadvantages that could lead to the adoption of a specific PPP model. It is not possible to give an individualized solution for each airport given the size, but a proposed outline for airports with similar characteristics is possible. Airports will be classified in eight categories according to AENA, which considers factors such as size, geographic location and type of traffic, as quoted by Ruiz de Villa (2011).

In the first place PPPs options will be chosen, since it does not seem interesting to sell airports unless it is a majority sale, because as Oum et al. (2006) have analyzed it may result in greater inefficiency, and lack of control. Moreover, since there is a possible opposition from various sectors of the population, PPP approaches provide the benefits of private management knowing that property remains with the state.

Hub airports, major and middle island airports and regional airports, all with over 2.5 million passengers, according to AENA (2012), international flights, with great presence of tourist traffic and low cost operators are presented as the most attractive for private management. Some of them, like the Madrid and Barcelona hubs as shown in the Tapiador and Matthew (2008) study find that these airports are working at very high efficiency, but the profitability according to the Fedea study determines that they remain with a budget deficit. This confirms the need to improve the non-aeronautical revenues. According to these same studies few of them are profitable, but could be even more profitable since almost all of them do not reach the operating efficiency peak. The best option would be an administrative license agreement, or lease, operation and management for each airport, with all kinds of operating income over a period of years, as this would generate many profits to the state, which could charge a fee for the grant, and an annual rate on income. It could also manage to reduce the cost of the operational fees at these airports and create more traffic. This proposal was made for hub airports, but with high prices, and companies interested in obtaining the administrative license were not willing to pay such prices because of the difficulty of getting the expected financial returns.

Minor airports have a small number of passengers, from 1.3 million to 0.2 million, according to AENA (2012a). All of them have the characteristic of having alternative airports within the radius of its range, as the case of Vigo and A Coruña. All of them present budget deficits and improvement possibilities for operational efficiency as Tapiador and Matthew (2008) have noted. They seem to be ideal as airports operated under a low-cost philosophy, as they are near major cities, are not large enough to be interesting for the number of passengers managed in a traditional way, which would not be profitable. They also suit the needs of low-cost airlines. This would be the only option for them to avoid a budget deficit situation. so as before should be done by administrative licenses to operate and manage, and perhaps in this case does not have to pay a high amount for the initial license fee, and only a proportion of income, given that the low-cost airlines always avoid

fixed costs, but can take cost variables that are readily attributable to each passenger. In this group of airports permissiveness to change must be greater, and certainly those interested in these airports are totally different from those of the previous group. Since they can compete with the closest regional airports they can be a vital key to enhance market competition.

Minor island airports, with the exception of La Palma, have very few flights and are fully deficient, but the service should be maintained as they are an essential means of communication for the population living in these areas. These services should be guaranteed and protected by the state. Thus, the attraction posed to private companies, which try to get some kind of profitability is negligible. In principle, they should remain managed by AENA.

Finally those considered as “other airports”, which are those with fewer than 100,000 passengers per year, and which do not need any operation, since they have nearby airports and other communications media. Management strategy should be completely remodeled in this case since given their location they would not be interesting even for low-cost carriers. Their main function would have to change and instead of commercial aviation they would have to convert to cargo airports or sport aviation. All of them have very high deficits because of the services that need to be provided. Organizations that are interested in their exploitation should sign contracts for maintenance and management which do not represent a cost to AENA. In a situation in which no company is interested in their exploitation they should be considered as an infrastructure sunk cost and perform operational closure. In case any local or regional entity is willing to finance them, airport management should be transferred.

With this proposed remodeling, Aena Aeropuertos SA remains an airport operator primarily responsible for performing oversight and negotiation of agreements with private companies, and a manager of airports where service must be guaranteed and cannot be operated privately. This could end the deficit problem and create a more competitive and optimized airport system, which would ultimately benefit the country as a whole.

5 Conclusions

There is an urgent need to avoid the budget deficit in the operational management of airports, which is an option that may require private management which may also eliminate political interference. Since airport management is an area of particular importance it is not interesting to lose control and the best option to privatize management is reaching Public Private Partnerships agreements with companies interested in the exploitation. The airport network is extensive and diverse, so each airport has different levels of efficiency, and specific management strategies for each airport should be made. Within the network there are airports which

are interesting from a commercial standpoint and others with low or no interest, so different PPP arrangements should be made for each of them. Some may not even be possible to exploit in a privately profitable way. Agreements should be granted separately and to different organizations, in order to promote competition in the sector and not turn them into a private monopoly.

6 References

- AENA (2012a) Estadísticas de tráfico. Available at <http://www.aena-aeropuertos.es> cited 16 Dec 2012
- AENA (2012b) Información sobre Aena Aeropuertos SA. Available at <http://www.aena-aeropuertos.es> cited 16 Dec 2012
- Carmona M. (2010) The regulatory function in public-private partnerships for the provision of transport infrastructure. *Research in Transportation Economics* 30 (2010): 110-125
- Foster C. (1984). Privatising British airports: What's to be gained. *Public Money* 3(4): 19–23
- FEDEA, Fundación de Estudio de Economía Aplicada (2012) Taxonomía de los Aeropuertos Españoles. Available at <http://www.fedea.net/transporte/> cited 15 Dec 2012
- Galindo C. (2012) AENA contempla más subidas de las tasas aeroportuarias para aliviar la deuda. *El País*. 24 May 2012. Available at <http://www.elpais.com> cited 18 Dec 2012
- Graham A. (2011) The objectives and outcomes of airport privatisation. *Research in Transportation Business & Management* 1 (2011) 3–14
- Janecke H. (2010). Managing and delivering an airport privatization programme: Case study of the Republic of Congo. *Journal of Airport Management* 5(1): 10–18
- Oum T., Adler N., Yu C. (2006) Privatization, corporatization, ownership forms and their effects on the performance of the world's airports. *Journal of Air Transport Management* 12(2): 109–121
- Preferente.com (2012) La salida a Bolsa de Aena se realizará “en uno o dos años”. 26 Jul. 2012. Available at <http://www.preferente.com> cited 18 Dec 2012
- Ruiz de Villa A. B. (2012) Transporte Aéreo: Marco institucional. Publicaciones de la Escuela Técnica Superior de Ingenieros Aeronáuticos, Universidad Politécnica de Madrid
- Tapiador F.J., Mateos A., Martí-Henneberg J. (2008). The geographical efficiency of Spain's regional airports: A quantitative analysis. *Journal of Air Transport Management* 14 (2008): 205–212
- Vogel H. (2006) Impact of privatization on the financial and economic performance of European airports. *The Aeronautical Journal* 110 (1106): 197–213