

ABSTRACT

Small regional airports have a major contribution to their local region. This dissertation studies the benefits for a region from its local airport. The economic benefits are related with an increase of the GDP, mainly through direct, indirect and induced employment and an increase in the inbound tourism. The airport integrates also the remote areas, providing social cohesion and a better standard of living for the population. After the liberalization process was regulated in Europe, competition was enhanced in the aviation market in favor of the consumer and the sector grew significantly. The development of low-cost carriers that occurred reformed the role that small regional airports can play for regional development and new trends were created for the air transport sector. National Airport of Nea Anchialos is studied as a case of a small regional airport, estimating its contribution and suggesting strategies for its further development.

Keywords: small regional airports, regional development, Nea Anchialos, LCCs, tourism, economic growth

TABLE OF CONTENTS

ABSTRACT.....	1
TABLE OF CONTENTS	2
LIST OF TABLES AND FIGURES.....	3
LIST OF ABBREVIATIONS.....	4
ACKNOWLEDGMENTS	5
1. INTRODUCTION.....	6
2. AIRPORTS: IMPACTS, FEATURES, POLICIES.....	8
2.1 CATEGORIZATION OF AIRPORTS	8
2.2. RELATIONSHIP BETWEEN THE AIRPORT AND THE REGION	10
2.3. ECONOMIC CONTRIBUTION OF AIRPORTS	13
2.3.1. CATALYTIC IMPACT OF AIRPORTS.....	18
2.3.2. AIRPORTS DRIVING TOURISM DEVELOPMENT.....	19
2.4 SOCIAL CONTRIBUTION OF AIRPORTS.....	21
2.5. ENVIRONMENTAL IMPACTS OF AIRPORTS.....	23
2.6. GREEK AIRPORTS.....	24
2.7. SUPPORTING POLICIES.....	28
3. THE DEVELOPMENT OF AIRPORTS IN THE DEREGULATED EUROPEAN MARKET	33
3.1. CURRENT TRENDS FOR REGIONAL AIRPORTS IN THE AVIATION SECTOR.....	33
3.2. THE LOW – COST CARRIERS	36
3.3. PRIVATIZATION OF AIRPORTS	38
3.4 AIRPORTS IN A MULTIMODAL TRANSPORT SYSTEM.....	41
4. THE CASE OF NATIONAL AIRPORT OF NEA ANCHIALOS.....	43
4.1. THE FACILITIES AND THE OPERATION OF THE AIRPORT	43
4.2. FLIGHTS AND PASSENGERS TRAFFIC	45
4.3. THE VICINITY NEAR THE AIRPORT	49
4.4. IMPACTS OF THE AIRPORT TO THE REGION.....	50
4.5. PERSPECTIVES FOR FURTHER GROWTH OF THE AIRPORT.....	52
5. CONCLUSIONS.....	56
REFERENCES.....	58

LIST OF TABLES AND FIGURES

List of tables:

Table 1: Air Traffic in Greece (1990-2010)	page	26
Table 2: Arrivals and departures of passengers 1994-2011	page	47
Table 3: Arrivals and departures of aircrafts 1994-2011	page	48

List of figures:

Figure 1.: Total employment in the global air system	page	15
Figure 2: Direct jobs generated by air transport in Europe (2010)	page	16
Figure 3: Domestic and International passenger traffic	page	27
Figure 4: Arrivals and departures of passengers 1994-2011	page	48
Figure 5: Arrivals and departures of aircrafts 1994-2011	page	49

LIST OF ABBREVIATIONS

ACI	Airports Council International
BAA	British Aviation Authority
CAA	Civil Aviation Authority (UK)
ELFA	European Low Fares Airline Association
ERAA	European Regions Airline Association
EU	European Union
GDP	Gross domestic product
HST	High-speed train
IATA	International Air Transport Association
LCCs	Low – cost carriers
PSO	Public Service Obligation
UEFA	Union of European Football Association

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1. INTRODUCTION

Nowadays, the globalization of the society has made movement of people between different countries more important than ever. People are traveling around the world on a daily basis and the need to reduce time and distances of traveling have increased the use of air transport. Airports have a significant role for businesses and individuals. The congestion of larger airports and the need for the proximity with an airport allows small regional airports to develop further.

The change in trends in the aviation market after the liberalization of the sector, and the boom of low-cost carriers created new facts for small regional airports. These airports have a major role for their local regions as they contribute to their economy producing direct, indirect and catalytic impacts and they usually serve the region as a tourist destination. In other remote regions, airports are important for their social contribution, providing social cohesion. The significant role that airports have in today's world is marked by the numerous regulations that are imposed on the market and the ongoing interest of private enterprises to invest on the sector.

The purpose of this dissertation is to assess the contribution of small regional airports for regional development. In the first section of this dissertation, the relationship between airports and its territory is examined and the contribution of the latter to the former in financial, social and environmental terms. There is made an effort also in this section to define the regulatory environment through which airports are developed in the market.

In the second section, the current trends of the aviation market are examined, the relationship between airports and the airlines and the effects on regional development. The operation and the establishment of low-cost airlines in regional airports have a major importance for their regions in a period of time when private investors

are entering into the aviation market, which is a part of a wider multimodal transport system.

In the last section, the case of Nea Anchialos National Airport is studied. The attraction of new airlines has increased the flow of tourists in the region, generating significant benefits. The quality characteristics of the region of Thessaly and the perspectives that create for further development of the airport are widely analyzed.

2. AIRPORTS: IMPACTS, FEATURES, POLICIES

2.1 CATEGORIZATION OF AIRPORTS

Airports around Europe are very different in size and function, as they serve different regions and target groups of customers and usually set different economic or social targets. Therefore, there is a need in the global literature for the airports to be categorized so that can be examined more efficiently.

At first, the Decision of the Council and of the European Parliament on Community guidelines for the development of the trans-European network defined three categories of airport (Official Journal, 2005, in OJ EU-2005/C 312/01):

- a) International connecting points (generally with an annual passenger volume of no less than 5.000.000)
- b) Community connecting points (generally with an annual passenger volume of between 1.000.000 and 4.999.999), and
- c) Regional connecting points and accessibility points (generally with an annual passenger volume between 250.000 and 999.999).

The Committee of the Regions, for its part, proposed five categories of European airports in its Outlook opinion of 2 July 2003 on regional airport capacities (OJ EU-2005/C 312/01):

- a) major hub airports (over 25 million passengers, four airports), accounting for approximately 30% of European air traffic,
- b) national airports (10 to 25 million passengers, 16 airports), accounting for approximately 35% of European air traffic,
- c) 15 airports of 5 to 10 million passengers accounting for approximately 14% of European air traffic,
- d) 57 airports of 1 to 5 million passengers accounting for approximately 17% of European air traffic,
- e) 67 airports of 200.000 to 1 million passengers accounting for approximately 4% of European air traffic

However, the Commission considers that there is a broad overlap between these two classification schemes and for the purposes of these guidelines has defined the following four categories (OJ EU-2005/C 312/01):

- a) category A, hereinafter “large Community airports”, with more than 10 million passengers a year,

- b) category B, comprises “national airports, with an annual passenger volume of between 5 and 10 million,
- c) category C comprises “large regional airports” with an annual passenger volume of between 1 and 5 million,
- d) category D, hereinafter “small regional airports”, with an annual passenger volume of less than 1 million

Nonetheless, in the literature except from the above classification, are used some other categories to discriminate airports. For instance, in a research conducted by Deutsche Bank (Christian et al. in Heymann E., 2005), is referred that it would be reasonable to define airports in categories according to their function and the attractiveness of their catchment area. Therefore, airports are categorized in:

- a) Primary airports, which have a hub function (hub airports)
- b) Secondary airports, these airports that do not function as hubs, but nevertheless boast an attractive catchment area. They are integrated in the route networks of scheduled airlines and offer a wide variety of flights to European destinations.
- c) Tertiary airports, which are defined as all the other international airports. In most cases, they are integrated into the international air transport system mainly by Lufthansa.
- d) Quaternary airports are former military or regional airports, which are mainly served by low - cost carriers (LCCs).

In addition, Jarach (2001), uses almost the same discrimination relied on the field of marketing and categorizes airports as follows:

- a) Primary hub (e.g. Paris CDG, London Heathrow)
- b) Secondary hub (e.g. Basel, Barcelona)
- c) Regional airport (e.g. Stuttgart, London City)
- d) Low cost airport (e.g. London Stansted, London Luton)

Mr. Bradbourn Philip in his report on the future of regional airports and air services in the EU (Bradbourn, 2011) considers these classifications of airports as inadequate to define what constitutes a regional airport. Since they have such a major contribution to the society of Europe, it is an urgent need that a clear, concrete, coherent and precise definition be formulated for regional airports.

2.2. RELATIONSHIP BETWEEN THE AIRPORT AND THE REGION

Studying about the relationship between the airports and regional development, a common characteristic that derives from the literature, is that several studies mention the significance of airports for territorial development and argue that airports have the ability to become the linchpin of development for a region (Cidell 2006, Feldhoff 2002, Sakris 2000). There are many different factors that influence regional development. Graham (1998) notes that if we review history, it could be perceived that transport, in general, belongs to the most important ones. The absence of sufficient transport infrastructure and services may be a decisive obstacle for the development of a region.

The airport, wherever is located, serves its hinterland, providing both economic and social benefits to local citizens. It is considered as a service to the territory similar to that of a hospital, a school or a cultural center. It is essential, even in the case of a small regional airport, to provide the area with activities and services that allow the most efficient and appropriate use and development according to national and regional planning.

Thus, as it is widely accepted, an international airport can have significant impacts beyond and far enough the airport territory itself. These impacts refer to urban development, direct and indirect employment and many other related fields, mostly economical and social. This impact outside of the region of the airport was described by Kasadra (2000) as the development of “aetrtopolois” “Aetropolis” is expanded within a radius of seventy kilometers away of the area that the airport is settled.

The operation of an airport, regardless of its size, strengthens and boosts the local region financially. In fact, a virtuous circle is created between the airport and the territory: the first is an important resource for the second, but at the same time, the second should be able to make necessary lifeblood to the first. The airport generates economic value on two fronts in the region (Amoroso and Caruso, 2010):

- a) As an economic activity in itself: it is the product of the concentration of investments and the provision of services related to air traffic management, administrative management and accounting of the airport
- b) As a support facility to the regional economy, as it can provide businesses and the public with a means of quick and reliable transportation to develop business, trade and offer services that can enhance the accessibility of national, international and intercontinental area.

Generally, airports are used as a tool that increases the effective “international accessibility” of the area. In the latest years, the growth of the low-cost carriers, which tend to establish primarily in regional airports, due to lower operational and management costs and limited congestion, have played an important role to this fact.

Amoroso and Caruso (2010) believe also that the interdependence between the airport and the vicinity around is expressed through a relationship that can be described as “complex and synergistic”. The presence of an airport in a region is endogenous and exogenous in nature and can be an important strategic asset in solving problems. It attracts inward investment as it is an attractive pole for businesses to settle in the area, creating job opportunities for local citizens, and as result strengthens the entire economy.

Additionally, provided that its operation ensures a stable and efficient mean of transport, it can become an effective marketing tool for the region. A successful airport can improve the perception of a city in an international environment. International transport links are one of the critical factors that influence the international recognition of a city, along with education facilities and levels of skilled labor. Operation of airports can offer a unique identity in a region, acting as strong advantage in its city marketing policy, even form a brand name for the region, putting it on the world map and improving its attractiveness for investments. As Heymann (2005) mentioned, the idea of having a local airport appeals to many regional politicians partly for prestige reasons.

The presence of an airport can improve the proliferation of tourism activities, as well. Tourist sector can be grown by improving accessibility and operation of an airport, and as a result significant events can be hosted in the region as sports events, cultural events or congresses. Tapiador et al. (2008), claim that a number of peripheral regions

became an attractive tourism destination because of the redevelopment of their airport. In this way, not only local citizens gained a better air access, but also significant economic synergies occurred for the society.

Except from the fact that the airport serves the population, another crucial point in their relationship is that the latter consists the “catchment area” of the airport. The catchment area, or area of attraction, plays an important role for the further growth of the airport. The most important factors on which it depends are: a) resident population, b) annual average income, c) level of employment, d) fields of work (Amoroso and Caruso, 2010).

What is more, Robertson (1995) referred to the potential of airports to bring regeneration in a region. Construction of new infrastructures or growth of old and abandoned airports can assist the restructuring of an area’s economy, by widening its range of industries. It is a very often phenomenon a business park to be established in the available land of an airport. Frequently, these business parks are used by firms with some connection to the airport or aerospace industries. Otherwise, they are chosen as locations for companies making intensive use of air transport. A very characteristic example of an abandoned and depressed area that was regenerated by the growth of its regional airport is the region of Charleroi. It was a region only with coal-mines and after the Ryanair used the airport as a base, the whole region was rehabilitated. McNamara (2011) in a conference organized by ERAA¹ supported the view that nowadays, connections provided by efficient regional air services, would encourage populations to shift away from the crowded inner cities and develop economic centers throughout Europe’s regions.

Among all the above tertiary impacts, the complementary role of the airport should be included. In fact, an airport does not only offer air services and except from the strategic importance that should be recognized, is also a meeting point for businessmen and a reception center for tourists.

