

## **FUNDING AND INVESTMENTS FOR TOURISM DEVELOPMENT: AIR TRANSPORT SERVICES IN PAROS ISLAND**

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### **ABSTRACT**

Tourism development in a destination may be achieved under specific conditions and circumstances which include sufficient destination accessibility and connectivity. This paper aims to highlight the contribution of funding and investments for tourism development related to the destination's transport infrastructure focusing on air services. Paros Island is the study case since it presents high interest due to recent funding and investments actions towards air transport sector. More specifically, Public Service Obligation (PSO) route Athens-Paros and local airport expansion, partially funded by the private sector investment action, are of high interest. Research methodology includes a secondary research of passenger traffic and hotel beds. Moreover, a primary research has been undertaken with personal interviews of tourism stakeholders of Paros Island regarding funding and investments on air services and destination's tourism development. Findings indicate that indeed air traffic flows have been significantly increased and so does tourism figures of the island.

### **KEYWORDS**

Funding, investments, air services, tourism development, Public Service Obligation, airport

## **1. INTRODUCTION**

Accessibility is strongly affecting the tourism development in a destination. Air transport has now reached regions characterized by discontinuity and the governments are aware of the importance of air services for a destination as a basic requirement towards its tourism development. Thus, there are funding released to ensure and support air connectivity, for example Public Service Obligation form of subsidizing regular air services (Hromadka, 2017). A holiday package requires transport time and cost. Thus, the generalized transport cost influences the choice of the transport mode. Air transport liberalization has led in the yield drop and thus, air transport is now more attractive than ever to the tourists. Consequently, the tourism development in a destination depends on the sufficient transport infrastructure, while destination expansion in international markets requires an airport able to serve such operations, i.e. an international airport (Prideaux, 1999).

The aim of this paper is to highlight the importance of accessibility to the islands, especially when it is ensured by funding and investments by the state governments and private sector in favor of social welfare, tourism and economic development. In Greece, the last contest for the Public Service Obligation routes included a significant change in the operational context of eight out of twenty eight air routes, including Paros Island that has been classified by Hellenic Civil Aviation Authority under the new PSO regime (more than one operator) that along with airport infrastructure improvement, co-funded by the state and private sector (runway extension and terminal expansion along with better services offered) have led to passenger traffic increase. Therefore, the new air transport environment of Paros is being investigated to examine its contribution to the island's tourism development.

In this context, this paper aims to investigate the case of Paros Island, which is a popular tourism destination that was accessible by ferry and limited serviceable by air until 2016, when above changes have been made in terms of funding and investments on the island's air services, so that is an exceptional paradigm to relate them with tourism development. Initially, literature review section develops funding and investments, air transport interrelation with tourism development and the framework of Public Service Obligations routes. Research methodology section develops the steps followed by the authors to conduct this study and end up in its findings and results. Summary of findings indicate that the research hypothesis is valid for the case of Paros. Finally, in the conclusion section, apart from the evident contribution of funding and investment in air services towards tourism development, the over-tourism threat is highlighted for Paros Island and thus, it is proposed for further research.

## **2. LITERATURE REVIEW**

### *2.1 Funding and Investments*

Funding is defined as the money given by a government or organization for an event or activity or for a particular purpose. In other words, funding is the act of providing financial resources, usually the form of money, or other values such as effort or time, to finance a need, a program or a project, usually by an organization or company. On the other hand, investments are defined as the action or process of investing money for profit. An investment is an asset or item that is purchased with the hope that it will generate income or appreciate in the future. More specifically, investing is the act of allocating funds to an asset or committing capital to an endeavor (a business, project, real estate etc.), with the expectation of generating an income or profit. In colloquial terms, investing can also mean putting in time or effort –not just money- into something with a long-term benefit.

