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REGIONAL AIRPORTS, TOURISM AND DEVELOPMENT: TWO PORTUGUESE CASE STUDIES

Margarida Vaz
University of Beira Interior

Jorge Silva
University of Beira Interior

Emília Baltazar
University of Beira Interior

Tiago Marques
University of Beira Interior

Air transport underwent profound changes in recent decades. Some airport facilities were privatized although others remained under public control, all pursuing commercial purposes through specialization/diversification of its business models, which proved to be quite profitable for infrastructures above a certain traffic threshold. For smaller ones, public funding proved indispensable to their survival. Stockholders, including tourism organizations, saw increased potential for regions with investment realizations in regional airports. This paper presents the Portuguese case studies of Évora and Bragança, and illustrates different models of attracting investments to develop regional airports, thus attracting air services and facilitating economic development, tourism in particular.

Keywords: *Regional Airports, Tourism and Economic Development, Business Models, Funding and Strategic Partnership, Operational and Economic Sustainability*

JEL Classification: *L83, M1, O1*

INTRODUCTION

There is a generalized opinion among researchers that transport infrastructures are potentially influent in the economic performance of the

regions mainly by "(…) expanding the use of existing resources (labor, capital, etc.), attracting additional resources (…), and making (…) economies more productive", (Fox and Porca, 2001:104). However Izquierdo (1997) argues that those facilities by themselves don't generate economic development in general nor regional development as they have to be considered as elements of the territory. As pointed out by the European Investment Bank (EIB, 1998) the transport infrastructure contributes indirectly to this aim, and may "[…], act as a catalyst in promoting development" (EIB, 1998:9). It is not easy to establish the true essence of the relationship between transport infrastructures and regional development (Macário and Silva, 2009), mainly because two types of impacts which Vickerman (1996) classifies as: non-space impacts - those occurring as an imposition in the economic activity, in general, by the investment in infrastructures; and space impacts – those occurring as a consequence of different performances, in different places too, by the infrastructures themselves. Nevertheless, transport infrastructures are a crucial point in Regional Economics. They have a strong influence to determine which industries would have to locate prior to other, in order to maximize the utility of those infrastructures.

Air transport has undergone deep changes in recent decades. Terrorism, political instability, the rise in oil prices, the financial crisis throughout the world, had caused an upheaval in the sector. Many air infrastructures were privatized although others remained under public control, both pursuing commercial purposes through strategies of specialization and/or diversification of its business models. These models proved to be quite profitable, but only for airports above a certain threshold of traffic; for the smaller ones public funding remained indispensable to their survival. Nevertheless, public and private entities, regional and central governments, as well as tourism related organizations, understood the increased potential for their regions with the realization of investments in some regional airports. Since tourism is the main beneficiary of this new paradigm, in many regions where such projects were carried out the regional tourism bodies and the private sector jointly leverage the whole process through strategic partnerships and creation of funds for financing (Figueiredo, 2010).

This paper presents two Portuguese case studies with distinct neighboring tourism facilities and business models: the regional airport of Évora (in the South) and the regional airport of Bragança (in the North). The paper aims to illustrate two different models of attracting the interest of investors and to assess how the public and private regional agents are organized and are investing in the development of those airports in order

to attract air services, facilitate the economic development - the tourism in particular. To achieve such a goal the paper is organized as follows: after this introduction, chapter two presents a short state of the art about regional airports as assets for tourism and economic development; chapter three underlines the sustainability of regional airports concerning funding and strategic partnerships; chapter four is dedicated to both Portuguese case studies of Évora and Bragança regional airports; finally, chapter five is the overall conclusion with a proposal for the evaluation of impacts of regional airports on tourism and economic development.

REGIONAL AIRPORTS AS ASSETS FOR TOURISM AND ECONOMIC DEVELOPMENT

In the context of AIRDEV Project[1] it's under discussion how airport's interactions with surrounding communities generate value, in order to determine its real socio-economic impacts and to identify new business opportunities.

