

TRANSPORT FOR TOURISM: A REVIEW OF PRACTICES AND A ROADMAP FOR POLICYMAKERS

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The development of transport infrastructure is a prerequisite and a fundamental factor in tourism sector growth, as without the variety of transport means (i.e. tourist transport by air, by water, on land) and modes (i.e. mass transportation, independent means of travel) tourism industry would not be able to exist. In this context, tourism embraces all the transport systems, from local transit systems to global air connection among destinations. This paper discusses transport for tourism issues with emphasis on practices observed in the rail, yacht and cruising sectors. Policy implications are then thoroughly discussed to suggest a roadmap for those working in the area.

Keywords: *transport, tourism, rail, yachting, cruising*

INTRODUCTION

Transport is a complex activity, impacting the outcome of people travelling and the main cause of the growth of tourism. Hence, transportation expresses the primary intention to fulfill travelers' needs, that is, the sightseers to the genuine site where the travel industry administrations are performed (Shah, 2019). Tourism development brings significant benefits to the local economy that governments and local authorities, as the responsible bodies who define the transport policy are obligated to plan and maintain or/ and develop the current tourism infrastructure, as well as to ensure and invest in improving road networks and airport facilities, especially in destinations that have limited economic opportunities other than tourism. Taking into consideration that the accessibility of a tourist destination is mainly the outcome of price (in absolute terms, as well as in comparison with competing destinations) and time (i.e. travel time between points of origin and destination) (Holloway & Humphreys, 2016), a further understanding of adequate transport links to destinations is imperative to ensure and recognize that a range of transportation means are often used in sequence by modern day travelers.

Land transport is often neglected in the view of transport and tourism, although it is the predominant mode of travel for many domestic trips (Page, 2003) in contrast to air transport that is the main mode for international tourism, which normally entails travel over long distances (Rodrigue, 2020), as well as the rapid air connections have already



formulated a dominant market, which is raised by the early 1970s. The share of air travel has increased from 46% in 2000 to 58% in 2018, while land transport has decreased from 49% to 39% in the same period (UNWTO, 2019).

Tourist transport on land covers a variety of distinct forms: car and coach travelling and rail transport. Automobile transportation is important in short distances as private means of transports (car, motorcycle etc.) provide passengers with a new freedom of movement, increasing opportunities to take day excursions as well as longer trips. Hence, travelers decide the route and the length of the journey and avoid intermediate transfers, in the sense that the whole trip, from door to door can be achieved. Car travelling has long been favored over public transport, while coach travelling referred to any form of publicly or privately operated road service for travelers, other than local scheduled bus services (Holloway & Humphreys, 2016). Coach travelling uses the same road networks as cars (Rodrigue, 2020) and describes tour and excursion operations, private hire services and transfers services from one destination to another, as well as coach routes may be both domestic (i.e., short local tours and/ or local mass tourism transportation) and international. In accordance with land transportation, it can be noticed that some transport can form part of the attraction of a destination because it can offer memorable experiences to visitors, such as a rail journey on the Orient Express through Europe or the Blue Train through the African countryside (Holloway & Humphreys, 2016). Over the decades, railways have been a part of the public transport system, but, nowadays, are no longer considered the main mode of transportation for tourist purposes. In fact, according to UNWTO (2019), it is estimated that barely 2% of international tourist journeys use railways as mode of transportation. Rail travel become more attractive for tourism purposes, as the railways systems of several countries, notably in Europe, massive investments for long-distance routes have been seen and high-speed services as well (Rodrigue, 2020).

Air travel contributed to the phenomenon of mass international tourism (Holloway & Humphreys, 2016) and is by far the most effective transport mode for international tourism, which normally entails travels over long distances (Rodrigue, 2020). However, nowadays, the pandemic crisis and the negative impacts of the spread of COVID-19 have negatively affected the airline industry more severely than it has affected other sectors.

According to IATA (2020), passenger demand evaporated as international borders closed and countries locked down to prevent the spread of corona virus and passenger revenues are expected to fall to \$241 billion, in 2020 (down from \$612 billion, in 2019).