There are several governmental bodies to fund actions or projects among member states of the EU in favor of social welfare or economic development. In Greece, General Secretariat for Investments and Development (NSRF) includes the Public Investments Program. As Public Investments are all the fixed and intangible investment activities of the State, which, in the context of the investment and economic development policy in general, aim to redistribute national income for the benefit of the society. The Public Investment Program is the country's most important development policy tool contributing to further convergence of regions, strengthening social cohesion through targeted actions and interventions to stimulate active demand, promoting sustainable development, enhancing employment, enhancing economic and social justice and supporting competitiveness. Investments included in the Public Investment Program and their expenditure are covered by the Public Investment Budget and concern –among others- constructions, reconstructions and expansions of installations or projects (NSRF, 2019).

### *2.2 Funding and Investments for Tourism Development*

Tourism is an important sector of economy and its development is heavily related to the funding and investments on the fundamental aspects of tourism industry. Hospitality, transportation, promotion and distribution often need to be funded by public and private sectors in order to ensure quality of tourism products or services offered by the destinations. Investments on information and communications technology, infrastructure, education and energy may prove necessary for the future of tourism sector in continuously changing and high demanding consumption patterns. In the Guide on EU Funding for the Tourism Sector

(2014-2020), European Commission has released the types of support to the member states via several direct and indirect funding schemes, such as European Fund for Strategic Investments (EFSI), European Regional Development Fund (ERDF), Horizon, Employment and Social Innovation (EASI) among others, highlighting the tourism related actions eligible for funding, defining the ability of application and the level of funding and illustrating examples of selected projects. Especially, when it comes to EFSI, strategic infrastructure including digital (investment platforms dedicated to tourism), energy (energy efficiency of hotels and tourism resorts) and transport (travel infrastructures such as regional airports and ports) may be supported by such funding scheme (European Commission, 2016). In particular, the latter is indeed considered as very significant to the tourism development of a destination since it is highly related to its accessibility degree since destination's connectivity and tourism mobility is heavily dependent on it. Admittedly, air transport is the favorite transport mode for international tourism, since in 2017 the 57% of inbound tourists has been arrived in the destinations by air (Lock, 2019), while the increase of international tourist arrivals in 2018 is partially driven from improved air connectivity (UNWTO, 2019). Undoubtedly, air transport contributes to tourism development and reasonably, member states invest to the optimization of air transport networks via EU or national funds.

### *2.3 The contribution of Air Transport to Tourism Development*

Mobility entails overcoming a distance from the origin to the destination requires time and cost. Thus, accessibility can be measured as the time and the cost an individual need to spend to access a destination. Economic geographers advocate the significance of the accessibility degree for a place towards its economic development and abundance. Being part of a transport hub-and-spoke network that ensures accessibility to a city or town is essential for the economic activity of a place as very significant due to enormous consequences for its economic prosperity (Poulaki and Papatheodorou, 2011; Ayoama et al., 2011).

On the other hand, according to International Civil Aviation Organization (ICAO, 2019) connectivity is based in the concept where "movement of passengers, mail and cargo involving the minimum of transit points which makes the trip as short as possible with optimal user satisfaction at the minimum price possible". Air transport connectivity is a catalyst to the economic development (ICAO, 2015), the employment, the trade and the mobility in Europe. Therefore, European Union aims to ensure connectivity of its remote regions with urban centers in each country. Local economies of remote regions are more attractive to business activity when they enjoy sufficient connectivity and mobility expansion. A good means of

tackling this problem is the imposition of a public service obligation (PSO) that ensures the interconnection between Europe's outermost regions and urban centers (Hromadka, 2017).