¹ European Regions Airline Association

As airports depend on international markets and business activity to a large extent, it could be argued that airport-related industries are less affected by domestic economic downturns, giving the local economy greater resilience. Despite this, the air transport can clearly be affected by other international events and by the vagaries of a very competitive air travel market. (Robertson, 1995).

On the other hand, interaction between the surrounding area and the airport cause some negative externalities. In the vicinity near the airport there are increased levels of noise and fuel emission due to the function of the airport. However, there are many policies from the European Commission according this matter, which guarantee acceptable levels of emissions, where at small regional airports are considered even negligible. Another negative point in this relationship, which is characterized as a “thorny issue” by Amoroso and Caruso (2010), is the dependence of airports on national and state policies. These policies are not considered very receptive to the needs of specific areas, and as there is not adequate communication with local governments, airports appear not to be very coherent with urban and regional government. However, lately, a greater involvement of the strategies for airport development has been authorized in the urban planning policies.

2.3. ECONOMIC CONTRIBUTION OF AIRPORTS

The importance of transport to economic growth has been recognized by the European Commission in their Transport White Paper (Commission of the European Communities, 2001): “It is difficult to conceive of vigorous economic growth which can create jobs and wealth without an efficient transport system that allows full advantage to be taken of the internal market and globalize trade”.

The overall economic impact of airports can be considered under the following headings (Airports Council International, 2004):

- a) direct: employment and income that is wholly or largely related to the operation of an airport
- b) indirect: employment and income generated in the economy of the study area in the chain of suppliers of goods and services
- c) induced: employment and income generated in the economy of the study area by the spending of incomes by the direct and the indirect employees, and

- d) catalytic: employment and income generated in the economy of the study area by the wider role of the airport in improving the productivity of business and in attracting economic activities, such as inward investment and inbound tourism

According to Brathen and Halpern (2011), the first three impacts can relatively easily be measured and quantified, and as a result, these impacts are studied more in the literature. However, catalytic impacts, which play the most important role of the contribution of an airport to the regional development, are quite difficult to be quantified, and are studied in a different section in this thesis.

The world aviation sector, as it is depicted in some statistics in the website of IATA (International Air Transport Association, 2011a), comprises from 1.629 airlines globally (448 only in Europe), has a fleet of 27.271 aircrafts (6.585 in Europe), carries 605.803.813 passengers for the year 2010 in Europe and completed 29,6 million departures per year from 3.733 different airports (701 in Europe). Some more statistics, that include data in more financial terms, represent that air transport in Europe contributes about \$749 billion, supporting 8,7 million jobs totally, from which the 5,1 million were caused from direct, indirect and induced impacts and the other 3,6 million from catalytic impacts. It should also be mentioned that 70% of businesses report that, serving a bigger market, is a key benefit of air transport, and this is proved by the fact that aviation carries over 46 million tones of freight annually and 35% of interregional exports of goods by value. Finally, 25% of all companies' sales are dependent on air transport. It is also worthwhile to mention that the European region represents 15% of the total worldwide jobs and 34% of the GDP generated by the air transport industry, including the catalytic impacts.

The most immediately visible economic benefit of the aviation sector is the employment of labor at, or immediately around airports. Airports are frequently among the largest concentrations of employment in their national and regional economies and the areas surrounding airports have lower than average unemployment (Airports Council International, 2004).

On a global scale, air transport industry generates 33 million jobs (International Air Transport Association, 2011a). 5,5 million people are employed directly, with the

airlines and airports employing 4,7 million people and the civil aerospace sector employing 782,000 people. The indirect jobs that are created via purchase of goods and services from companies in the air transport supply chain are 6,3 million. 2,9 million jobs are induced through spending by industry employees as well, and another 17,1 million direct and indirect jobs are created through air transport's catalytic impact on tourism (figure 1).

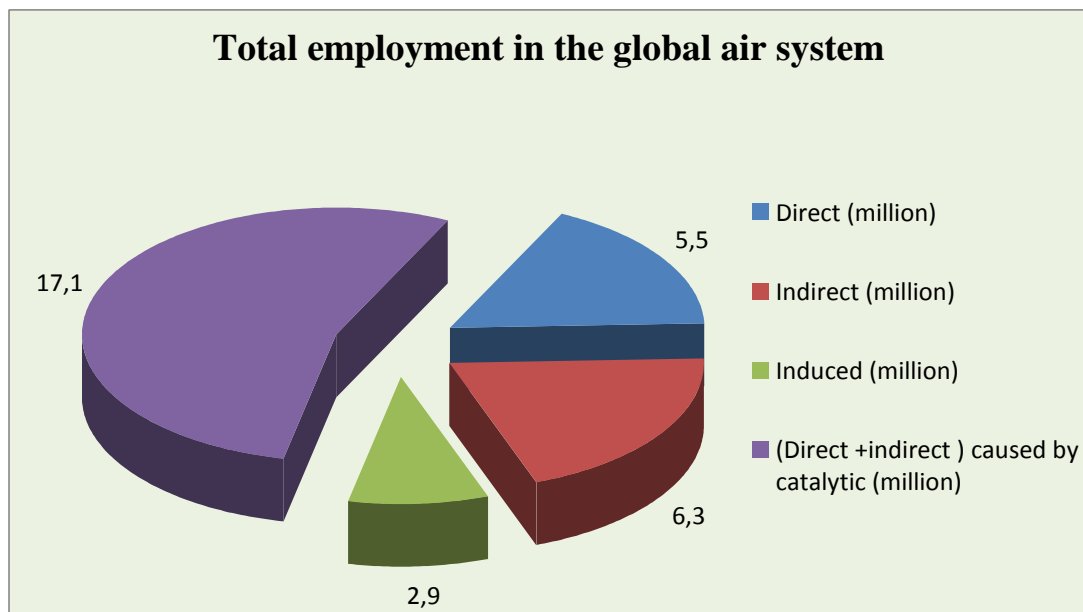


Figure 1. Source: Own compilation from www.iata.org

Figure 2, illustrates the direct jobs generated by air transport in Europe in 2010. A total of 1,9 million people are employed directly by the air transport in Europe in 2010. As it is shown, 519,000 (28%) people work for airlines or handling agents (e.g. as flight crew, check-in staff, maintenance crew, reservations and head office staff). 220,000 people (12%) work directly for airport operators (e.g. in airport management, maintenance security, operations), while 827,000 (44,5%) are occupied on-site at airports for government agencies, such as customs and security, or provided services in retail outlets, restaurants, hotels etc. Another 290,000 people (15%), are employed in the civil aerospace sector (manufacture of aircraft systems, components, airframes and engines).

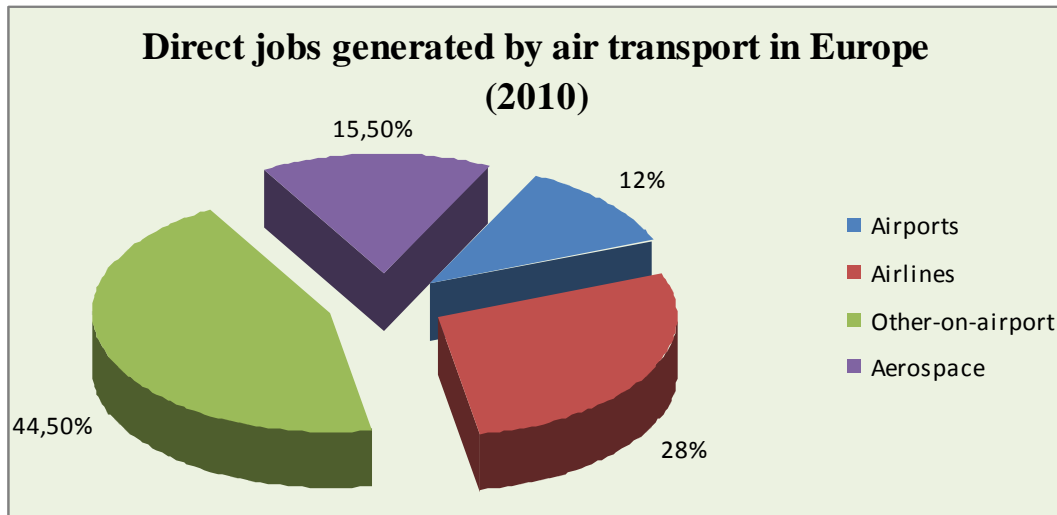


Figure 2. Source: Aviation Benefits beyond Borders

Oxford Economic Forecasting (2006), estimates that aviation's direct contribution to GDP will increase by 4,4% per annum in real terms over the next fifteen years helping to create an additional 841,00 jobs across the region by 2030. Meanwhile, when accounting for catalytic effects in terms of increased tourism receipts, real GDP growth is also projected at 4,4% per annum with implied job creation of 1,6 million.

Hakfoort et al (2010), studying the regional economic impact of the Amsterdam Schiphol airport, indicated that the total multiplier of direct employment in the airport is approximately 2. This means, that one job on the airport leads to approximately one job in indirect and induced employment.

Similarly, Airports Council International (2004), studying 25 different airports, reached at the conclusion that European airports currently support, on average, around 950 on-site jobs per million passengers (workload units²). This number is just a little lower than the "typical" 1000 jobs per million passengers, that was estimated by several studies in the 90's, due to the fact that in the latest years airline carriers have managed to increase their productivity by achieving economies of scale and many airports have been privatized. The growth of low-cost carriers in Europe in the same period enhances also this fact. However, Robertson (1995) claimed that this ratio cannot be taken as granted and varies in different airports. Actually, more jobs than

² A workload unit, is the annual movement of either one passenger or 0,1 tones of freight/mail.

this average can be achieved by factors such as airlines establishing bases, maintenance facilities, freight operations and airport related uses being allowed on-site. From the study mentioned above, was estimated that on average, for every 1000 on site jobs supported by European airports there are around 2.100 indirect/induced jobs supported nationally, 1.100 indirect/induced jobs supported regionally, or 500 indirect/induced jobs supported sub-regionally. Ultimately, it can be concluded that measuring together the direct, indirect and induced jobs, for every million passengers (workload units), that is the size of a usual regional airport, European airports can support: 2.950 jobs nationally, 2.000 jobs regionally, 1.425 jobs sub-regionally.

What is more, an airport contributes to the regional economy, as an infrastructure project itself. The implementation of the investment increases the income and the employment regionally, because of the activities of construction firms and their suppliers. In the case of a construction of an airport, these activities are the design of the facility, the building of (additional) runways, the construction of the terminals and hangars, the installation of traffic navigation systems and so on. On the contrary, during the period of the construction of infrastructure, there may be an increase in taxation or higher interests rate as a result of public borrowing on the capital market that could affect negatively the consumption in the region. These effects, positive or negative, last only for the period of construction and are characterized as temporary effects (Hakfoort et al, 2010).

A crucial aspect is how the income gained by wages and employment is spread or invested in the region. Robertson (1995) supports the view that many of the employment benefits are fairly localized and within 30 minutes drive time of the airport. In this 30 minute drive from the airport is likely to be spent as well, much of the income of the induced employment gained from the spending of airport-related employees. Indirect employment, based on supplier firms, can be very widespread, but a significant amount also remains in the local region, particularly where this includes a major industrial and service center. Therefore, it would be fair to argue that airports may not have the ability to spread benefits to all parts of a region, related to its size. It seems clear that the majority airport-related jobs are very accessible to the more local area around them, including the main population centre the airport serves.

The location near airport of multinational companies that make intense use of the airport, such as innovative high-tech companies, pharmaceuticals industries, biotechnology or electronic clusters etc., which are a great core of employment, also enhance this view.

2.3.1. CATALYTIC IMPACT OF AIRPORTS

Airports constitute necessary infrastructure for a wide range of economic activities. The air transport industry's most important economic contribution is through its impact on the performance of other industries and as a facilitator of their growth. This wider economic role is known as the catalytic impact, arising from the effect that air service accessibility can have on the region served by the airport.

There are two main types of catalytic impacts of airports (Brathen and Halpern, 2011):

- a) impacts relating to regional economic competitiveness as a result of an airport ability to promote export activities including tourism, enhance business operations and productivity, and influence company location and investment decisions
- b) impacts relating to regional accessibility and social development as a result of an airport ability to secure access for regions, provide residents with opportunities to travel (e.g. for work or leisure, to maintain contact with friends or relatives or to access services such as health and education) and influence resident location and retention..

The “spin-off” benefits that air transport produces through airports, improve all aspects of firms’ operations, including sales, production, customer service and innovation. Airports usually influence company location decisions and competitiveness. The presence of an international airport seems not only to attract new inward investment from overseas companies, but also retains existing companies in the area, promotes the export success of companies located in the area by the provision of passenger and freight links to key markets and secures the expansion of existing companies in the face of competition with other regions. Moreover, since companies that use the airport demand high-skilled and well-educated employees, the airport retains in the region its skilled citizens and deters them from migrating to capital cities. As a survey conducted on behalf of IATA revealed (Oxford Economics Forecasting, 2006), access to good international transport links influences the decision of 43% of the participant on where to live and work.