The economic impact of transportation systems on regional development, and in particular of airport infrastructure, has been at the center of attentions. In general, regional impacts generated by the existence of an infrastructure, such an airport, will be greater the more services it offers and the wider the range of destinations it allows. However, and from a commercial point of view, this relationship may be non-linear mainly because airlines will provide prior flights to the most attractive destinations than to those less important. Size and endogenous characteristics of each region are important too, as the so called new economy activities will be attracted easier to larger regions with a significant population and market sizes than to smaller ones sparsely populated and with a weak entrepreneurship dynamic. Those territories not only offer a wider potentially suitable labour market but also provide a larger one for goods and services produced. The overall conclusion is that, within limits, air transport stimulates further growth in the economy but it is also fostered by the dimension of the hinterland itself which adds to airport management a requirement of strategic marketing (Silva and Macário, 2008).

Indeed, air transport is an important input for the development of non-leisure-based industries, mainly for those which promote interpersonal linkages. In fact, not only the transport of air passengers is crucial to some of those industries, but also many of "(…) such firms also rely on a range of air freight services to provide quality service to customers and to operate just-in-time production management" (Button

and Taylor, 2000:209). But air transport is also an important issue for the success of tourism in a lot of regions, mainly for two reasons: i) changes in technology affect both size and speed of aircrafts, and ii) the real cost of travel fell through low cost packages and tourist discounts. Thus, "(…) as market demand is highly elastic at the lower price level, this has led to a large increase in demand (…)", (Cole, 1998:430). Button and Taylor (2000) consider the related impacts of both non-leisure-based industries and tourism in terms of four main effects:

- Primary effects: these are direct and immediate benefits to a region for the creation of new services and/or the expansion of others still existing. They may include the need for some physical improvements over the local airport but they may bring some local benefits too on account of wages and incomes the workers and the companies consequently spend in the region. Although these are gains to the local economy usually they are of short term and limited in magnitude;
- Secondary effects: these are longer term effects. Usually they are linked with local economic benefits of air service operations mainly due to the employment involved directly with the handling of aircraft, passengers and cargo. Also there are very important indirect secondary effects over the local economy concerning the on-going income flow of air service operations in terms of employment and income - in general, and of taxation revenue for local authorities - in particular. The secondary effects size over the territories depends upon airport operations of both, volume and nature;
- Tertiary effects: these are effects over the local economy resultant of air transport services at the disposal of both individuals and companies. Usually, the development of business activities require the use of transport modes in general, but those engaged with the *new economy activities* are surely involved with air mode in particular because they need easy inter-personal contacts only possible with high speed and quality transport services. Usually, these companies sets act as basis for local economic development mainly because not only they present a considerable geographical mobility, but also they belong to an important growth sector;
- Perpetuity effects: there are several empirical evidences that infrastructure investment reflects itself into the regional economy by raising the activity level and stimulating the productivity thus acting as a catalyst for higher economic growth in the appraisal area. Thus air transport services development, acting as a kick-start

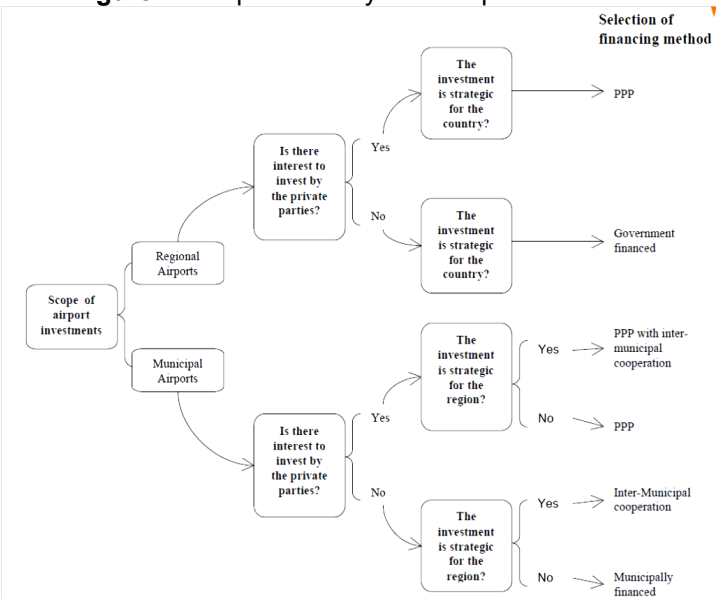
mechanism, may set in progress larger and longer term crossed regional economic development processes of wide scope and density, leading to profitable scale economies too.