Accessibility depends on various factors in addition to the availability of transport modes and related infrastructure such as frequency of services and fare levels. (Papatheodorou 2002). Increased levels of accessibility may enhance the tourism flows that lead local governments to implement tourism development strategies that usually include transport infrastructure improvement or even construction. On the other hand, when the demand for a tourist destination increases, current infrastructure should be improved to meet it and enhance destination competitiveness (Crouch, 2011). Crouch and Ritchie (1999) advocate that the success of tourism is intertwined with the performance of sectors such as transportation, contributing to the prosperity and quality of life of the local community too. Consequently, air transport may prove very significant for the tourism development in a destination and for this reason governments ensure funding schemes to facilitate air transport services in regions with low accessibility degree. Besides, after air transport liberalization, low cost carriers penetration were characterized as market generators for many undiscovered destinations due to new routes launched by them with low fare availability (Pender and Baum, 2000). Facilitating accessibility of a tourist destination results in its development. Areas characterized by geographic discontinuity and deprived of infrastructure are subject to Public Service Obligation (PSO) regime in order the state government to ensure, via subsidies, the potential of transferring passengers to and from urban areas. This is a global practice and is frequently met in the literature, mainly regarding the islands, where traffic experiences an increase generating so from local residents' transfers, as from tourists that tend to explore accessible destinations. Consequently, air transport contribution to tourism development is obvious in such destinations.

#### *2.4 The Public Service Obligation Regime*

A public service obligation hereinafter referred to as a PSO is defined as "a form of service of general interest in which a State may subsidize (fund) a service to ensure adequate provision of scheduled air services to a regional or developing region or to any regional airport considered vital for economic development but it is not commercially viable" (Hromadka, 2017: 6). The state intervenes, with the obligation of public service, a form of state funding intended to ensure for these services the determination of regular air service, with continuity and pricing or minimum capacity. In Europe, Public Service Obligations (PSOs) is a documented policy

(concerning services, frequencies, scheduling and fares) aiming to provide air connectivity to places that under normal circumstances would have lacked them (Fageda et al., 2018).

European PSO routes are characterized by high heterogeneity and discretionary criteria among countries in terms of subsidization and market protection. In order not to affect competition (Merkert and Williams, 2010), public service obligations in the EU are allowed only under very specific conditions laid down in Articles 16-18 of the Air Service Regulation (European Commission, 2008) No. 1008/2008 concerning the rules for the operation of airline services in the community.

Public Service Obligations are developed within the legal framework of the European Union. In practice, however, the choice of reserved routes, the decision on the amount of subsidies, the fixing of fares and levels of service, etc. is done by national governments of Member states (European Commission, 2019). A variety of policies have been implemented to support airline services on non-viable routes. Although they share a similar philosophy they have remarkable differences and implications from a public policy perspective, so according to Fageda et al., (2018) grouped these policies into specific categories: a. Route based funding policy, b. Passenger based funding policy, c. Airline based funding policy and d. Airport based funding policy.

In Greece, Public Service Obligation regime concerns route based policy, where the national government via the ministry of transport and Hellenic Civil Aviation Authority subsidize 28 routes upon airline bidding contest, following Commission's criteria on non-viable air connections that need to be operated for social welfare and economic development (European Commission, 2017). However, such markets are protected by the entrance of other carriers during the contract time, since the air carriers bidding to operate the routes.

### **3. EMPIRICAL CONTRIBUTION**

#### *3.1 Paros as a study case*

Paros is the third largest among Cyclades Islands complex located in the center of the Aegean Sea, with area of almost 200 square kilometers and 120 kilometers coastline. As a tourism destination, Paros is very popular, not only due to the beautiful beaches but also due to marvelous sightseeing. Regarding Paros transport system, a sufficient road network ensures accessibility across the island, a port located in Parikia -the capital of the island, which offers