Travelling by water may be considered as the synonymous of relaxing holidays, as cruising requires the luxury of free time and historically expressed a more expensive type of holiday than air travel. According to Holloway & Humphreys (2016) water transport divided into five distinct categories: line voyage shipping (i.e., port-to-port), cruise shipping, short sea shipping (i.e., ferries), inland waterway and excursion vessels, and privately chartered or owned pleasure craft. According to Cruise Lines International Association [CLIA] (2019), the cruise industry continues to grow throughout 2019, as 30 million passengers cruise globally, up 6% from 28.2 million in 2018 and continues to make a positive impact on communities around the globe by sustaining 1,108,676 jobs equaling \$45,6 billion in wages and salaries and \$134 billion total output worldwide in 2017. In Greece, line voyage shipping becomes a notable tourist industry, as there are just 15 air terminals to serve 95 islands (Shah, 2019), while cruise ships expressed another significant market segment for tourism.

Having the above in mind, this paper reviews practices in transport for tourism focusing on rail and maritime transport. Section two discusses issues related to rail transport and section three examines the role of the cruise and yachting sectors. Section four then elaborates on policy implications while section five summarizes and concludes.

RAIL TRANSPORT: IMPLICATIONS FOR TOURISM

Tourist trains whether heritage railways or ones of cultural, ecotourist or other topical interest are in operation in several countries around the world, offering dedicated tourist experiences to passengers / tourists and a multitude of social and economic benefits to the regions and countries in which they operate.

At the policy level, several countries show a certain tendency to renovate the railway networks and coaches and to add all sorts of up-to-date facilities like bars, accessibility options for people with mobility problems, special services addressed for families with children as well as technological perks such as free Wi-Fi the possibility of online ticket issuing and booking and such. Moreover, many countries made the obvious

connection between railways and tourism and proceeded to maintain and restore heritage lines which function as tourist attractions. Examples of this tendency include the Carpathian tram, the Orient line connecting Paris to Istanbul, the Diakopto – Kalavryta Rack Railway in Greece to name but a few. In Greece, according to the Hellenic Railway Reconstruction Plan (SAES, 2008), the responsibility for the construction and maintenance of the railway lines is assigned exclusively to the company ERGOSE, while the management of the trains and the transport projects is undertaken by TRAINOSE. In relation to the tourist trains, TRAINOSE renovates and secures the regular operation of three tourist lines, the Pelion historic train (known as Mountzouris), the Diakopto – Kalavryta Rack Railway and the line connecting Katakolo to Ancient Olympia.

Railway turned out to be a worldwide less expensive mode of transport (Sampaio and Daychoum, 2017) especially when compared to other transport options, as it holds a significant advantage over them in terms of fuel consumption per unit transported. In addition, a positive aspect of its future development lies in the fact that railway transport is set to follow soon the example set by low-cost airlines. Corporate strategy of large companies such as the French SNCF and the German Deutsche Bahn consists in offering cheap tickets to attract new customers and thus acquire a competitive advantage in the transport sector (etravelnews, 2018a). A case in point are the Thalys IZI trains which starting from April 2016 offer a slower but cheaper way to cover the distance in the Paris-Brussels line, an offer comprising the possibility to travel without the advantage of a seat in the train's bar (etravelnews, 2016).

Many countries are going through a period of recession and commuting by rail is a cost-efficient option that allows people in the lower income brackets not only the possibility to travel, but to travel abroad. Moreover, railway networks create jobs and guarantee the connectivity of remote areas within any given country and outside its borders, thus reducing any "disadvantages" of said areas and geographical discontinuity overall. In the same perspective, one must underline the cultural significance of certain lines, the restoration and operation of which offers a twofold advantage. Railways contribute to the protection of the local heritage and tradition while favoring the tourists / passengers' acquaintance with elements of said tradition, culture and eventually locality of the destinations concerned.

Over the last decades, trains have been renovated, wagons are becoming more comfortable and technologically advanced services are offered. Steam engines have been replaced by diesel ones, the result of which are High Speed Trains or HST, which enable the railway mode to successfully compete with airplanes and cars on medium-range routes. An impressive development in HST is the adoption of Maglev (Magnetically Levitated) trains technology. Maglev trains are propelled by two sets of magnets, and can develop speeds more than 500 km / h. In this context, railway is emerging as a cost efficient and fast mode of transportation for long range travels also. Railway is not only a cost-efficient mode of public transportation, especially for medium and long range travel; it is also a more energy-efficient and environmental-friendly one (Pastori, 2010). In the era that saw the reduction of greenhouse gas emissions going to the top of every policy agenda, this is an important asset.