THE SUSTAINABILITY OF REGIONAL AIRPORTS: FINANCE, STRATEGIC PARTNERSHIPS, TOURISM AND SOCIAL RELEVANCE

Airports in general are characterized by strong sunk costs, making them hard to be financed at the level of a municipality alone, mainly if the main beneficiaries are inter-regional, thus being difficult to define the project financing sources. Even aviation may fail to meet the full external costs generated by its own activities (noise and pollution)[2] and fail to pay for direct costs generated by the activity itself, as for example motorways to link the airport to targeted cities (Whitelegg, 2000).

A question subsists: how to decide what kind of public and/or private cooperation is better for each kind of infrastructure project, in order to maximize social benefits? For this analysis, the scope of the investment has to be defined (Figure 1).

Figure 1. Scope and Players of airport investments



Source: own elaboration

Public private partnerships (PPP) make more sense for semi-public or club goods, because there is interest by both parts to share risk management and maximize profit. An airport is a non-rival good, as long as the demand doesn't exceed the airports capacity, but has the potential to become an excludable good, as it is technically possible to restrain the use of the airport for certain purposes (Table 1).

Table 1. Reference table for type of good

	Excludable	Non-excludable
Rivalrous	Private goods (Foods, Costume, Auto)	Semi-Public goods (Toll, road, hospital, Post and Telecom)
Non-rivalrous	Club goods (Highway and Bridge, Comfort station)	Public goods (National defense, Common Highway, Lighthouse)

Source: Own elaboration based on Chang and Liu (2008)

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It is, then, a club good, but has still certain fuzzy properties that cannot be modelled through this simple table (Table 1). In addition to that, an airport has monopolistic properties that cannot be understated, because it generates what is called X-inefficiency, turning these infrastructures vulnerable to an inefficient operation and interests of the owner (Button, 2010). This is particularly true to both regional airports of our case studies, which are owned by the municipality, where the introduction of competition mechanisms is rather difficult. It is even debatable if these ownerships are not run by electoral and personal endeavours.

The 18th article of the Portuguese law nº159/99, 14th September, states that it is competent to municipalities to maintain, invest, finance and operate municipal airfields and municipal heliports. That implies that a Public-Public Partnership between the government and the municipality is not feasible legally[3]. At the same time, the scope of the law may change with the terminology change to regional airport, and become a project of national interest, turning a Public-Public Partnership possible between the Ministry of Transportation and the municipality[4], but this doesn't make sense, as the transfer of budget is done by the government to the municipality. Both articles don't mention inter-municipal partnerships, and that possibility could be a solution for the airfields' expansion to regional airports. The involvement of the private sector in regional airports owned by municipalities is also relatively debatable, since there is no interest developing an infrastructure which depends mainly on two

possibly inexistent factors: the demand by airlines; and the demand by customers. The factors which can increase those demands in our regional airports, notably linked to tourism, will be discussed later in this paper.

It will be difficult to improve the airports' infrastructure if the government has already endorsed another transport policy[5], thus transport infrastructures may become also concurrent. When a certain transport infrastructure is expanded, the amount of investment may be recovered by an increase of the price for use, but that may generate adverse selection, as economic agents may use a less efficient transport infrastructure in terms of speed or cost, for example, and compromise the investment's profitability and payback period, on one side, and reduce their economic performance overall, on the other.

Tourism is a great source of income for airports. A great part of an airport's revenue is based on the retail present in the airport, even in the smallest regional airport. Still, considering the growing demand of rural tourism in Portugal (Vaz and Dinis, 2007), the airports can directly benefit from their location in rural areas. Regional airports have a strong role to play, developing market niches on their own, facilitating the mobility of tourists that arrive to the main coastal areas and turning the rural areas more accessible. For example, tourism has been the main beneficiary of the regions that have managed to capture the Low Cost Carriers. In many regions where such projects were carried out, the regional tourism bodies and the private sector jointly manage to leverage the whole process through strategic partnerships and creation of funds for financing (Figueiredo, 2010). A regional airport can be a good spot to increase some kinds of air sports and activities oriented towards tourism, such as air festivals, and local demand of innovative products. Aero clubs have strong dynamics in those activities, as they organize events that attract the surrounding population, and generate small scale benefits mainly to the operation of the airport. New trends in tourism, referred as Adventure Tourism, bring also new areas of business, which can be the step to undertake before even considering an infrastructure's expansion.