ferry connections to Piraeus, the Greek main port close to Athens, and to Lavrio in the southeastern Attica region. Paros also has a local national airport. Before the summer of 2016, the runway was the shortest one in Greece with 800 meters length, i.e. only specific aircraft type could operate there. More specifically, small turboprops of less than 50 seats connected Paros with Athens International Airport. For this reason route was not considered as viable since airline operations used to be extremely limited and given the tourism demand of the island, air services were considered to be insufficient to meet it and the flights that connect Paros with Athens are under Public Service Obligation regime usually operated by the fleet of Olympic Air as the appropriate one for the airport's restrictions in payload. Therefore, in July 2016 the effort of expanding air transport system in Paros was completed. It started in 2012 and its budget reached 15.2 million Euros (Naftemporiki, 2016). Project completion was achieved in two main axes. Initially, local airport was expanded with funding coming from the state through the Public Investment Program (HCAA, 2016) and partially from the private sector investments (Olympic Air - Aegean Airlines' subsidy). Further to the improvement of the airport (no longer such payload restrictions), in the last PSO contest in July 2016 as well, 8 among 28 PSO routes had been handled differently to be operated by two or even more airlines if the financial compensation was null, i.e. without being funded but under the market protection of PSO regime, when the annual funding used to be more than 4 million Euros (HCAA, 2016). Thus, the route is now being served by two airlines that operate with bigger aircraft types due to longer runway. International commercial flights have been launched as well. Consequently, Paros Island is now more accessible by air and arrivals have been increased. For these reasons, Paros is an exceptional paradigm to be investigated in terms of funding and investments in air services towards tourism development.

### *3.2 Methodology*

Empirical methodology includes an extended secondary research data analysis with regards to passenger traffic evolution and seasonality, accommodation units and beds annual change. Data has been collected from various sources. Furthermore a primary research is undertaken and concerns personal interviews with representatives of bodies and institutions involved in tourism and air transport of Paros Island, to extract qualitative data, developed via open-ended questions on air transport latest changes in Paros Island and their contribution to the destination tourism development, adjusted each time to each representative. Interviews were further supported by open discussion on the research hypothesis, since each participant, apart from their point of view, developed additional information based on the institution they represented. Furthermore, secondary data were extracted from the websites of tourism

institutions such as INSETE, Hotel Chamber of Hotels, Hellenic Statistical Authority etc.) as well as from the Hellenic Civil Aviation Authority where, after personal contact, the information on Paros airport improvements were provided along with passenger traffic statistics.

Regarding interviews, representatives participated in the research were:

- a. the President of Paros' Municipality Tourism Committee
- b. the Head of Network Planning and Scheduling of Aegean Airlines
- c. the Airport Manager of Paros National Airport
- d. the President of Paros' Hotel Association

An effort to access Sky Express, the other airline that operates Athens-Paros PSO route, was made but without response. Admittedly, the participants covered all aspects of the research hypothesis providing with insights the issue of funding and investments for tourism development focusing on air services.