Table 1: Number of railway passengers (in thousands) by EU country and by mode of transportation for the year 2017-2018

	National			International			Total		
	2017	2018	Change 2018/2017 (%)	2017	2018	Change 2018/2017 (%)	2017	2018	Change 2018/2017 (%)
EU-28	9 635 743	9 766 383	1.4	151 311	153 468	1.4	:	:	:
Belgium	:c	:c	:c	:c	:c	:c	:c	:c	:c
Bulgaria	20 411	20 534	0.6	784	795	1.4	21 195	21 329	0.6
Czechia	176 932	182 513	3.2	5 791	6 775	17.0	182 724	189 288	3.6
Denmark	193 928	192 211	-0.9	12 638	13 096	3.6	206 566	205 307	-0.6
Germany	2 815 592	2 865 171	1.8	15 851	15 387	-2.9	2 831 443	2 880 558	1.7
Estonia	7 326	7 652	4.4	107	107	-0.3	7 433	7 759	4.4
Ireland	45 130	47 546	5.4	375	414	10.5	45 505	47 960	5.4
Greece	15 337	16 778	9.4	22	17	-21.0	15 359	16 795	9.4
Spain	592 284	595 114	0.5	1 070	1 029	-3.8	593 354	596 143	0.5
France	1 237 353	1 206 606	-2.5	40 126	40 198	0.2	1 277 479	1 246 804	-2.4
Croatia	19 513	19 942	2.2	290	301	3.8	19 803	20 244	2.2
Italy	846 081	863 992	2.1	2 676	2 596	-3.0	848 757	866 588	2.1
Cyprus	-	-	-	-	-	-	-	-	-
Latvia	17 327	18 075	4.3	167	166	-0.4	17 494	18 242	4.3
Lithuania	3 855	4 300	11.5	322	366	13.6	4 176	4 665	11.7
Luxembourg	16 523	17 155	3.8	6 407	6 176	-3.6	22 930	23 331	1.7
Hungary	:c	:c	:c	:c	:c	:c	:c	:c	:c
Malta	-	-	-	-	-	-	-	-	-
Netherlands	:c	:c	:c	:c	:c	:c	:c	:c	:c
Austria	245 224	262 719	7.1	9 269	9 918	7.0	254 493	272 637	7.1
Poland	291 500	297 230	2.0	1 548	1 823	17.7	293 048	299 053	2.0
Portugal	141 876	147 408	3.9	251	173	-31.1	142 127	147 581	3.8
Romania	67 142	64 539	-3.9	188	176	-6.3	67 330	64 715	-3.9
Slovenia	12 592	12 677	0.7	410	428	4.2	13 002	13 105	0.8
Slovakia	71 474	73 380	2.7	3 442	3 885	12.9	74 916	77 265	3.1
Finland	85 155	86 951	2.1	548	552	0.7	85 703	87 502	2.1
Sweden	217 668	235 330	8.1	12 149	11 160	-8.1	229 817	246 490	7.3
United Kingdom	1 737 710	1 762 710	1.4	19 649	20 521	4.4	1 757 359	1 783 232	1.5
Norway	72 968	77 298	5.9	593	442	-25.5	73 561	77 740	5.7
Switzerland	490 259	482 376	-1.6	10 336	10 677	3.3	500 595	493 053	-1.5
Montenegro (*)	-	-	-	-	-	-	927	992	7.0
North Macedonia	495	534	7.9	5	6	13.8	500	540	7.9
Turkey	85 206	-	-	132	-	-	85 338	-	-

(.) not available; (-) not applicable; (c) confidential.

(*) Totals are the sum of quarterly data

Source: Eurostat (online data codes: rail_pa_typepas and rail_pa_quartal)

Source: Eurostat 2020

According to the Eurobarometer, 80% of European citizens principally from Great Britain and countries of Central and Northern Europe use the train as their mode of transportation (European Commission, 2018). More specifically and according to data from the European Railway Community (CER) 9.7 billion passengers in Europe traveled by train in 2016. The highest rate of passengers was observed in Austria, amounting to 27%, a country followed by Germany with 22%, Slovakia with 21% and Luxembourg with 20%. Greece lags far behind featuring a lower than 6% rate.