In addition, air transport provides access to main markets, allowing globalization of production and exchange of products between countries, thus facilitating world trade. Global marketing of goods and services and trade with distant markets is now possible, resulting in an increase in sales. Over 80% of businesses reported that air services are sometimes important for their on sales, with almost 60% considering them either vital or very important. Companies reported that on average, 25% of all sales are dependent on air services (Air Transport Action Group, 2008). Enterprises around the world have the ability to deliver products to their clients quickly and reliably and reduce costs exploiting economies of scale with the use of improved transport links, increasing in this way their productivity. Airports allow the implementation of foreign direct investments in less developed areas, reducing regional inequalities in the European Union. A good transport infrastructure can also encourage greater spending on research and development projects of companies, acting as a spur to innovation.

It is estimated that catalytic impacts on investment and productivity added about \$1,800 billion to global GDP in 2006. Including effects through trade and tourism, the overall catalytic effect of air transport on GDP is estimated to be about \$2,460 billion (Air Transport Action Group, 2008).

2.3.2. AIRPORTS DRIVING TOURISM DEVELOPMENT

Another very significant catalytic impact of airports is the development of tourism, which is growing fast in the last period, primarily due to the boom of the low-cost carriers that are using secondary or regional airports and are opening up new markets through their radical services.

Airports are closely related with the development of inbound tourism. Many holiday destinations in remote regions of Europe, such as the Spanish and Greek islands would not be easily accessible without air services. In fact, over 80% of the tourists arriving at Greek islands such as Crete, Rhodes and Corfu arrive by air. Even for major European cities, air travel can account for a third or more of their foreign visitors. For instance, 70% of foreign tourists to the United Kingdom arrive by air,

21% of all foreign tourist arrivals in Greece travel through Athens Airport and 32% of foreign tourists to the Lisbon area arrive through Lisbon Airport. Other statistics data show that almost 10 million tourists arrive at Ile de France area by air, spending €3 billion. Vienna airport is also a growth engine for tourism in Austria, as approximately 37% of tourists travel by air remaining for an average of 4,7 days and spending around €130 per day for leisure travelers and €426 for business travelers (Airports Council International, 2004). Thus, the development of good direct air service connections is very significant for the development of tourism and the economy in those areas.

Tourism is a particularly important source of new jobs. In 2011 tourism in Europe directly supported 9,937,000 jobs (2,7% of total employment). This is expected to rise by 0,4% in 2012 and by 1,2% up to 11,262,000 (3% of total employment) in 2022. Including jobs supported indirectly by the industry, the total contribution of tourism to employment was 7,7% (28,377,500 jobs) of total employment in 2011. This is expected to fall by 0,3% in 2012 to 28,285,000 jobs and rise by 0,8 % up to 30,599,000 jobs in 2022 (8,1% of total). The total contribution of tourism to Europe's GDP was \$1,720,1 billion (7,9% billion) for 2011 and is expected to reach \$2,177,5 billion in 2022 (World Travel and Tourism Council, 2012).

Therefore, contribution of tourism to regional development is less than obvious and should be given respectful consideration from local governments in the next years, as there appear to be increasing trends in the sector. The extended use of the internet, which exposes people to many different sights and sounds of remote locations and allows communication between them, in accordance with the multicultural nature of society established in a globalized environment, will create additional demand for tourism in the near future. According to IATA (International Air Transport Association, 2011a) passenger numbers are expected to almost double until 2030.

A very important aspect for the region is if the investment in an airport would indeed benefit the region financially or income will be spent in neighboring regions. This depends on whether the tourists using the airport, spend their money in the local territory, or they use the secondary airports only to have access on the region and

immediately travel via multimodal transport systems to their main destination, which is another region,. In this case, a possible income for the region is lost.

2.4 SOCIAL CONTRIBUTION OF AIRPORTS

Beyond all the economic benefits that airports produce for the region, there is a major contribution to the society as whole. If we assume that, in financial terms, at a micro level, economic profit derives from the difference between costs and revenues, the situation is not the same at the macro level, where long term aspects are taken into consideration and social factors such as political or cultural cannot be ignored (Amoroso and Caruso, 2010).

Airports as an infrastructure of transport have direct and indirect social impacts on individual users, enterprises and the region as a whole, improving the quality of life and services and providing social cohesion. These benefits upgrade the standard of life of the citizens and are not measurable, as in the case of economic benefits. Only the opportunity cost of developing an airport can be measured, in the sense of using the inputs for building an airport, for investing in another infrastructure or project which will contribute to society.

Airports play an important role in integrating some of the more remote areas of Europe, such as Greek islands, Scotland, Scandinavia and Spain. This will have an impact on local economies and it can secure the maintenance of local services, such as education and health care. Accessibility can be important for the retention of skilled labor force. As a result, these remote areas are usually characterized by low unemployment rates, as a modern transport system prevent them from migrating. Thus, local economy strengthens. For the above major social and economic factors, many air services connecting regional communities in Europe with their major cities have been placed under “Public Service Obligations” (PSO’s), whereby the operations are financially supported by regional or national governments. The social importance of air transport providing accessibility will grow with the enlargement of the EU. It is widely accepted, that without air service access many citizens of the European Union

would be denied participation in the modern world, which entails implications to the quality of their lives. In this case, regional inequalities in the Union would increase.

A survey of the benefits of the Easy Jet Inverness-Stansted service identified the importance of the social impact of air services in overcoming peripherality (SQW, 2002 in Airports Council International, 2004). This study demonstrated that not only had the existence of the service lead to increased inbound tourism, but that 1 out of 2 local residents in the Inverness area felt that the existence of the service had made the Highlands of Scotland a better place to live, with 3 out of 4 agreeing that it made the area seem less remote and 2 out of 5 saying that it made it more likely that they would continue to live there.

Additionally, apart from the fact that air transport services to remote areas are often vital to ensure access to basic services such as hospitals, universities and colleges, it also facilitates the delivery of humanitarian aid anywhere on earth. In a case of emergency or natural disaster (earthquake, fire, tsunami), access to provide immediate help is only available through the air, with airplanes or even helicopters. The urgent delivery of medical supplies and organs for transplantation is implemented through airports, as well.

Aviation plays a very significant role in the development of the “knowledge economy”. It is important for researchers, university professors and other intellectuals to participate in congresses all over the world, to meet other colleagues and exchange their views. Debbage (1999) claimed that although technological innovations have made communication between people very simple, there are still sectors that rely heavily on direct contact with other colleagues. This opportunity to travel, contributes to increasing innovation and evolution in the scientific community. It is also more feasible for young students to study for a period of time in a foreign country, obtaining a better understanding of their faculty. It is the phenomenon of “cultural proximity” that Noteboom stated, (Noteboom, 1999 in Song W, and Ma Y., 2006), when knowledge is more easily exchanged as the level of shared experiences increases, that use of airports succeed, by minimizing distances between countries.

Furthermore, the social benefits derived from leisure travel and tourism are real and significant. People have the opportunity to travel all around the world visiting friends or relatives, maintaining their traditional and family customs and also exploring new cultures, broadening their spiritual horizons. Access to holiday travel is another important quality of life indicator for all European regions.

2.5. ENVIRONMENTAL IMPACTS OF AIRPORTS

There is a small group of people who are opposed to the construction or development of airports due to its impacts on environment. These impacts refer almost exclusively, to the phenomena of air pollution and noise. However, these oppositions may occur mostly in airports type A and B, since the emission of gas pollutants and noise from regional airports are well below the more restrictive standards and are considered negligible. Nevertheless, the air aviation industry is taking great strides to control its impacts on the environment. Therefore, the proposals to heavily penalize air transport on the basis of environment performance are unfair. A sustainable approach requires the costs and the benefits to be balanced.

Today, modern aircrafts achieve a fuel efficiency of 3,5 liters per passenger per 100km, or 67 gallons per passenger per 100 miles, which is 70% more full-efficient than 40 years ago. There are some types of aircraft even friendlier to environment, such as the Airbus A380 and the Boeing 787 which consume less than 3 liters per 100 km and can be compared favorably with small family cars. IATA aims at an average improvement in fuel efficiency of 1,5% per year to 2020 (Air Transport Action Group, 2008).

Air transport's contribution to climate change represents 2% of man made CO₂ emissions and this could reach 3% by 2050. This evolution is based on a growth in aviation CO₂ emissions of 2-3% per year, with an annual traffic growth of 5%. For 2010, total emissions increased by 3,5% to 649 million tones CO₂, compared with 627 million tones in 2009. This growth is a result of an increase of 5,2% due to capacity increase, with a simultaneous reduction of 1,7% from efficiencies. In this

field the aim of IATA is to reduce net CO₂ emissions 50% by 2050 compared to 2005. The air transport industry is now working towards carbon-neutral growth, which is translated as no increase in carbon emissions in spite of traffic growth, as a first step towards a carbon-free future (International Air Transport Association, 2011b).

As far as the noise pollution is concerned, aircraft entering today's fleet are 20 decibels (db) quieter than comparable aircraft 40 years ago. This represents a reduction of 75% in noise pollution (Air Transport action Group, 2008).

IATA follows a pillar strategy in order to address climate change. It is estimated that with improved operations adopted, up to 6% per year fuel and CO₂ can be saved. What is more, IATA helps fuel conservation by compiling best practices, publishing guidance, visiting airlines and continuous training. Its Green Teams in 2011 received 19 airline reports on fuel saving implementation and saved since 2004 78,6 million tones in CO₂ emissions and \$16,5 billions in fuel costs (International Air Transport Association, 2011b). Finally, in the latest years many efforts have been made to create an aircraft which will operate only by solar power, an innovation which will eliminate fuel and CO₂ emissions when will be a reality.

2.6. GREEK AIRPORTS

It is widely accepted in the literature (Costaki, Skayannis, 2008, Tsouka et al.) that the particular geomorphology of Greece, with many mountains in its mainland and thousands small islands situated at the West, East and South part of the country, in accordance with a not well-organized transport network led to the development of many small regional airports. Aviation has a prominent position in the transport system of the country and airports are the main gates of entrance for million of people, especially in the summer. Comparing to other countries of Europe and taking into account the population of Greece, it could be considered that there are an adequate number of airports in the country.

Concerning their spatial location, the first airports which were constructed in the 1930's and until two decades after the world war, were located mainly to the

mainland. The bad quality of the road transport in that period made airports attractive. After the 1957, when Olympic Airways appeared in the Greek aviation industry, new airports were constructed. In that period, airports were constructed mostly in islands (Costaki J.) mainly to serve Olympic Airways targets, which were to increase volume of passengers through the growth of tourism. This model is implemented until today and the development of airports in the mainland of the country is not significant. It should also be mentioned that the first airports operated for civil and militarily purposes simultaneously, thus their spatial location was related on matters of national security and national defense, as well (Skayannis, 2008). Generally, it can be concluded that the spatial location of airports was based neither on specific policies or planning, nor on a feasibility analysis, but were located rather randomly. This fact resulted in a poor quality and insufficient level of service for the Greek air transport industry in the next years.

Nowadays, there are 45 airports in Greece for civil usage and many more which are operating as military airports only. From these airports, 15 are characterized international airports, 26 are national airports and there are also 4 municipal airports. There are 5 airports that have closed and are not operating anymore. The national and the municipal airports consist of designated points of entry-exit (9 airports), ad hoc designated points of entry-exist (5 airports) and domestic airports (11 airports) (Civil Aviation Authority, 2012a). All airports are a property of the state, except from the Eleftherios Venizelos Airport in Athens, which is a partnership involving the Greek state and a private consortium led by the German company Hochtief Aktiengesellschaft (Athens International Airport Eleftherios Venizelos, 2012). In table 1 and figure 3, is shown the total domestic and international movement of passengers and freight through Greek airports for the years 1990 – 2010.

As it is obvious from Table 1, numbers of flights and passengers using Greek airports has almost doubled in this 20 years period of time. It is proved from the statistics data, that airport are an integral part of citizen's every day life and have a major role in the development of the country. This increase can be explained as a result of the modernization of the country in these years, the economic growth and growth of tourism and also as a result of the integration of Europe. However, freight tones that

are carried through air decreased, due to the fact of the changes in the production sectors and technological innovation.

TOTAL AIR TRAFFIC					
DOMESTIC AND INTERNATIONAL AIR TRAFFIC					
YEARS	FLIGHTS	PASSENGERS		FREIGHT (tonnes)	
		ARR+DEP	ARRIVALS	DEPART.	ARRIVALS
1990	244676	11080228	11067099	63427	58576
1991	223380	9727381	9860424	59471	51905
1992	259104	11419963	11441631	63174	55095
1993	276897	11800468	11851830	67430	58019
1994	288539	13139732	13174392	71934	62345
1995	292365	13024974	13064271	75164	64884
1996	299105	12974073	12854916	66214	56029
1997	332491	14276024	13794811	93278	65271
1998	343414	14524309	13931906	79411	55814
1999	396624	16458544	16346191	82677	52553
2000	427309	17917946	18313938	83738	59606
2001	396192	17600688	17957823	81432	55102
2002	360282	16646425	16831744	77525	47976
2003	395773	16971795	17053431	75780	50732
2004	419851	17589681	17650110	76247	54984
2005	403163	18130097	18316739	73387	51987
2006	429419	19259749	19453763	75412	54663
2007	455199	20529838	20784541	74541	55489
2008	440914	20345555	20491364	76171	56846
2009	457706	19746105	19899381	63139	52088
2010	428863	19083347	19220226	57612	47018

Table 1. Air Traffic in Greece (1990-2010) Source: www.ypa.gr

In Greece, air traffic tends to concentrate on few airports. According to Adamidis (2008), the five largest airports of Greece (in Athens, Thessalonica, Irakleio, Rhodes, Corfu) are transferring the 80% of total movement and only the two largest airports transfers more than 50% of total passengers. In addition, 39% of passengers and 92% of freight are transferred through Eleftherios Venizelos in Athens. Regional airports

usually operate only to serve the needs of their regions and many of them are not even financially viable. It is a necessity for small regional airports to overcome their problems and participate more fully in the air transport sector.