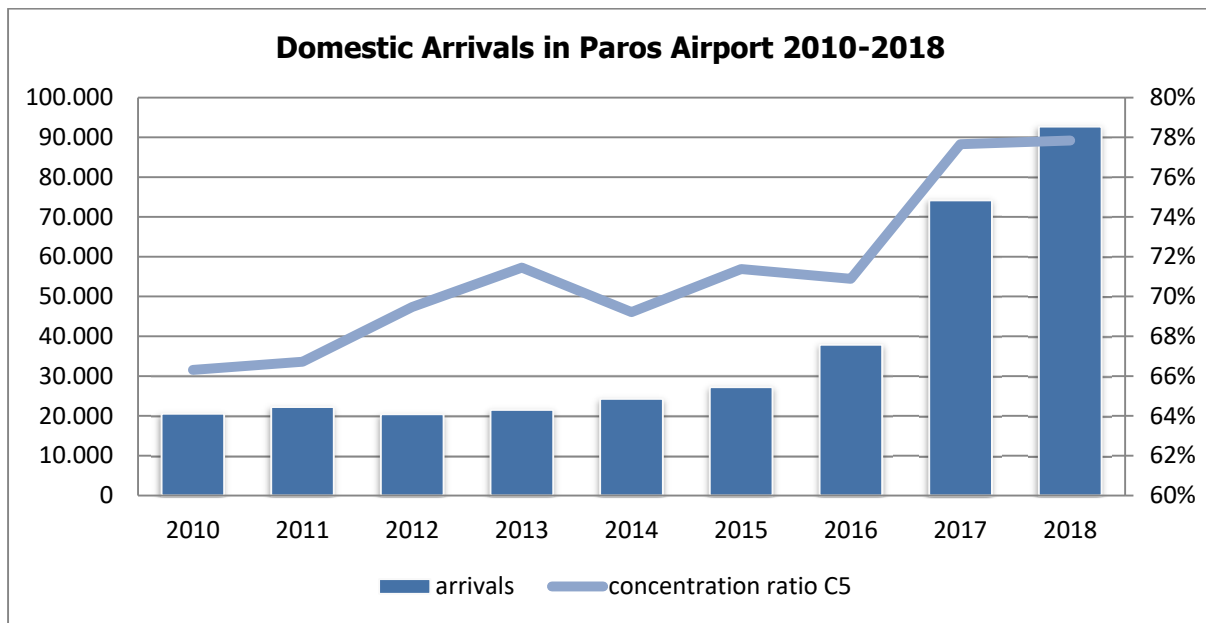
#### **4. SUMMARY OF FINDINGS**

##### *4.1 Quantitative Data Analysis*

Figure 1 indicates that since 2016 there is a significant increase in domestic passenger traffic. Given that improved airport infrastructure was released by July 2016 as well as the changes in PSO regime of route Athens-Paros by then, reasonably such increase is lower for this year (half period). On the other hand, full years 2017 and 2018 highlight the contribution of the evolution in air transport services of Paros Island. More specifically, in 2017 the domestic passenger traffic has been doubled compared to the previous year, while in 2018 the increase reached the 25%. Additionally, as per Figure 2, international passenger traffic started to appear in Paros National Airport by 2017, that such operations were enabled, contributing with more than 1500 passengers, while such figure was doubled in 2018. Thus, the expectations of both flows (domestic and international passengers) are high for the future of tourism in Paros. It is worth mentioning that concentration ratio C5, ie traffic concentration in months May-September has been dramatically increased lately, indicating that the traffic difference in 2017 and 2018 concerns mainly leisure tourism activity.