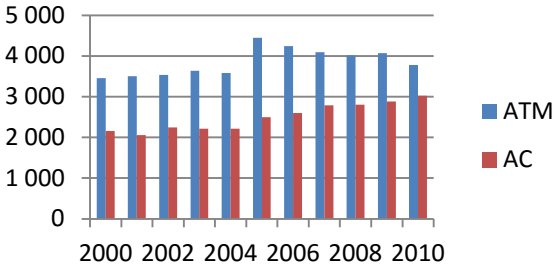
Beyond the purely economic aspects related to the airports - regional airports also develop functions that are socially relevant. For example, small airports can provide a public service of extreme importance to those places where medical care is not available and which require urgent transport to bigger cities. Aside from that, a regional airport increases the mobility on the local population. A good example is the business traveller, who needs to be in time at a business meeting. Small airplanes making regular carriers may help to develop local business. The raise of

this issue may attract the interest of regional entrepreneurial associations to invest in the regional airport, in order to keep it open.

TOURISM AND THE REGIONAL AIRPORTS OF BRAGANÇA AND ÉVORA. TWO PORTUGUESE CASE STUDIES

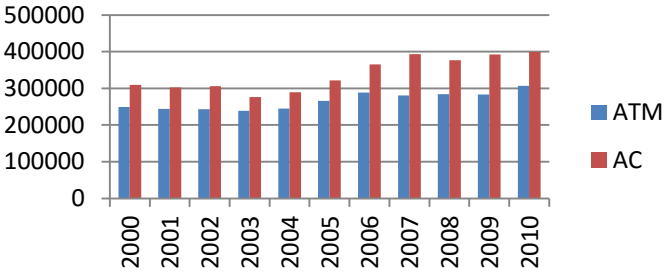
Bragança and Évora are located in the NUTS III[6] Alto Trás-os-Montes (ATM) and Alentejo Central (AC), respectively. The investment effort made in the last decade by both regions to increase their tourism market is reflected in the above figures (Figure 2, 3, 4 and 5).

Figure 2. Lodging capacity (nº of beds)



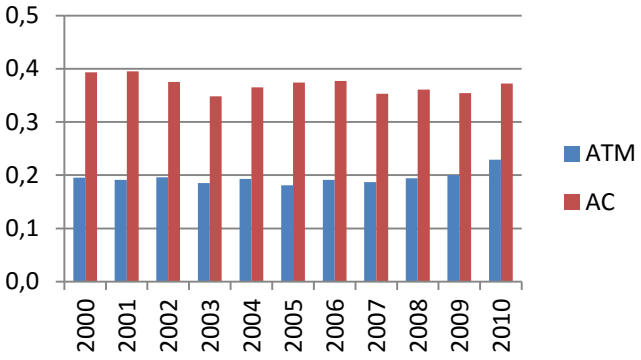
Source: INE (www.ine.pt)

Figure 3. Number of overnight stays



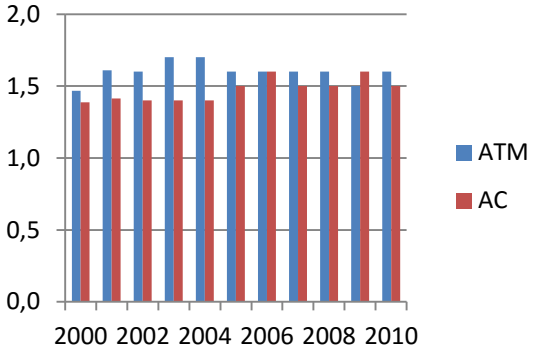
Source: INE (www.ine.pt)

Figure 4. Net bed occupancy rate



Source: INE (www.ine.pt)

Figure 5. Average stay



Source: INE (www.ine.pt)

The analysis of the lodging capacity of ATM tells us that, according to the number of overnight stays in the region, the supply of beds is clearly above the demand, resulting in poor bed occupancy ratios in the last decade. Since those lodgings are already in place, one of the pillars for the development of tourism is guaranteed, and the increase of tourism

marketing and of tourists´ mobility can contribute significantly for the number of overnight stays in the region, and, finally, for the growth of the regional income. Following this, the development of the regional airport of Bragança can be the missing link between excessive supply and deficit demand, since lower times of travel can allow tourists for longer stays or more frequent short-stays. Moreover, the proximity of Spain can extend the catchment area of the airport to a greater potential demand.