Even though Greece is at the bottom ranks of all EU countries, as the Eurostat data (2020) presented below show, the rate of Greek passengers travelling in the national railway network rose by 9.4% from 2017 to 2018, although in the international railway network had significant fall by 22.1%.

According to the same data set the number of commuters by rail on both national and international rail networks in countries of the European Union (EU-28) have risen by 1.4% from 2017 to 2018, a trend showcasing the dynamics of the development of railways as a means of transportation in Europe.

59% of Europeans passengers claims to be satisfied with the punctuality and reliability of train schedules while 66% express satisfaction with the frequency of trains at stations and the overall reliability of the mode (European Commission, 2018). According to the Eurobarometer, the numbers show a 7% improvement from 2013, when a similar survey was conducted. 55% of the same group declares being satisfied with the amount of information provided during the trip, especially when delays are involved, an increase of 8% compared to 2013. As far as the type of route is concerned, 11% of Europeans tend to use the railway once a week for suburban travel while 5% does the same for local/regional destinations. Still, 78% claim that they have never traveled abroad by train.

Pertaining to the demand for attraction trains, statistics are quite limited, as their passengers are not differentiated from the general demand for rail travel. Nevertheless, it is safe to suggest that railway related tourism is an important form of dedicated tourism trends internationally. In France, for example, estimated that 4.5 million tourists favoring railway. It generates revenue of €60 million and creates of approximately 1,000 jobs, 600 of which are directly related to it while the rest are indirectly related ones (Marchi, 2010; Blancheton and Marchi, 2013). In Switzerland, two attraction lines, the Glacier Express and the Bernina Express, have generated 250 directly jobs, while in Ohio, USA, 30 such lines are in operation attracting a total of 3 million tourists annually. In Greece there is an increasing demand for such trains especially during the summer months. It is worth noting that in 2018 there was a dramatical increase in passenger traffic in the Pelion line, estimated at approximately 20,000 passengers from Greece and abroad, from 16,000 which is the number corresponding to the year 2017. At the origin of this increase was of course the organized mass travel tourism excursions from Israel, Bulgaria, Germany, France, England, Italy and Australia but also educational trips and school excursions from various areas of Greece (etravelnews, 2018c).

Efforts are being made at the international, European, and national level to expand the rail network connecting countries and to improve intermodality and passenger safety. In this context, the European Council, through the White paper 2011 “Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system” called for a speedy adoption of the fourth package of measures in the field of rail transport, aiming to secure open access to the internal market for passenger rail transport, the independence of the infrastructure operators, the auction for public service contracts with competitive bids and the highest level possible of railway safety and interoperability (European

Parliament, 2018). In Greece, the key points of the National Strategic Transport Plan include cross-border road projects of emblematic value which will enhance the transportation of goods and carriage of passengers inside the country and abroad with special emphasis placed on the Balkans (Metaforespress, 2019). Upgrading the railway line that connects the Ancient Olympia site to Pyrgos and Katakolo, has also been included in the Integrated Spatial Investment program, co-financed by the European Regional Development Fund (ERDF), setting as its main goal the promotion of the tourism product of the region (etravelnews, 2018b).

For railway tourism to be further consolidated and developed the intersection of the attraction trains lines departing stations with “regular” train stations, road transportation stations, ports or airports is crucial. Such interoperability will establish a sense of continuity and corresponding synergies with all modes of transportation. The Eurail/Interrail card is another important development in this direction. It aims to provide the opportunity to travel by train in Europe at very low cost to a target group of mainly young people from 31 countries including Greece. Annually and worldwide close to 220,000 Interrail cards are sold to European citizens and 400,000 ones to non-European passengers. It is worth noting that the Greek TRAINOSE is a member of the railways network, to which Eurail / Interrail cards are available (etravelnews, 2015). In addition to railways of neighboring countries, shipping companies participate in these offers, more specifically for the Italy – Greece, the Adriatic route.

In conclusion, rail transport is undergoing a phase the dynamics of which are principally due to the following features: the low cost of transportation, the expansion of the network connecting countries (cross-border networks), the relatively lower ecological impact of its operation when compared to other modes of transportation and its promotion by national States and international organizations. Rail tourism and the use of the railway network for tourism purposes represent a rather high percentage (58%) of the total rail travel traffic (European Commission, 2018), a fact which proves the importance of this mode for the development of tourism and vice versa.