**Figure 1.** Domestic Arrivals in Paros National Airport 2010-2018



Source: Hellenic Civil Aviation Authority, 2019 – processed by authors

**Figure 2.** International Arrivals in Paros National Airport 2010-2018

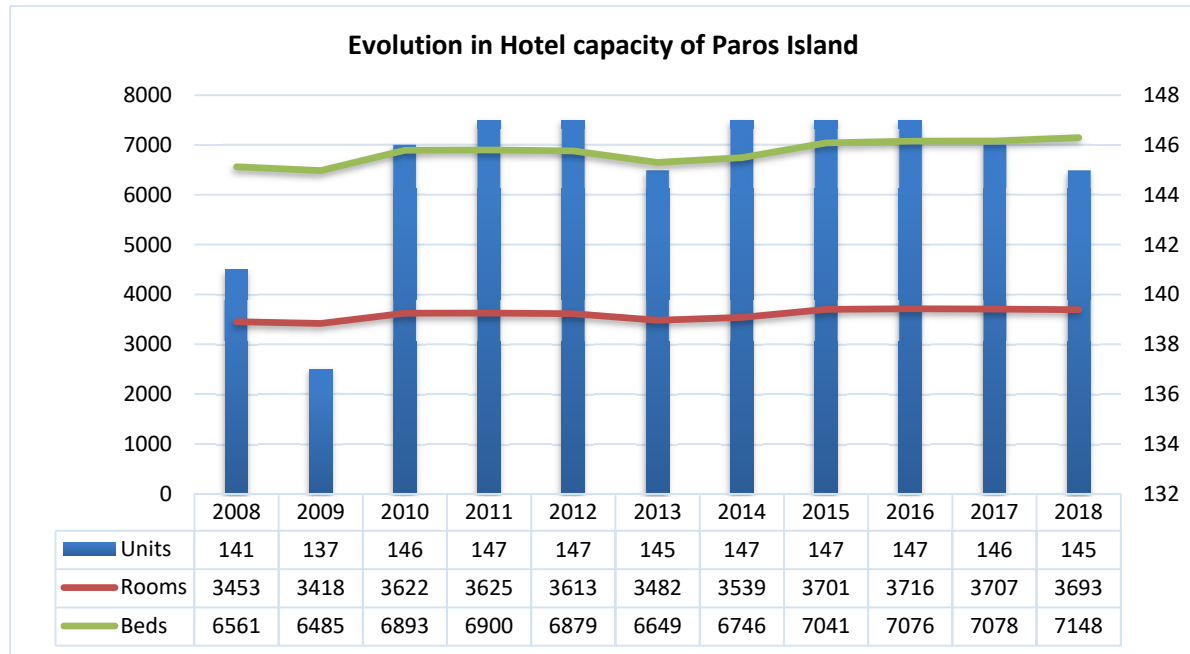


Source: Hellenic Civil Aviation Authority, 2019 – processed by authors

Interestingly, hotel capacity in Paros Island has been differentiated for the period 2016-2018, when the air passenger traffic has been dramatically increased (Figure 3). However, this is not happening for the rooms to let capacity that has been increased by 26% in terms of beds (Figure 4). It seems that the booming in tourism flows has led to this direction, following the trend of the latest years where many underutilized private properties have been transformed

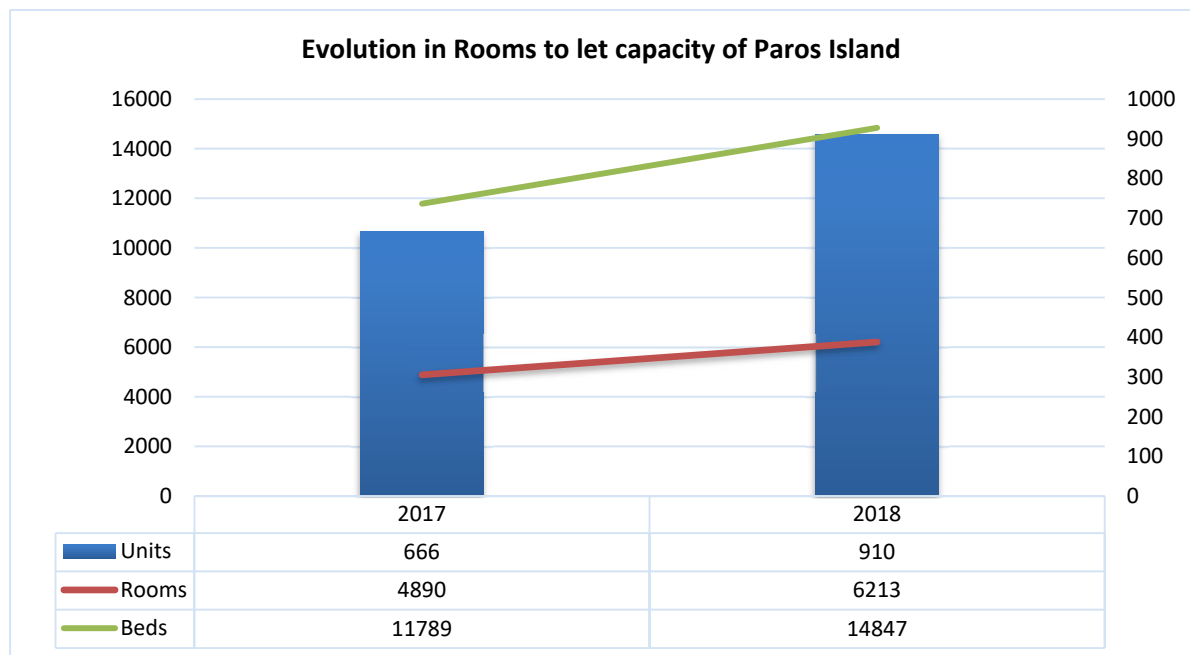
into accommodation units to meet the tourist demand in urban centers and tourist destinations.