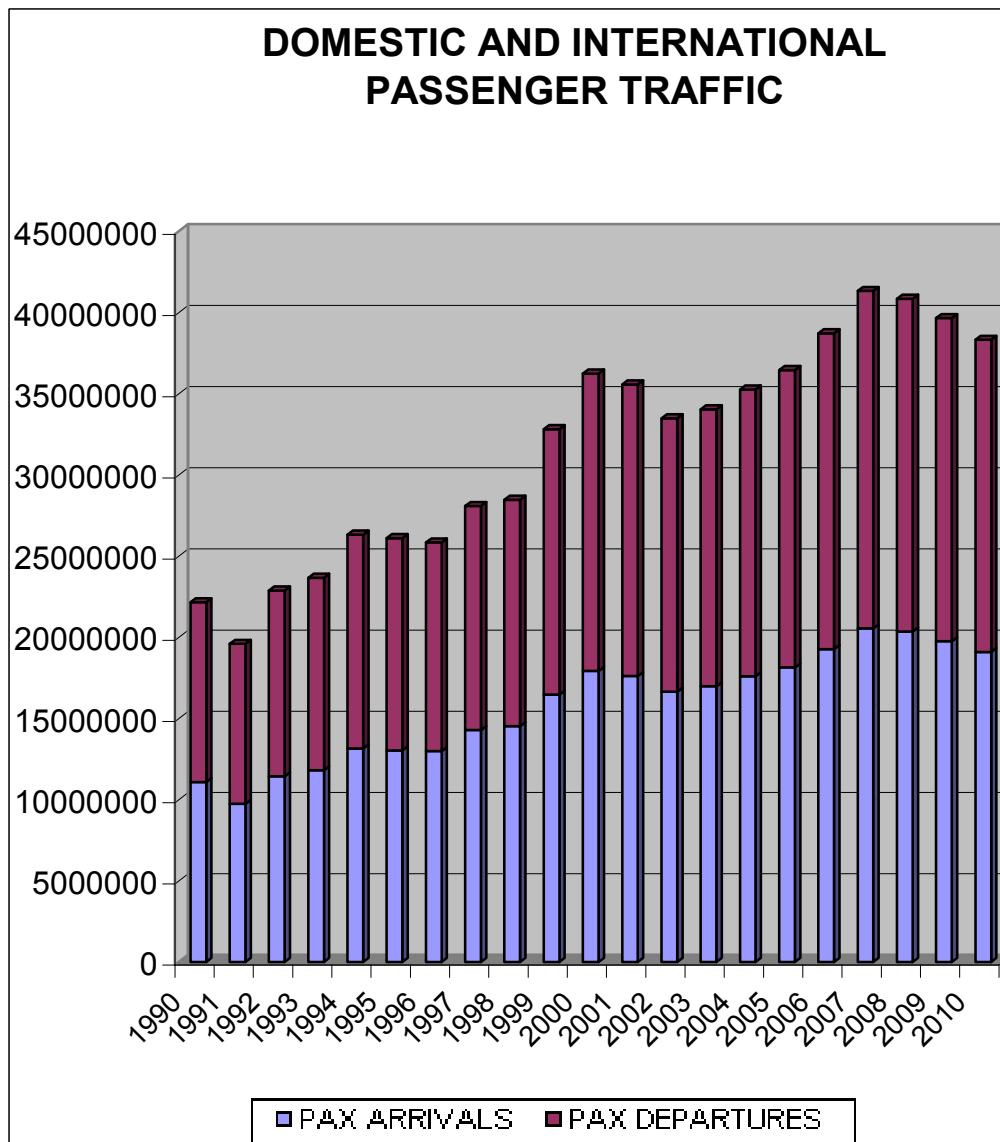


Figure 3. Domestic and International passenger traffic Source: www.ypa.gr

As it was announced from the Hellenic Aviation Society (2006), Greek regional airports lack of current infrastructure. These airports were constructed with money from the state budget and were created on the sense of the lowest expense (Stephanis et al.). They should be modernized in order to correspond in a future increase in demand for air services. More funding should be guaranteed, but the state cannot afford more funding from the state budget.

In this sense was imposed in 1992, the duty of modernization and development of airports. Besides this, Mr. Koutsoudakis on the announcement of the Hellenic Aviation Society (2006) supported the view that regional airports serve a very small number of aircrafts (around 300). The population and the financial standards of the country can support at least 1000 or 1500 aircrafts and this is the only factor that can solve the financial problems of regional airports. Moreover, Adamidis (2008) claimed that regional airports should attract low-cost carriers to use them for direct flights and also intermodal cooperation should be enhanced. A very significant source of funding could be the mere or total privatization of small regional airports, which would improve the operation, but simultaneously may increase the price of the tickets. Recently, the government of Greece under the pressure of the international Monetary Fund suggested a project of privatization for airports in Greece. However, due to the fluid political environment in the period that this thesis is written, it remains unidentified whether this process will proceed or not.

In future terms, small regional airports in Greece could play a major role in the development of the country through tourism growth. In order this to become a reality, there should be adopted a destination management. The potential of each airport should become possible to be served by the potential of each destination. In other words, there are some small islands that are served by only a few flights per week. These flights would increase, provided that the appropriate infrastructure to support successfully the increased number of visitors is available in the region. Also, Skayannis (2008) stated that since Greece has a strategic position in the map of Europe, can play a role of transport hub in the region of Mediterranean. Under this consideration, airports should contract alliances with carriers in order to contribute to their region.

2.7. SUPPORTING POLICIES

The Community, except from looking at the needs of the sector, makes any available effort to secure and enhance all the social and economic impacts, which were

mentioned above, air transport could provide. In this framework, imposes several Regulations and Directives on its member states and on the sector as a whole.

The liberalization of the air transport market, which came into force in 1993 and became a reality on 1997, is considered the most important Community policy in the sector. The European Commission through the “Third Air Package” based on Regulations 2407/92 (OJEU-1992/No L 240/1), 2408/92 (OJEU-1992/No L 240), 2409/92 (OJEU-1992/No L 240/15) created a single market in aviation industry. These policies cover four main areas: market access, capacity control, fares and the issue of operating licenses for companies.

According to Gillen and Niemeier (2006), the central motive of the three air transport market liberalization packages was to limit the further commercial growth of national flag carriers that states were adhered to. When restriction on full cabotage rights disappeared after the opening of the market to all Community carriers, competition in the sector increased rapidly, providing more efficient services and lower prices for the consumers.

However, as Morell (1998) describes, the first few years after the European skies have been completely opened, the dynamics of the market did not change as much as expected. The duopolies of the flag carriers did not get challenged very intensively, and the full flexible fares continued to slowly rise. It was the entrance of the LCC’s carriers in the market, exploiting the Regulation 2409/92, which allowed carriers to set prices freely that changed the sector of aviation in Europe.

As a corollary, deregulation brought a new policy choice to the managers of small regional airports which were empty all the previous years. This choice Barrett (2004) states, is to run the airport as a business despite it being in the public sector. An efficient solution to turn losses into profits is to attract an airline to the airport that would generate traffic and revenues respectively. In the framework of liberalization process, the relationship between airports and airline changed in regional airports.

Moreover, liberalization of the aviation market has had significant implications for the leisure industry (Papatheodorou, 2002). There is no longer distinction like before deregulation between scheduled airlines and charters, as the former can now enter the market of the latter and vice-versa. Apart from this, there are now three players in the leisure market. Low cost carriers are used predominantly from customers who have a great elasticity for price, such as recreational tourists for city-breaks tourism. However, deregulation did not prove beneficial for all destinations. As the competition of airlines was focused on more popular destinations for leisure tourism and national carriers would be eager to continue unprofitable routes, monopolistic prices occurred for the less popular destinations of the periphery. Consequently, divergence between developed and underdeveloped regions intensified.

In an attempt to quantify the benefits of liberalization, Arndt (Arndt, 2004 in Gillen and Niemeier, 2006) showed that for the period of 1989 to 2000 fares fall by 31% to 35%, flights increased by 20% to 54% and consumer surplus rose by 311\$ per passenger in 1999 compared to 1989.

A basic element of the Regulation 2408/92 which proves indisputably the intentions of the Commission for social cohesion and its sensitivity towards remote and unfavorable regions as far as their spatial location is concerned, was the imposition of a “public service obligation” (PSO) in respect of scheduled air services. Many member states have adopted PSO’s in order to guarantee an adequate provision of air services from carriers that otherwise consider them as uneconomical (Greece operates 24 such routes). In a very interesting study that was subsidized by the Association of Greek Tourism Enterprises (Tsartas et al., 2010), is suggested that PSO’s could move one step beyond overcoming the national borders and be implemented in a transnational environment, aiming at the connection of Europe’s regions. The connection between regional airports from different countries could assist the movement of European citizens and enhance leisure tourism. As a matter of fact, the study refers that connections with a particular tourism theme could be created , for example “The Mediterranean island footpath”, which could depart from Pafos and through Siteia (Crete), Aktio (already exist a PSO route) and Catania, reach at Valeta, the capital of Malta.

There are also some pieces of legislation as well as Directives aimed specifically at airports. A Directive covering ground handling (OJEU-1996/No L 272) was made in 1996 which mandated that airports provide access to third parties in the ground handling market. In fact, the European Council with that Directive abolished monopoly practices that previously existed in the ground handling market in every of its Member States, imposing free competition which aims at the provision of more efficient services for the consumer. This forward-looking Directive brought a significant change in the aviation sector, upgrading the quality of services and lowering costs.

Although many regional airports can operate and perform well when sufficient number of passengers are brought in by airlines carrying PSO's, airlines prefer to use more popular airports that can guarantee efficient operation, rapid connections and where they have slots that did not wish to lose. As a consequence, airlines need some incentives to run the risk of opening routes from unknown and untested regional airports. Under this scope, the Commission regulated (OJEU-2001/No 70/2001) based on the articles 87 and 88 of the Treaty to provide state aid temporarily to airlines under certain conditions, in order to create new routes or new schedules from regional airports and to attract the passenger volumes necessary for them to reach a critical mass. Furthermore, some special arrangements relating to the subject of state aid will be accepted for the outermost regions which are penalized by their poor accessibility. However, the use of public funds for the development of airports has been repeatedly contested both by competing airports and by airlines flying to these airports and that led the European Commission to publish a clarification on this issue (OJEU-2005/C 312/01) in order to ensure a level-playing field for airports in Europe. According to ACI (Airports Council International, 2010) the overall assessment of the application of these guidelines is negative. ACI refers characteristically:

These guidelines have failed to provide a clear legal framework for airports to play their role in a competitive aviation industry. Numerous complaints from third parties on alleged state aid have resulted in a heavy workload for the European Commission and a disproportionate administrative burden for airports subject to an investigation by the Commission.

The European Parliament in order to ensure that the development of airports contribute to regional development in terms of sustainable and environmentally friendly development, adopted the Directives 2002/49/EC (OJEU-2002/No L 189/12) and 2002/30/EC (OJEU-2002/No L 085), which established a new scenario in noise management measures and in particular with regard to noise generated by air transport. The Directive 2002/49/EC introduced a common noise indicator for all the activities with the aim of providing a basis for developing Community measures to reduce noise emitted by major sources. The Directive 2002/30/EC represents a further step to try to limit noise in and around EU airports. It poses a serious threat for the growth of airport infrastructure since it establishes routes and procedures regarding the introduction of noise-related operating restrictions at Community airports.

3. THE DEVELOPMENT OF AIRPORTS IN THE DEREGULATED EUROPEAN MARKET

3.1. CURRENT TRENDS FOR REGIONAL AIRPORTS IN THE AVIATION SECTOR

The liberalization of the European aviation market combined with the enlargement of the European Union and in accordance with the regulation policies that are imposed in the market, created new trends in the sector with a number of changes in the organizational and administrative structures of airports, in the relationship between airports and airlines and opened the way for the entrance of new attitudes that create opportunity for profits in a competitive deregulated environment.

According to Skayannis (2008), in this free aviation market, the operation of a regional airport and the role that it would have depends on several factors, such as: a) the policies of airlines and their alliances which rely on b) the preferences of passengers, c) the regional and local policies which are correlated with the European and national policies and d) in some cases national defense matters. Tenekoudis (2001) refers to the trends of passengers' demand in the sector and their incline to gain benefits related to security and economy (both of cost and time) of flights. In particular, the most important factors for customers to use air transport are security of flights, ticket price and punctuality of the routes, while the airport that an airline uses, type of aircrafts or the popularity of the airline are less important factors.