The case of AC is more delicate to analyse. This region has managed to attract a higher number of tourists (measured by the number of guests in hotel establishments) then the ATM region, may be because Évora is a world-renowned city, for its cultural heritage, and medieval attractions. Like ATM, also AC presents a low average stay, showing that both regions are demanded for short-breaks. In spite of the higher values of AC, both regions have low net bed occupancy ratio. Since there is a great potential for tourism in the regions, those values should be source of preoccupation for local authorities and tourism agents. Near AC (more precisely in Beja, Baixo Alentejo), an international airport has taken lots of investments to attract low-cost carriers to boost regional tourism as a consequence. The airport of Évora, if expanded to allow passengers, would generate unnecessary competition among airports of the region. Hence it is not expected to be used for commercial transport of air passengers, but instead to cargo transportation, in the long run. Currently the airport of Évora has an important role on air sports activities.

It can be said that both regional airports of Bragança and Évora have adopted different business models, but none of these are oriented towards a really tourism development. To increase tourism, both in the airport and in the region, the business models actually implemented must be imperatively compatible with the transport of small aircrafts. In the case of Évora, the airport isn't equipped with a passenger's terminal, nor with a cargo terminal, and the airport of Bragança has only a terminal with a maximum capacity of 16 passengers. According to the municipality airport's master plan, the main objective of the future operation of Bragança's airport is to increment the number of passengers. It seems to us that it is the best business model solution, as the area of the district of Bragança is one of the most remote regions in the country, aside from the islands.

In the case of Évora, an industrial aeronautical park in the neighbourhood of the airport has been built, for an initial investment of 12 million €. The firm EMBRAER, SA, the forth world's largest aircraft manufacturer, undertake great investments to build two new factories, totalling 148 million €, which are set to attain full level of production in

2014, and generate great local employment. This business model can ensure good perspectives of revenue for the municipality (sale of land, taxes payments, aeronautical taxes revenues), and for the local population, with as foremost effects the creation of employment and growth of the GDP.

CONCLUSIONS

In general, regional impacts generated by the existence of an infrastructure, such an airport, will be greater the more services it offers and the wider the range of destinations it allows. However, the size and endogenous characteristics of each region are important too, as the so called *new economy activities* will be attracted easier to larger regions with a significant population and market sizes than to smaller ones sparsely populated and with a weak entrepreneurship dynamic. Nevertheless, regional authorities and stakeholders, including tourism organizations, saw increased potential for regions with investment realizations in regional airports. For smaller regional airports, public funding proved indispensable to their survival, but strategic partnerships can be designed to involve the main beneficiaries (eg. tourism industry). The two Portuguese regional airports presented on this study reflect two different business models of airport and two different development goals. One (Bragança) oriented to increase the number of air passengers and planning to really contribute to tourism development of the region. The other (Évora), besides being a national reference on air sports activities, managed to attract an important aeronautical industry and is planning the cargo transportation in the long run. Both, implementing their plans can impact positively on the regional economy and boost the external image, thus attracting tourists.

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ENDNOTES

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2. As the land surrounding the airports are owned by the municipalities, our two Regional Airports Case Studies do not generate significant levels of noise and pollution, thus avoiding the creation of pressure groups to stop the growth of the infrastructure.

3. Reinforced by the article 8, paragraph c) of the Portuguese law of Local Finances nº 2/2007, 15th September.
4. Article 8, paragraph b) of the Portuguese law of Local Finances nº 2/2007, 15th September.
5. Great investments on PPP have been made in the development of the Portuguese motorways network in the 2000's, generating strong financial commitments for the next years.
6. Portuguese statistical regions.

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Margarida Vaz (mvaz@ubi.pt) is a professor and researcher of NECE-Research Unit in Business Sciences, at University of Beira Interior, Department of Management and Economics, Faculty of Social Sciences and Humanities, Covilhã, Portugal.

Jorge Silva (jmiguel@ubi.pt) is a professor and researcher of LAETA/UBI-AeroG, at University of Beira Interior, Department of Aerospace Sciences, Faculty of Engineering, Covilhã, Portugal.

Emília Baltazar (mmila@ubi.pt) is a PhD student and researcher of LAETA/UBI-AeroG, at University of Beira Interior, Department of Aerospace Sciences, Faculty of Engineering, Covilhã, Portugal.

Tiago Marques (mvaz@ubi.pt) collaborated with the Transportation Research Center (NIT), at University of Beira Interior, Department of Aerospace Sciences, as a trainee researcher in the AIRDEV project, under the scientific supervision of Margarida Vaz.