**Figure 3.** Evolution in Hotel capacity of Paros Island 2008-2018



Source: Hellenic Chamber of Hotels, 2019 – processed by authors

**Figure 4.** Evolution in Rooms to let capacity of Paros Island 2017-2018



Source: Register of Tourism Enterprises, 2019 – processed by authors

## *4.2 Qualitative Data Analysis*

### *Interview with the President of Paros' Municipality Tourism Committee*

The President of Paros Municipality Tourism Committee was referred to airport's further expansion when it comes to runway (initially 1800 and later 2200 square meters) and terminal station, highlighting that international flights require custom services which have not yet been implemented in Paros national airport but there is a plan for it. Moreover, he stated that Paros' Municipality has conducted an environmental study related to airport operations and expansion to limit the effect towards the island and its residents. Regarding Athens-Paros PSO route, he argued that as long as the airport permits limited operations in terms of capacity, tourism is not particularly enhanced solely by it. However, after airport's expansion arrivals have been significantly increased, while the expectations are even more optimistic with current situation in air services to permit a more intensive promotion of Paros as a tourism destination in national and international tourism related exhibitions. Finally, the President of Paros' Municipality Tourism Committee stated that indeed, there are additional infrastructure projects that need to accompany such tourism figures' increase. Some of them have already started and other have been planned to, concerning mainly port infrastructure improvements, water infrastructure, waste management that will help to rebuild and protect the existing ecosystem and to upgrading and further development and competitiveness of the island of Paros, and will improve the day-to-day and quality of life of the island's residents and visitors.

### *Interview with the Head of Network Planning and Scheduling of Aegean Airlines*

Paros airport improvement have been partially funded by private sector upon initiative of Olympic Air, which have been operating for many years the route Athens-Paros with small turboprops, aiming to expedite capacity increase for the summer season of 2017. Hellenic Ministry of Transport approved the fund and Olympic Air contributed to the first phase of passenger terminal as well as to the surrounding area of the airport. In question regarding Olympic Air's potential funding for other airports, the Head of Network Planning and Scheduling stated that at the moment there are no plans for such action but due to the strong sense of responsibility towards airline's passengers and Greek people as the major carrier in Greece, Olympic Air would not hesitate to repeat it. Moreover, in the crucial question of the research regarding the contribution of PSO route towards tourism development of the island, he argued that such context assures the minimum service an airline should offer as it initially serves local residents optimizing their accessibility to the urban centers contributing in the economic and social development, while it mitigates seasonality phenomenon in tourism destinations. Olympic Air serves fifteen PSO routes and the Head of its Network Planning and

Scheduling stated that the subsidy does not cover the real operational cost of the route. However, for the case of the islands with payload restrictions due to small runways, it is evident that the fewer seats an airplane has, the higher cost per available seat kilometer (CASK) for the airline. Nonetheless, PSO routes are quite significant in an airline's network due to hub and spoke system efficiency optimization.

*Interview with the Airport Manager of Paros National Airport*

The most responsible for the new airport of Paros, its manager, stated that the changes in the infrastructure concern mainly the bigger aircraft type that may operate in the island. That does not mean only more people and more tourists but also less flight cancellations due to weather conditions which are equally very important. Moreover, regarding the changes in the PSO regime, he argued that competition has led to fare drop and more frequencies even for the winter season, while currently there is business activity in the airport (airline offices, car rentals, ground handling companies, restaurants and this is predicted to be enhanced in the future. General Aviation is also more active since the airport schedule has been extended. Nevertheless, a twenty four hour operation needs to be done including terminal and runway further expansion, customs and passport control. Paros airport manager advocates that PSO regime has contributed to the tourism development of all routes involved as initially it benefits the local residents. The change of this regime has definitely led to the enormous traffic increase with future potentials.