The majority of regional airports is still a public asset, emphasizing on its social contributions, and has two specific characteristics which bring a dissent to the regional and state authorities on how to deal with them. On the one hand, as these types of airports are usually preferred by LCCs, have the ability to contribute to the region, in the way that was mentioned in the previous section. On the other hand, they have efficiency costs because they may split airline and passenger traffic among

airports, which results in higher costs as density economies are not realized, and capacity is underutilized.

As Francis et al. (2004) believe, it is important for airports to reconsider the traditional airport-airline relationship which in the past depended largely on aeronautical charges. Already, since the mid-1990s in various countries around the world, the commercial business model began to replace the traditional public utility modern of airport management. Airports tend to focus more on non-aeronautical revenues and for this reason, they are making efforts to attract LCCs and generate more such revenues by increasing passenger volumes.

In addition, there is an ongoing active interest of private investors in the airport sector. It is also worthwhile to be mentioned, that there appears also to be a change of attitude on the part of the public authorities regarding the contribution of private investment to airport development. The continuing privatization of the airports will produce much diversity in the air transport market of Europe in the future.

Relating to problems that regional airports are confronting, should be referred that, while in many international airports of Europe appears to be capacity congestion, a great number of small regional airports see the airlines that used them to leave for other competitive airports, especially in a period of crisis as it is the current one. Other small regional airports are characterized by significant deficiency of infrastructure and inefficient business operation, as they are administrated by public authorities. As a consequence, these airports do not manage to secure a critical mass of traffic that would make them financially viable.

Furthermore, air traffic that affects airports directly is very vulnerable to an increase in fuel price and in other social threats, such as terrorism. The September 11th attacks resulted in a loss of revenues and profits for airlines for the years that followed and in an increase of costs for more radical security measures in all airports and aircrafts. Consequently, all airlines had negative profits for a period of five years after the attack (2001-2006). Concerning the increase in fuel price, it is estimated that for each

dollar that the price of fuel increases, the total cost in the sector increases for 1,6\$ billion (euro2day, 2012).

Nowadays, the current situation of airports in Europe is the greatest obstacle to the development of air transport. The inability to increase productivity is because the construction and the operation of new airports or the development of existed airports, is a time-consuming and expensive process which needs careful and prompt planning into a political environment that will favor the attraction of funding and guarantee the assignment of the necessary permission by the local and national authorities. The duration and the cost for obtaining the necessary permission for construction, is characterized by the aviation sector as totally excessive.

The investments in infrastructure that had been carried out until today and those that are about to be completed in the near future, are not sufficient to face the major problem of productivity, which exists mostly in the larger airports in Europe. Thus, in 2025 is expected that more than 60 European airports will face significant congestion problems, while in the 20 largest airports, the volume of passengers will exceed the existing capacity for eight to ten hours on a daily basis. This would mean that airports by the year 2020 would not be able to serve more than 3,7 million flights per annum and more than 250 million passengers would be affected. These signs are already visible, as flight delays were doubled from 23% in 2000 to 46% in 2006. The cost of these delays is measured up to € 1,9 billion annually in the EU-27 and if the environmental dimension of delays is considered, the cost will exceed by far € 2 billions (euro2day, 2012).

While today among the ten largest airports four of them are European, with the capacity problems that European airports face, is estimated, that by 2025 none of the European airports would be included among them. Nevertheless, at the same time there are many underused airports across Europe which has proven to be an attractive choice for no frill airlines and their customers. The cooperation of these two sides will have positive effects for both of them and for airports, as congestion at hub airports would be reduced. Barrett (2004) notes that LCCs require a 25 minute turnaround and they may not wish to serve busy airports. Since their passengers are on simple point-

to-point journeys, they require a simple airport product rather than the complexity of the busy hub with several terminals, long walking distances etc. On the other hand, LCCs are widely welcomed from empty airports as they generate non-aeronautical revenues from sources such as catering, retail shopping and car hiring. Therefore, in making deals with low-cost airlines the airports trade off a reduction in aeronautical revenues in return for extra non-aeronautical revenues. Barrett considers this situation a trend for all small regional airports.

Gillen and Neimeier (2006) believe that this strategy may lead to another problem, however, in the long term. The demand for LCCs is not cannibalized from other carriers but is generated from other activities and modes. As LCCs gain larger share in the market, may tend to broaden their business model and turn more directly to business passengers. This will divert demand for airport services to medium airports. The airports in the EU states will certainly gain as a whole, but these are unlikely to be regional or secondary airports. These changes in trends of airports reveal the view formulated in the literature that air transport sector has an intense cyclical character (Dobruszkes, 2006).

3.2. THE LOW – COST CARRIERS

The low-cost carriers which can offer, simultaneously, fares at the charter level and the ease of a scheduled service, appeared in the deregulated European aviation sector in the 1990's. The first low cost airline in Europe was Ryanair which followed the successful example of Southwest Airlines (the biggest low cost airline in the United States) and adopted a strategy of ongoing and rigorous cost reduction translating these savings into lower prices than competitors, growing existing markets through stimulating demand with low prices and developing markets neglected by competitors such as secondary routes or visiting friends and relatives.

According to Dobruszkes (2006), there are three factors that are related with the development of LCCs: a) the demand in air transport sector is connected with economic cycles and has significant fixed costs linked to high level of airplanes

ownership, b) the price of air transport often remains a limiting factor for a large proportion of the population and c) liberalization in the air transport sector allow free creation of new services and can thus encourage the creation of new airlines.

LCCs offer point to point services on short haul routes without baggage service and passengers travel on one class without making a seat reservation. There are no free drinks or meals during the flights and no business lounges at the airport, applying to their conservative strategy towards expenses. The absence of business class and the reduction of space between the seats enable them to have 15% more seats.

What is more, LCCs choose to fly predominantly from regional airports, a decision which enables them higher daily aircraft utilization. Dobruszkes (2006) stated that in 2004, Ryanair and easyjet have flown 11h per day on average, against 9.2 for BA or 7,7 for SN Brussels Airlines because at these airports, the turnaround time is faster. Secondary airports are cheaper, as well. There are lower airport and ground-handling charges, because for these airports the attraction of such airlines is very significant in order to reach a critical mass of passengers. In many cases, LCCs receive an indirect subsidy by local authorities of the region that airports serve, with an advertisement in the enterprise's web site, in order to give them an incentive to use the airport. Such actions have attracted the caution of European Commission, which does not applaud them.

Another characteristic of cutting off costs is the fact that they use a standardized fleet, resulting in lower training costs. Also, as there is no in-flight service, the planes can fly with the minimum number of staff required. As a consequence, labor saving is achieved. As far as marketing is concerned, there is also an advantage that helps to keep costs down. Low cost tickets can mostly be purchased directly via the internet or by telephone, which means no commission has to be paid to an agency.

European Low Fares Airline Association (ELFAA et al, 2007) points out those low cost airlines have significantly contributed to the European economy along with more employment opportunities, more steady tourism markets and creation of new tourism centers. Additionally, LCCs have improved cohesion within the EU, in particularly the connectivity of inaccessible areas and new member states in Europe, and have

enhanced the quality of life for European citizens providing better and cheaper opportunities on employment, tourism and transportation.

As Button and Vega (2008) underlined, low cost airlines have an effect on migration as well. In fact, LCCs have increased more temporary and sequential migration and a long-distance commuting. Since revisits to the home country have been cheaper and thus more frequent, EU citizens tend to migrate more than in the previous years. As a justification is the increasing number of immigrants from Poland to UK and the simultaneous increase of “friends and relatives visits” since Ryanair started routes between the two countries.

As it was written above, LCCs sometimes receive a so-called marketing contribution by the local authorities of the region of airports that are interested in having a low cost carrier basis. LCCs use regions’ advertisements to ask for lower charges. As a corollary, the cities are offered a new way of advertisement to a broad public and the possibility to receive new tourists. Therefore, it can be said that LCCs are an important factor of city marketing campaigns in the tourist policies of regions.

In some cases, the usage of regional airports from LCCs may have some negative benefits for the region and the airport as well. Dennis (2004) supported the view that due to the fact that most regional airports do not have fixed rail links, most of the passengers that come through the airport at the region are hiring private cars affecting the environment and increasing traffic congestion at roads. LCCs have also undermined government efforts to move more long-distance traffic by rail, because of the more frequent use from passengers of air transport towards rail, due to the lower prices that LCCs offer. That explains why in countries with very expensive railway system (Germany), LCCs serve many domestic flights.

3.3. PRIVATIZATION OF AIRPORTS

In most European countries regional airports are still a public asset suitable for promoting economic development. These countries consider that regional airports

have a wider social character, contributing to the society and the local region and thus, they should be developed further through public policies and funding. Therefore, regional airports in many countries, such as Spain, Sweden, Greece, Portugal and Ireland are owned by their states, while Germany's airports (larger ones) are owned by state or local rather than national governments. French regional airports are owned by the central government but are managed by local governments.

On the contrary, in other countries airports have been partially or fully privatized. Airport privatisation gained momentum in the 90's with the first wave of privatisation of Vienna (share of 27%) in 1992, Copenhagen (25%) in 1994, Athens (45%) in 1996, Düsseldorf (50%) and Napples (65%) in 1997, Skavsta Stockholm (90%), Florence (39%), Turin (41%), Hamburg (36%), and Zurich (50%) in 2000 and finally Fraport (29%) in 2001. For the period 2001 – 2006 during the crisis of aviation privatisation process ceased, to resume in 2006 with the privatisation of Brussels, Budapest, Bratislava, Lubeck, Malta and Paris in 2006 (Gillen and Niemeier, 2006). At first larger airports were privatized and as it is evident, the wave of privatisation coincide with the period of liberalization of the aviation market.

The only fully privatized airports are in Great Britain where the ownership belongs to one enterprise, BAA³ PLC, since 1987. Airport of Rome Leonardo Da Vinci has also been fully privatized. If we look beyond European borders, airports in Australia have been fully privatized as well, while in USA and Canada airports have not follow the global trends to fully privatization, remaining under state or local government's ownership. According to Cook, the aim of a government when devolving an airport's ownership might be to reduce dependency on state resources or to expand the airport and increase its catchment area. Other reasons might be the inability of the public sector to attract investments and the efficiency of a private company to focus on customers' requirements and on policy and regulations. Very often the state devolves airports in order to solve urgent financial problems and strengthen its budgets.

³ British Airports Authority

Therefore, as Donnet et al. (2011) argue, governments seek private funding for airport development to achieve regional planning goals, but risk losing the ability to actively coordinate future airport development to fir regional economic development planning. That interprets the fact that very often full privatisation is restricted as the former public owner wants to secure certain political interests by retaining a percentage of the airport, either the minority or the majority. There are many different models to devolve an airport to private investors, such as share flotation or trade sale where the private investor obtains responsibility for airport development and operations forever or for some years only. Other models are concessions, project finance (the case of Athens airport, Eleftherios Venizelos) and management contracts where the public authorities have still the higher influence.

The major effect of privatisation on airports is that they were made more profit oriented. Forbes (2002) believes that privatisation can improve efficiency at airports, particularly in specific areas such as retail operations. Niemeier (2011) adds that the typical private airport in Europe is a partially privatized airport which tries to pursue a wide range of objectives such as regional development, job creation and tourism growth. It is widely accepted that the private for-profit business model more often leads to a further exploration for chances to reduce costs and increase revenues than the public management. In addition, privatisation has introduced to airports new management models and marketing policies directed to serve users with a more customer-oriented approach, and better investment decisions. However, private investments of such a caliber mandate a regulatory environment to secure that consumers are protected and airports do not act as monopolistic powers.

This dissertation studies the contribution of airports to regional development, thus it should focus on the changes that privatisation of an airport may create in terms of regional development. Private enterprises operate based on productivity terms, thus efforts to cut costs are made constantly. A privatized airport may reduce employment rates adopting a more productive management strategy. On the other hand, private investors would be more efficient in developing the airport through attraction of new airlines. As a consequence catalytic impact of airports would be further for the region, balancing any reduction of employment may occurred from the privatisation process.

Moreover, as Bilotkash et al. (2010) argue that the privatisation/aeronautical relationship is complicated due to the fact that many multiple effects are involving and it is very difficult to determine when one effect dominates others. Whether aeronautical charges are increasing or reducing after privatisation of an airport is a very crucial point. In case that aeronautical charges increase, then airlines may increase ticket prices for customers and considering LCCS as they cannot increase the price so easily may decide not to fly from the private airport in the future, affecting the development of the region. The study that is mentioned above proves that privatization tend to lower aeronautical charges, although the issue remains highly debatable as several studies have opposite results and the matter should be further researched .

3.4 AIRPORTS IN A MULTIMODAL TRANSPORT SYSTEM

European air transport system has two distinctive features. The first one is the enormous amount of airports in its hinterland and the second that these airports are connected with and compete with other transport systems and predominantly with a well developed rail-system. The rapid development of the high-speed train (HST) in Europe besides its own contribution to the society it has a great impact on air transport, as well. The railway system can act in a complementary way to large airports, boosting their development, but are also can be a competitive threat for some small regional airports.

For large airports with a respective number of passengers multimodality can increase their catchment area. Airports use the railway system and especially high-speed trains to attract more connecting passengers further from the vicinity that are settled. The bigger the catchment area is, more passengers may decide to use the airport. Additionally, connection with other modes of transport is a crucial point for an airline to decide whether they would use a specific airport. Another benefit for intermodal airports is that can reduce traffic congestion in large airports. Other modes of transport such as a national motorway, or even better a railway system can substitute

the airport for small domestic routes, or diffuse passengers to the nearest secondary airport for long hauls. What is more, multimodality enhances the cargo and freight industry and regions having airports well connected with other modes of transport can be benefited by the establishment in their area of large logistics enterprises.

However, as Chiambaretto (2011) points out that a multimodal transport system, usually trains may not be equally beneficial for small regional airports. In the case that a small regional airport serves domestic or very short-haul flights, the presence of a high speed train may lead to a loss of passengers for the airport. Regional airports serve point to point flights and passengers usually pay a higher price for such routes than connecting ones on a feeder flight. As a consequence the high-speed train is a very good alternative for them as the traveling time is almost the same and the HST is usually cheaper. Except from that the absence of these point to point passengers may force the national carrier to completely cut this route, if it starts to seem unprofitable after a period of time. Chiambaretto (2011) defines that a distance up to 800 km can be estimated as the limit that a passenger may alter from air transport to high-speed train.

It should be made clear that small regional airports may be affected by high-speed train but not from the railway system in general. High speed trains are developed mainly in the central Europe at the moment. In many countries, such as Greece, where HST have not developed yet, the existing railway system cannot substitute the air transport system and it enhances the role of airports, just as the high-speed trains benefit large European airports that described above.

4. THE CASE OF NATIONAL AIRPORT OF NEA ANCHIALOS

4.1. THE FACILITIES AND THE OPERATION OF THE AIRPORT

Nea Anchialos National Airport – as it is the current name of the airport- operated in the existing military airport with a structure of a civil airport since 1965. Located 26 km away from the city of Volos, it is easily accessible via E75 motorway. In the past, the airport linked Volos to Athens by Air, as well as charter flights from many parts of Europe. The airport is used in common with the Hellenic Air Force and due to this fact its location decision may be influenced by national defense matters (Volos Airport, 2012a).

In 2010 a new terminal building was inaugurated. The area of the new terminal building is 8.924,14m² and the total cost of the construction is estimated at €20 million. It includes a ground floor which hosts a waiting room, ten entry and exit gates, a coffee-bar and duty free shops. There is also an upper floor, where the offices of the Civil Aviation Authority are located. There is enough room for a restaurant and more duty free shops to be located. However, the existing retail shops are considered sufficient, taking into consideration the current movement of passengers at the airport. In addition, the same year with the terminal building, it was completed the construction of the new fire station with a size of 492m² and the tidying up of the external side of the terminal building, a surface of 42.000m². Outside the building, there is a car park station (Eustathiou, 2012).

The building installations of NEA Anchialos National Airport include all those essential infrastructures and services that a modern airport needs. There has been special provision for the disabled people who wish to reach the airport. Special ramps are designed to lead to the arrivals and departures room and also to all places of interest, toilets, parking, ticket offices etc. An ATM is installed and there is a plan for a branch office of a bank to be settled as well. Regular airline companies as well as charter flight ones are represented by offices. Nea Anchialos Airport also hosts the offices of rent-a-car companies.

The airport has its own aprons which can host five aircrafts and up to 30 small aircrafts. The runway is the same that the military air force uses and has a length of 2.980 meters. It can serve several types of aircrafts such as Boeing 737, Boeing 727, Boeing 757 and Mac Douglas 83 of 149 passengers (fully loaded). According to Mr. Eustathiou (Eustathiou, 2012), the manager of the airport, a great variety of aircrafts can be served, almost 80% of total aircrafts. The airport control tower belongs to the military and also the air-traffic controllers are employed by the military.

Management Authority of the airport is the Civil Aviation Authority (CAA). The Department for Civil Aviation Authority (DCA) is responsible for regulating, licensing and providing air transport services for all flights within Magnesia and Nea Anchialos Airport, as well as for the management and growth of the Airport, the contracting of bilateral airport agreements with third countries, and providing aeronautical information.

Furthermore, the airport has a new baggage handling system (BHS) installed by Logan Teleflex in 2010. The system has significantly improved customer services at the airport. After the deregulation of handling it has been given to three different companies, Olympic Handling (transport of passengers and catering), Goldair Handling and Swissport (baggage and ramp handling). The handling was given to these companies for seven years after a public competition (Eustathiou, 2012).

Police and Custom services are established also in the airport. As in all airports, the former is in charge of the safety of the airport's inside and surrounding areas, performs regular passport and baggage controls and supervises the department of lost and found. The latter imposes and collects taxes in goods, monitors the safety of merchandises supply chain, imposes prohibitions and restrictions on imports, exports and transit of certain goods and protects health and safety of passengers.

4.2. FLIGHTS AND PASSENGERS TRAFFIC

The airport's peak period of traffic is between April-October every year, as it serves predominantly tourists with several charter or scheduled flights. The rest months of the year are served some charter flights, private flights or even flights from and to hospitals.

The number of passengers the using the airport and also the number of flights served by it were increased without any precedent since 2010 (see table 2 and 3) and especially the last year. This increasing trend is expected to continue in the following years due to two reasons. First of all, the improvement of the infrastructure with the construction of the new terminal upgraded the level of services. Moreover, since 2010 low-cost carriers were attracted to use the airport and offer scheduled flights for the period April-October.

In 2010, there was an agreement between the local authority of the region of Thessaly and two low-cost carriers, Ryanair and Air Berlin to offer scheduled flights. Such agreements are very common between these airlines and regional or secondary, uncogested airports which can provide small turnaround time (25 minutes) and low aeronautical charges in order to increase capacity and attract tourists for their region. The agreement with Ryanair to offer flights to and from Milano (Bergamo), Frankfurt and Brussels (Chalerloi), included an advertisement of Magnesia in the company's web site for the first two years and by 2011 for the region of Thessaly as a tourist destination and also links to websites www.thessalytourism.gr, www.magnesiatourism.gr and www.greekhotels-association.com. For these advertisements some money were paid to Ryanair in a way of an "indirect" subsidy in order to serve the airport. There were also pressures from the local authorities to the Ministry of Transport to deregulate ground handling services and succeeded lower aeronautical prices. A bus connecting the city of Volos with the airport and transfer the passengers of every flight was paid by the region of Thessaly. What is more, Ryanair for such agreements demands usually that there is a car-parking and an adequate terminal infrastructure. Ryanair flies to and from these destinations four times per week, every Sunday, Tuesday, Wednesday and Thursday (Adamaki, 2012).

In a similar way, there was an agreement with Air Berlin in the same year for connections between Nea Anchialos and Nierenberg, Düsseldorf, Hamburg, Berlin. In the case of Air Berlin, the first year the local authorities paid for an advertisement of Magnesia on their board magazines. The second year, when Air Berlin added a flight at Skiathos Island in its schedule there was also a separate advertisement of the islands of Sporades. Air Berlin demanded from the region of Thessaly to implement the promotion of flights. As a result, a group of people representing the local authority visit all places that were flights from the airport to promote Air Berlin's flights, they host tourist operators and journalists at the region and made further advertisement (Adamaki, 2012).

Except from these, there are a variety of other flights to many more destinations, providing international accessibility to the region. Every Saturday, Austrian Airlines connects Thessaly with Vienna. Monarch airlines fly to London and Manchester and every Monday Transavia flies from Anchialos to Amsterdam. In the near future Rae will fly to Geneva once a week. Under consideration remains the connection with Irakleio at Crete through the airline Sky Express (Volos Airport, 2012b).

Every Saturday, a French airline brings tourists at the airport with final destination the Club Mediterranee. The Club Mediterranee is located at Gregolimano area at the north of Euboea. Tourists usually follow the route airport-Rahes by car and Rahes-Gergolimano by boat which is chartered by the Club med and it is 1 hour and 30 minutes long. An alternative choice is the transfer of tourists from the airport to Club Med by helicopter (Skyrgiannis and Skayannis, 2003).

As it is obvious from table 2 and 3 and from the figures 4 and 5, the airport has contributed to the increase of tourism in the region in the last 15 years. Indeed, comparing 1994 to 2011 the passengers using the airport have almost grown ten times. The most significant increase both in flights and passenger was since 2010 due to the attraction of LCCs to the airport and the inauguration of the new terminal building.

However, the increase of passengers has not been steady through time, but it had many fluctuations. The main characteristic for all those years is that arrivals and departures are almost at the same level. That is depicted clearly in figure 4, where the blue line coincides with the purple. It should also be mentioned that there is also a number of transit passengers carried through the airport. This number of passengers is tangibly smaller than the total passengers and intensively is not counted in the total passengers in this dissertation. These passengers usually stay on the same plane or just get off the board to change aircrafts and in real terms do not interact with the local region, as they do not contribute to its financial and social life.

YEAR	ARRIVALS (PASSENGERS)	DEPARTURES (PASSENGERS)	TOTAL PASSENGERS (ARRIVALS+DEPARTURES)	ANNUAL CHANGE (%)
1994	7768	7201	14969	-
1995	12243	12080	24323	62,5%
1996	14803	14689	29492	22%
1997	10138	10142	20280	-31,7%
1998	11668	11927	23595	16,3%
1999	17412	17476	34888	47,9%
2000	22927	22717	45644	30,8%
2001	22668	22787	45455	-0,4%
2002	25013	25673	50686	11,5%
2003	19974	19973	39947	-21,1%
2004	18006	18108	36114	-9,7%
2005	14411	14520	28931	-19,89%
2006	9229	8965	18194	-37,11%
2007	6147	6512	12659	-30,4%
2008	13259	12900	26159	51,6%
2009	13675	12665	26340	0,69%
2010	27186	27364	54550	107%
2011	46420	46154	92574	69,7%

Table 2 : Arrivals and departures of passengers 1994-2011 Source: www.ypa.gr

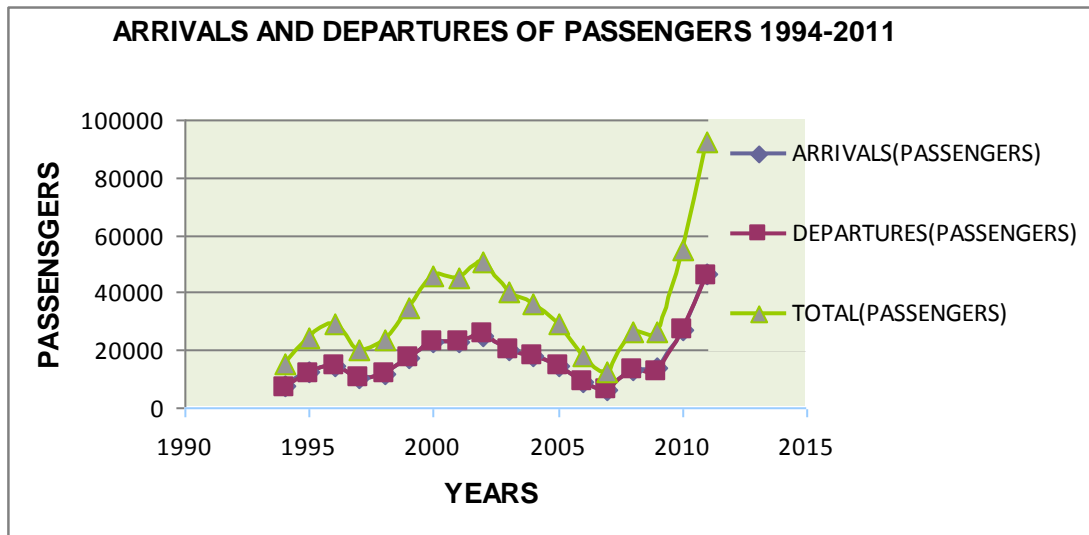


Figure 4. Arrivals and departures of passengers 1994-2011. Source: www.ypa.gr

In general the traffic at National Airport of Nea Anchialos is increasing during the first ten years of its operation, both in terms of passengers that are transferred and in terms of flights that are served. This means that every year the airport improved its operation and increased its popularity and was established as a new mean of transport in the region.