*Interview with the President of Paros' Hotel Association*

According to the President of Paros' Hotel Association, airport expansion enhanced the international profile of the island when it comes to the tourism markets of Europe. Despite the mode of transport when accessing Paros, income flows have been increased due to the internationalization of the island by the new airport infrastructure. However, runway and terminal expansion are required for the future, while customs and ground handling services should operate to substantially accept international flights. He stated that indeed the contribution of the changes in air services of Paros island have contributed to the tourist traffic increase which is obvious mainly from May to September. Hotel capacity has also been increased with a new big five-star hotel unit to operate in June 2019. Nonetheless, he postulated that further tourism development requires additional infrastructure projects like new accommodation units. Peak period is characterized by issues regarding water supply, drainage system, road network and port congestion and there is a need for project to facilitate the hospitality for the increased number of tourists on the island. It is important, however,

that there are accommodation units not certified for their quality with the deadline to breathe out by the end of 2019. The president of Paros hotel association finds seasonality extension more feasible now with improved local airport, highlighting the need for an integrated cooperation between the responsible institutions of the island towards sustainable tourism development and natural resources protection from over-tourism. He finally stated that Paros Island as a destination is targeting higher education and income level of tourists and for this reason, alternative forms of tourism such as religious tourism and gastronomic tourism, among others, are also being developed aiming to extend the tourist season.

## **5. CONCLUSIONS**

The development of a tourist destination is heavily affected by a wide range of factors that differentiate the supply and influence the demand that depend on the continuous changes in consumption patterns. The air transport sector is a prerequisite for the very existence of the tourism industry and its development. Therefore, funding and investment schemes are provided towards air transport services enhancement to increase accessibility degree of tourist destinations.

As far as the island of Paros is concerned, Public Service Obligations funding scheme by the European Union has benefited the island ensuring air connectivity of the Island in an evolving regime in favor of service optimization to meet the high tourist demand before and after the airport's expansion upon investment actions by Public Investment Program and private sector (Olympic Air) as well that permitted the airline operations without payload restrictions and bigger aircraft types. Consequently, domestic traffic has significantly increased, and international traffic appeared in Paros National Airport. Private sector investment has been driven by the increased demand for the popular tourist destination that may be translated to higher connectivity flows in the Aegean Airlines –Olympic Air hub-and-spoke network. Admittedly, funding and investments in air services of Paros Island has contributed to the tourism development of the destination as quantitative data analysis has shown, with rooms-to-let capacity to have been significantly increased.

Nonetheless, it is generally accepted by all interviewees that the island in its peak months with existing infrastructure cannot accommodate more visitors. As mentioned in the qualitative data analysis, peak period is characterized by issues regarding water supply, drainage system, road network and port congestion and there is a need for project to facilitate the hospitality

for the increased number of tourists on the island, especially upon the airport expansion. Once the above projects are done Paros Island, as a tourist destination will be able to expand into new markets without dealing with the threat of over-tourism having significant potential for further development and, at the same time, the character of the island along with the quality of life of the inhabitants will not be altered. Furthermore, the projects that are or will be implemented are based on and are part of the strategic plan of the Municipality of Paros for the sustainable development of the island with the aim of improving the quality of life of the islanders taking advantage of the existing financial opportunities.

Paros is a popular tourist destination with high quality of tourist product provided. It covers a wide range of requirements for visitors whether they want a quiet family holiday or a vacation with intense fun and nightlife. Alternative forms of tourism such as religious tourism and gastronomic tourism, among others, are also being developed aiming to extend the tourist season. Suggested further research concerns 2019 as a key year to compare with previous ones, in terms of hotel capacity, as it is expected to experience an increase. Moreover, it would be essential to study if the carrying capacity of the island is exceeded in peak period, following destination life cycle concept.

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