YEAR	FLIGHTS	PASSENGERS PER FLIGHT
1994	152	98
1995	346	70
1996	440	67
1997	339	60
1998	402	59
1999	406	86
2000	529	86
2001	667	68
2002	618	82
2003	622	64
2004	600	60
2005	588	49
2006	236	77
2007	198	64
2008	229	114
2009	302	87
2010	568	96
2011	1018	91

Table 3. Arrivals and departures of aircrafts 1994-2011 Source: www.ypa.gr

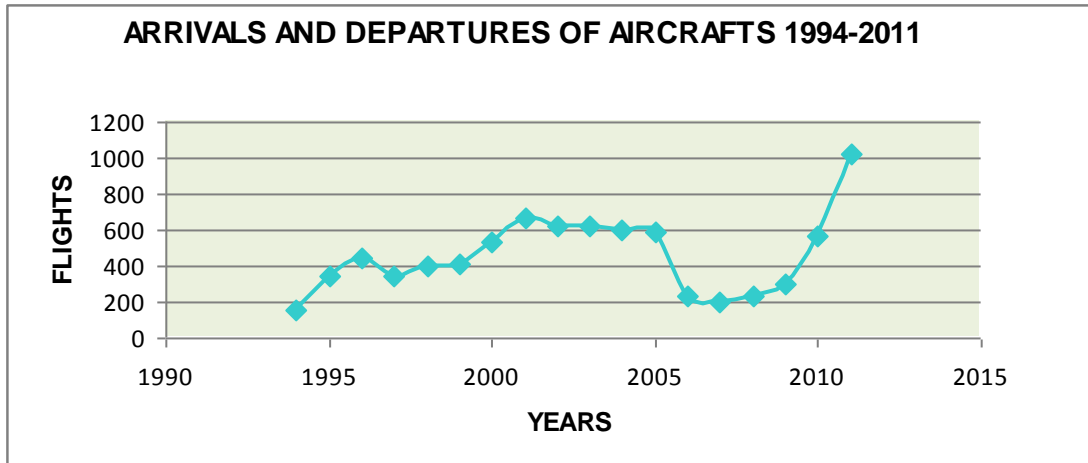


Figure 5. Arrivals and departures of aircrafts 1994-2011. Source: www.ypa.gr

Nevertheless, although the city of Volos was an Olympic city in 2004, there was a recession in traffic in the period 2003-2008. The region did not exploit the popularity gained by the Olympic Games and failed to attract tourism. The number of flights served by the airport is fallen dramatically this period which means that there were not made the appropriate actions by the authorities to promote the region and attract charter flights. This period is also characterized by a global crisis in the aviation sector (2001-2006) due to the 11th September attacks. In 2007, the traffic of passengers was at its lowest price, even lower than the 1994 the first year of its operation. This year was very bad for the whole country in the tourist sector, mainly to the great firebreaks in many regions of Greece during that summer.

4.3. THE VICINITY NEAR THE AIRPORT

National Airport of Nea Anchialos is situated in central Greece in a region characterized by an intensive agricultural productive base of the economy. It is close to Volos (140.000 citizens) and next to city of Larissa (180.000 citizens). The administrative region of Thessaly, where the airport of Anchialos is the only airport, has a population of 730.730 people.

The city of Volos is intersected by the national road of Greece and thus, is included in the areas which are penetrated from the popular “S” development rainbow which offers access to the national and European routes through the Trans-European

network transport system. It is also connected with the national railway of Greece and has a significant port with a passenger and a commercial terminal. The existing infrastructure allows a further development in the activities of the airport, as it expands the catchment area of the airport providing accessibility and proximity with the neighboring regions.

In the region of Thessaly there are a variety of Universities and scientific research centers. Larissa hosts a medical school and a section of biotechnology and in the city of Volos there is a Polytechnic school and a faculty of financial studies. A group of remarkable researching teams have the necessity to travel abroad quite often to participate in congresses and to diffuse knowledge.

The region of Magnesia has a unique natural environment. The mountain Pilio in accordance with a beautiful coastline creates an attractive tourist destination. According to Skayannis (2002) the most appropriate kind of tourism to be developed in the region is the alternative tourism. Therefore the target group of the airport should be environmentally friendly group of people, naturists, who enjoy hiking and who would prefer to stay in traditional rooms. The longest distance (e.g. Platania) is by car at most two hours from the airport. Moreover, about two and a half hours long from the airport is located the famous mountain of Meteora. It can attract thousands of religious tourists from all over the world. The airport of Nea Anchialos is the closest airport at Meteora.

4.4. IMPACTS OF THE AIRPORT TO THE REGION

The ongoing growth of the National Airport of Nea Anchialos has made it to be a very significant source of direct employment for the region. At the moment, for the appropriate operation of the airport and the implementation of flights are employed 13 people at the Civil Aviation Authority and 30-35 people at the companies responsible for the ground handling services. There are also about 15 people representing the police and the Custom service, and many other employees are occupied at the coffee-bar, restaurants, rent-a car companies, parking station, Hellenic Post services etc. The

total direct jobs are estimated at 80-100 people for the period May-October and for the rest months are employed about 20 people at the airport (Eustathiou, 2012).

As it was analyzed in the first section of this dissertation, the direct employment of an airport can trigger more employment at the non-airport area. In fact, it was noted that in the case of Amsterdam Schiphol Airport the multiplier effect of direct employment is 2 and one direct job at the airport can lead to the creation of an indirect and an induced job (Hakfoort et al., 2010). Although that the multiplier effect may not be the same in the case of National Airport of Nea Anchialos, because there is a great difference in the size of the two airports, it should not be ignored that direct employment generate further development for the region.

The most important impact of the airport to the region of Thessaly derives from the predominant use of the airport, which is to promote tourism. The majority of the passengers use the airport for leisure tourism. Therefore, the catalytic impact of the inbound tourism for the airport is less than indisputable. As it has been referred, the catalytic impacts are very difficult to be quantified. However during the interview with the Ex-President of the Prefectural Committee of Tourist Promotion of Magnesia, Mrs Adamaki (Adamaki, 2012) pointed that approximately it is feasible to estimate the economic benefits of the tourism for the region. According to her, it is estimated that every tourist spends approximately 100€ on a daily basis and he/she stays in the region for 7 days average. It is also estimated that the 65% of passengers arriving through the airport are tourists. As a result, with the annual arrivals of passengers depicted in table 2, it can be estimated that for the year 2011, the year with the largest traffic for the airport, the annual turnover from tourism was more than €21 millions. From this turnover according to Mrs. Adamaki (Adamaki, 2012) the 40% is net profit for the region, which means about €8,5 millions were generated at the region from the operation of the airport in 2011.

What is more, the airport and the increase of flights and connections with many different destinations, provide the region with international accessibility. Both local enterprises and individuals can be benefited. On the one hand, enterprises are open to the global market. The existence of a well-operated airport is a priority for many

businesses to establish in the region. The existing enterprises can take advantage of the airport to grow their markets. Supplementary policies are essential for the local authorities in this case. For instance, the expansion of the railway system and the connection of the industrial area of Almyros with the airport will create new perspectives for the enterprises to transfer their products.

On the other hand, individual users are benefited as they have the opportunity to travel through the airport to many different European destinations and broaden their minds. They have the opportunity to meet new cultures and spend their leisure time constructively. Additionally, the region of Thessaly is in the first positions among regions of Greece that its students prefer to study abroad. The airport allows them to visit their relatives more often, strengthening the family relationships. For students who study in the several Universities of the region would be easier to decide spending some time abroad, upgrading their skills and gain new experiences.

4.5. PERSPECTIVES FOR FURTHER GROWTH OF THE AIRPORT

Nowadays, one of the most debatable issues about airports in Greece is their privatization process. Due to the financial problems of the Greek public state, the International Monetary Fund pressures for deregulation in many sectors of the economy, and in the first line is the privatization of airports. Based on the regulation that has put forward the privatization process, which is still under discussion, it is proposed that airports would be assigned at private investors with the majority of the share remaining still at the state. The private investor would have the responsibility for the management, operation and development of the airport.

In a case of privatization, Nea Anchialos airport would face some new challenges. On the one hand, if a private investor takes charge of the management and marketing policy of the airport, as it would be more profit-oriented, there would be better chances for the airport to attract more airlines and add new route destinations. The flights would be increased, thus the airport would have more non-aeronautical revenues (new retail shops may open, increase of traffic at the parking station etc) and

also more tourists would visit the region contributing financially through their spending.

On the contrary, the privatization of the airport may create some unexpected disnormalities in the operation of the airport. Except from the fact that direct employment in the airport may be reduced, due to the effort for increasing productivity from the private investor, also the aeronautical charges for the airlines using the airport would increase. In this case, airlines would transfer the increase to the ticket price, but because LCCs are very cost-sensitive may reconsider about using the airport.

Nevertheless, taking as granted the current situation, in order the airport to grow more, local authorities should continue to pursue new agreements with airlines to increase the volume of passengers that are transferred. The more passengers the airport transfers, economies of scale are created and the airport reduces its marginal costs. Local authorities should continue their efforts and participate in as many international tourist exhibitions as they can. Their presence in such exhibitions with a stand referring to Magnesia would be a very good opportunity to promote tourism in Thessaly, Pilio and its surrounding areas. The last such action was made, in February 2012, where in an exhibition at Moscow a presentation of the region of Thessaly as a tourist destination was exhibited in front of 70 local tourist operators, and now a flight from Russia is under conversations.

In this framework, under the scope that the airport's most important and profitable usage is its relationship with the development of inbound tourism a new tourism governance and a tourism marketing strategy should be adopted. Except from the local authority all the involved persons (private enterprises, local chambers, citizens, University,) should participate in a public forum where planning and assessment of tourist strategy will be under consideration for the common benefit. Under public consultation all disagreements would be diminished and tourism strategy could be more efficient.

After the consultation process, it would be more efficient that a marketing team would be created. This team should be a group of a few people (3-4 persons), who would derive from different groups of interests (from the local authority, the tourist operators and hotel owners and the chamber). It would be a non-profit independent group of people who would undertake all the meetings with possible partners for the airport. They would travel abroad to participate in international exhibitions, such as the “Routes” annual exhibition, and would implement all the tourist and marketing strategy of the region. The region should be promoted as an alternative tourist destination, highlighting the natural footpaths of Pilio, the traditional houses and rooms for tourists and the unique sea shores of the region. This perception will differentiate the tourist product of the region of Thessaly from the common 4S standard Greek destination and will appeal to naturists, mountaineering clubs and ecological organizations.

The image as an alternative destination can be enhanced also by the exploitation of the existing famous Train, which was constructed in 1895 by the father of the famous painter Giorgio de Chirico (Volos info, 2012). This train is connected with culture, history and natural environment of Pilio. It provides a unique view of the natural environment and is considered a monument of industrial architecture. The promotion of this monument with its surrounding material could attract several tourist groups of railway employees from all around Europe as well as students from Technical Universities for a short break trip.

In terms of marketing, it would be very important for the airport to acquire its own name. In the past there were some proposals about this. According to Mrs. Adamaki (Adamaki, 2012) it was proposed firstly to be named “IASON AIRPORT” but it was not implemented. The last proposal was to be named “ACHILLES AIRPORT” but also this is still under conversation. The change of name will assist the airport to acquire its own identity and would also enhance the brand name of the region.

Moreover, Nea Anchialos National Airport should take advantage of the high quality sports facilities that are settled in the region. More specifically, the city of Volos was an Olympic city for 2004 and the duopoly of Volos and Larissa were about to host the

Mediterranean Games in 2013. As a consequence there are the appropriate facilities that allow the region to host remarkable sport activities that would bring some thousands of tourists in the region.

The Panthessaliko stadium has a capacity of around 35.000 spectators and includes a football pitch and a tracking field of Olympic specifications. Respectively, in the city of Larissa there is a new football pitch which can host about 18.000 spectators. It is a pitch of private ownership characterized by the UEFA⁴ with 3 stars, which entails that official international games can be hold. Next to this, there is also a basketball court which can host 5.500 spectators. In the past were held in Larissa in this court official basketball games for the World Championship of young men (1996) and the final four of the European Women Championship (1997). The organization of similar events or even friendly matches of national teams can attract thousands of foreign visitors in the region, through the airport. Since the other facilities existing in the region (there is available transport to and from the stadium and sufficient number of hotels) allow the inflow of these numbers of tourists, such opportunities should be exploited.

⁴ Union of European Football Associations

5. CONCLUSIONS

It has been proved that the airport is closely related to the region that is settled and it can totally alter its image. These two elements are developed proportionately. The development of the former entails the development of the latter. An airport has direct, indirect and induced impact to a region, creating opportunities for new jobs in the vicinity of the airport and in the wider area and contributes to the overall GDP of the region. The most important impacts of the airport however, are the catalytic impacts on other industries and sectors of the economy. The most important of these sectors is the tourism industry. In the case of small regional airports, their main contributions to regional development is the trigger of tourism traffic at the region and are predominantly used for the transfer of tourists to their holiday destinations. Furthermore, airports integrate remote areas and provide social inclusion. Although they might be a source of pollution for the atmosphere there are made impressive efforts and the emissions of aircrafts are reduced significantly. In addition, the liberalization of the aviation market was the most important regulation for the growth of the sector, as competition was enhanced in favour of the consumers.

In such a deregulated environment new trends were formed in the aviation sector. Airports are starting to act more than enterprises rather than a social service, being more profit-oriented and paying more attention to non-aeronautical profits and make efforts to become more productive. These trends allow the boom of low-cost carriers which play a major role for the development of regional airports and thus, regional development. The low-cost carriers prefer to settle in uncogested, secondary, regional airports and through its cost-cutting strategy succeed to operate with a very low cost, which is translated into low price tickets for consumers. As a result, secondary airports are used widely by price-sensitive passengers for leisure purposes and travel through Europe creating unprecedented traffic at regional airports and major benefits to the regions of the airports. The deregulated market resulted also in the privatization of many European airports. The privatization process resulted in the introduction of new management and marketing policies at airports, which means a profit based operation of airports. Finally contrary to large airports small regional airports seem to be threatened by the multimodal transport system for short-haul routes that usually are

served more from regional airports rather than larger airports, as passengers may turn to HST.

Nea Anchialos National Airport has grown significantly in the last two years after an agreement of the local authorities of the region with low-cost carriers to serve the airport. Its operation is based on tourism and at this direction should exploit the natural and unique environment of Magnesia and Pilio which constitutes a different kind of tourism, alternative tourism. It is very crucial that marketing strategies should be implemented in order to attract more airlines and increase its volume of passengers, benefiting more the region financially. Public consultation and coordinated actions by authorized personnel would bring the desirable level of passengers at the airport. Moreover, existing facilities in the region should be exploited and developed more, in order to expand the target group of tourists for the region and create more incentives for them to visit the region.

REFERENCES

Adamidis T. (2008), Air Transportations today and Tomorrow in Greece. Announcement in the congress: “The future of transports in Greece: A route to the performance and the perspectives in the transportation sector in Greece”, Thessaloniki, 5th May 2008

Air Transport action Group (2008), The economic and social benefits of air transport 2008, brochure produced with the kind sponsorship of IATA

Airports Council International (2010), A level playing field for European airports – the need for revised guidelines on State Aid. 16 June 2010

Amoroso S., Caruso L. (2010), Regional airport: study on economic and social profitability. *Int. J. Sus. Dev. Plann.* Vol 5, No2 (2010) 175-184

Barrett S. (2004), Airports and Communities in a Deregulated Market. Trinity College, Economics Department, paper to Hamburg Conference, February 20th 2004

Barrett S. (2004), “How do the demands for airport services differ between full-service carriers and low-cost carriers?” *Journal of Air Transport Management* 10 (2004), pp 33-39

Bilotkash V., Clougherty J., Mueller J., Zhang A. (2010), “Regulation, Privatisation and Airport Charges: Panel Data Evidence from European Airports”. July 15th 2010

Bradbourne P. (2011), Report on the future of regional airports and air services in the EU (2011/2196(INI)). European Parliament, Committee on Transport and Tourism (19.12.2011)

Brathen S., Halpern N. (2011), Impact of airports on regional accessibility and social development. *Journal of Transport Geography*, 19 (2011) 1145-1154

Button K., Taylor S. (2000), International air transportation and economic development. *Journal of Air Transport Management* , 6(4): 209-222

Button K. J., Vega H. (2008), “The effects of Air Transportation on the Movement of Labor, *Geojournal*. January 2008, Volume 71, Issue 1, pp 67-81

Chiambarretto P. (2011), Strategic reactions of regional airports facing the competition of the high-speed train – Lessons from France, Ecole Polytechnique, Paris, France, Working Paper Version – August 2011

Cidell J. (2006), Regional cooperation and the regionalization of air travel in Central New England. *Journal of Transport Geography*, 2006, Vol. 14, No1, pp 23-3, ISSN 0966-6923

Cook G., Airport commercialization and privatisation. Why?, BAE SYSTEMS UK

Costaki J., Regional airports and their development during the years 1946-1990. Problems and geophysical particularities of the Greek territories. Architect-Engineer, ITUA

Debbage K G. (1999), Air transportation and urban-economic restructuring: competitive advantage in the U.S. Carolinas. *Journal of Air Transport Management*, 5(4): 211-221

Dennis N. (2004), Can the European low-cost airline boom continue? Implications for regional airports. Paper presented at the 44th European Congress of European Regional Science Association, 25 – 29 Aug. 2004, Porto, Portugal

Dobruszkes F. (2006), An analysis of European low-cost airlines and their networks, *Journal of Transport Geography* 14 (2006), pp 249-264

Donnet T., Keast R., Walker A. (2011), Fitting Airport Privatisation to Purpose: Aligning Governance, Time and Management Focus, EJTIR, Issue 11(2), April 2011, pp 98-114

European Low Fares Airline Association, Assembly of European Regions & Forum of European Regional Airports (2007), "Social Benefits of Low fares Airlines in Europe".

Feldhoff T. (2002), Japan's regional airports: conflicting national, regional and local interests. Journal of Transport Geography, 2002, Vol. 10, No3, pp 165-175, ISSN 0966-6923

Forbes P. (2002), Airport privatisation – How should airport operators and investors react to changing market conditions?, Association for European Transport 2002

Forsyth P. (2006), Estimating the Costs and Benefits of Regional Airport Subsidies: A Computable General Equilibrium Approach. Department of Economics and Tourism Research Unit Clayton Campus, Monash University, Victoria,, Australia, Sustainable Tourism Cooperative Research Centre, Centre for Tourism Economics and Policy Research. Paper given at German Aviation Research Society Workshop, Amsterdam, June-July 2006

Francis G., Humphreys I., Ison S. (2004), Airports' perspectives on the growth of low-cost airlines and the remodeling of the airport-airline relationship, Tourism Management 25 (2004), pp 507-514

Gillen D., Niemeier H. (2006), "Airports Economics, Policy and Management: The European Union". Comparative Political Economy and Infrastructure Performance: The Case of Airports, Madrid, September 18th and 19th 2006.

Graham B. (1998), Liberalization, regional economic development and the geography of demand for air transport in the European Union. Journal of Transport Geography, 1998, Vol. 6, No2, pp87-104. ISSN 0966-6923

Hakfoort J., Poot T., Rietveld P. (2010), The Regional Economic Impact of an Airport: The Case of Amsterdam Schiphol Airport. CPB The Netherlands Bureau for Economic Policy Analysis, The Hague, Netherlands, (Received April 2000: in revised form January 2001), Online publication date: 18 August 2010

Hellenic Aviation Society (2006), Development of regional airports in Greece, Press release 03/05/2006

Heymann E. (2005), Expansion of regional airports: Misallocation of resources, Deutsche Bank Research, November 18, 2005

Jarach D. (2001), The evolution of airport management practices: towards a multi-point, multi-service, marketing-driven firm, Journal of Air Transport Management, 7 (2001), p.119-125

Kassarda J.D. (2000), Airport-Driven Urban Development. ULI on the future: Cities in the 21st Century, Washington D.C.: Urban Land Institute, pp 32-41

McNamara S. (2011), Airport regions Conference, January 2011, European Regions Airline Association

Morell P. (1998), Air transport liberalization in Europe: The Progress so far. Journal of Air Transportation World Wide, 3 (1)

Niemeier M. (2011), The Challenges of European Airports Policy, FEDEA seminar on Airport Privatisation , 24 May 2011, Madrid

Official Journal of the European Union (OJEU-1992/No L 240/1). Council Regulation (EEC) No 2407/92 of July 23 1992 on licensing of air carriers, (24.08.92)

Official Journal of the European Union (OJEU-1992/No L 240). Council Regulation (EEC) No 2408/92 of July 23 1992 on access for Community air carriers to intra-Community air-routes, (24.08.92), pp 0008-0014

Official Journal of the European Union (OJEU-1992/No L 240/15). Council Directive 96/67/EC of 15 October 1996 on access to the ground handling market at Community airports, (15.10.96), pp 0036-0045

Official Journal of the European Union (OJEU-2002/No L 085). European Parliament Directive and the Council 2002/30/EC of 26 March 2002 on the establishment on rules and procedures with regard to the introduction of noise-related operating restrictions at Community airports, (28.03.2002)

Official Journal of the European Union (OJEU-2002/No L 189/12). European Parliament Directive and the Council 2002/49/EC of 25 June 2002 relating to the assessment and management of environmental noise, (18.07.2002)

Official Journal of the European Union (OJEU-1996/No L 272). Council Regulation (EEC) No 2409/92 of July 23 1992 on fares and rates of air services, (24.08.92)

Official Journal of the European Union (OJEU-2001/No 70/2001). Council Regulation (EC) No 70/2001 of January 12 2001 on the application of Articles 87 and 88 of the EC Treaty to State aid to small to small and medium-sized enterprises, (12.01.2001),

Official Journal of the European Union (OJEU-2005/C 312/01). Communication from the Commission. "Community Guidelines on Financing of Airports and Start-Up Aid to Airlines Departing from Regional Airports" (9.12.2005).

Oxford Economics Forecasting (2006), The Economic Contribution of the Aviation Industry in the UK. October 2006

Papatheodorou A. (2002), Civil aviation regimes and leisure tourism in Europe. *Journal of Air Transport Management*, 8 (2002) pp 381-388

Robertson J. (1995), Airports and economic regeneration. *Journal of Air Transport Management*, Vol.2, No2, pp 81-88, 1995.

Sakris J. (2000), An analysis of the operational efficiency of major airports in the United States. *Journal of Operational Management*, 2000, Vol. 18, No.3, pp 335-351, ISSN 027-6963

Skayannis P. (2002), The planning of tourism, the infrastructure of transport and the environmental protection in the coast areas of Magnesia: Local interests and perspectives. *PLACE*, 18-19, pp 109-128

Skayannis P. (2008), The small regional airports in a transitional period: Challenges and prospects for Greek airports. University of Thessaly

Skyrgiannis H., Skayannis P. (2003), Air Transport and Tourism: the role of the N. Anchialos airport, Department of Planning and Regional Development, University of Thessaly, 9(25) : 567-580, November 2003

Song W., Ma Y. (2006), Hub-and-Spoke System in Air Transportation and its Implications to Regional Economic Development. *Chinese Geographical Science*, 2006, 16(3), pp 211-216

Stephanis B., Profillidis V., Dimitriou D., “Air transport and tourism in main tourist destinations of the Greek islands”, International congress, “Air transportation and airports-Evolution in the 21st century, Democritus University of Thrace

Tapiador F., Mateos A., Marti Henneberg J. (2008), The geographical efficiency of Spain's regional analysis: a quantitative analysis. *Journal of air transport management*, 2008, Vol. 14, No4, pp 205-212. ISSN 0969-6967

Tenekoudis A. (2001), Air transports development and their impact on Greek aerospace business activity, Hellenic Aerospace Industry S.A., 2001

Tsartas P., Papatheodorou A., Lagos D., Sigala M., Christou E., Spilanis I., Staurinoudis T. (2010), The importance of Tourism for Greek Economy-Society and policies proposals for tourism growth. Study subsidized by the Association of Greek Tourism Enterprises

Tsouka D., Balis A., Poulimenakos S., General development policy for Greek airports and financing

Airports Council International (2004). The social and economic impact of Airport's in Europe. York Aviation, 2004, Geneva

Web sites

Athens International Airport Eleftherios Venizelos, www.aia.gr
<http://www.aia.gr/pages.asp?pageid=6&langid=2> {last access : 06.05.2012}

Aviation Benefits beyond Borders, www.aviationbenefitsbeyondborders.org
http://www.aviationbenefitsbeyondborders.org/sites/default/files/pdfs/REGIONAL_ANALYSIS_ABBB_Europe1.pdf {last access: 30.04.2012}

Civil Aviation Authority, www.ypa.gr

- a) <http://www.hcaa.gr/content/index.asp?tid=218&lang=2> {17.04.2012}
- b) <http://www.hcaa.gr/content/index2.asp?lang=2> {17.04,2012}
- c) <http://www.hcaa.gr/content/index.asp?tid=15> {last access 17.04.2012}

Commission of the European Communities (2001), White Paper, European Transport Policy for 2010: time to decide. Brussels 12.09.2001, www.europa.eu
http://ec.europa.eu/transport/strategies/doc/2001_white_paper/lb_com_2001_0370_en.pdf {last access: 01.04.2012}

euro2day, "Saturated capacity in Europe but inefficiency of entrepreneurship management and investments in Greece, www.euro2day.gr
www.euro2day.gr/dm_documents/Press_ALPHA_106_1_Kcfau.doc {last access: 16.05.2012}

International Air Transport Association, www.iata.org,

- a) http://www.iata.org/pressroom/facts_figures/fact_sheets/pages/economic-social-benefits.aspx {last access: 28.04.2012}
- b) http://www.iata.org/pressroom/facts_figures/fact_sheets/Pages/environment.aspx {last access : 28.04.2012}

Volos Airport, www.volosairport.gr

- a) <http://www.volosairport.gr/en/About-us.html> {last access 28.05.2012}
- b) <http://www.volosairport.gr/en/All-Flights.html> {last access 28.05.2012}

Volos Info, www.volosinfo.gr

<http://www.volosinfo.gr/el/h-perioxh/trenaki-piliou> {last access 05.06.2012}

World Travel and Tourism Council (2012), Travel and Tourism, Economic Impact 2012, Europe. The Authority on World Travel and Tourism. www.wttc.org
http://www.wttc.org/site_media/uploads/downloads/europe2012.pdf {last access: 05.05.2012}

INTERVIEWS

Adamaki E. (Ex-President of the Prefectural Committee of Tourist Promotion of Magnesia) (2012), Interview about the development of National Airport of Nea Anchialos, via telephone and e-mail, May 2012

Eustathiou K. (Manager of Nea Anchialos National Airport) (2012), Interview about the operation of National Airport of Nea Anchialos, at his office at the airport. Nea Anchialos, Volos, May 2012