Yachting and Cruise Sectors

a. Yachting

This section of the paper discusses the current situation in the yachting and cruising sectors in Greece and compares them with other competing European and Mediterranean countries to create a roadmap of services that link yachting and cruising with other transportation related to leisure tourists in the context of intermodality.

The USA is the most developed yachting market in the world. In the European market, areas of more intense yachting development are France with a focus on the Cote d'Azur, Italy, and to a lesser extent Spain. From the point of view of the supply of yachts in the Mediterranean, France, Italy, Spain, Croatia, Greece and Turkey occupy a remarkable position, while "openings" in maritime tourism are made by the countries of the eastern and southern coasts of the Mediterranean (e.g. Cyprus, Israel, Tunisia, Malta). As for berths, they are estimated 40,000 on the Mediterranean coast of France, 50,000 in Italy, about 50,000 in Spain, 13,600 in Turkey and 5,000 in the countries of the former Yugoslavia.

According to a survey by the European Boating Industry, there are 37,200 companies related to the boat industry in Europe, while there are over 234,000 direct jobs. Only in the boat production sector there is a turnover of 6 billion euro. 48 million Europeans are involved in marine activities such as rowing, windsurfing, diving, etc., while 36 million are involved in yachting. The boat ownership ratio in Europe is 1: 164. The marinas are distributed in the European Continent as follows: 2,000 marinas in northern Europe, 800 marinas on the Atlantic coast and 1,200 marinas in the Mediterranean.

According to the data of ICOMIA (2015) in Greece there are 170,052 boats of which 125,137 belong to the category of plastic boats including boats with outboard engine, i.e., 74%. The second largest category is the inflatable boats which amount to 21,400, representing 13% of Greek boats. The motorboats (13,445) with internal engine are 8%, the PWCs (6,000 boats) are 3% and 2% are the sailing boats (4,060 boats).

According to the data of Greek National Tourism Organization (G.N.T.O.) and the Hellenic Marine Association, the number of organized marinas amounts to 22 with a total capacity of 8,924 seats, of which 4,075 are in Attica. The located marinas are 55, while there are also 80 tourism shelters. It is estimated that the 8,924 berths in the marinas produce 389 direct jobs.

The competition for the Greek yacht ports comes from the northwestern Mediterranean countries (France, Spain and Italy) but also from the northeastern Mediterranean (Turkey, Croatia). The marinas of the Northwest Mediterranean are estimated to absorb 80% of the total demand for services in the Mediterranean. The northeastern Mediterranean zone (Greece, Croatia and Turkey) serves 14% of total demand. The remaining

6% is absorbed by Algeria, Morocco, Cyprus and Egypt (Chen, Balomenou, Nijkamp, Poulaki, Lagos, 2016).

Based on the analysis made in the maritime activity of yachting, we believe that intermodal opportunities may exist in the following cases:

- In the 22 located and organized marinas that operate in the various parts of the island complex of Greece with a total capacity of 8,924 mooring places, of which 50% are in Attica.
- In 30,000 charters per year from about 100 charter companies, with average charter duration of 9 days serving an average of 270,000 people, which shows the good prospects for further growth for the coming years.
- In the 100 companies that deal with the object of maritime tourism with the 17,700 boats that they have and the 1,600 people that are directly employed.
- In the innovations implemented by yachting companies and related to the product advertising activities, to attract customers.
- In the capacity of the recreational ports that can serve from 500-2,000 boats per day with several additional benefits.
- In the geographical dispersion of marinas and yachting companies throughout the island area of Greece.
- In the possibility of combining the yachting offer with the parallel alternative forms of tourism (e.g. sports, health, educational, adventure, eco-tourism) and the creation of the necessary support infrastructure in the framework of integrated development programs.

It is obvious that tourists (users or owners of yachting) when moving to the various access points of boats (e.g. marinas, ports, shelters) scattered in the island complex of Greece, use all available means of transport (private or public). Also, the tourists/passengers of these boats seek information about their various points of movement. Tourists who are interested in yachting when arriving by air at the various airports, to reach their hotel of residence and then to a marina, can usually make use of the transfer services from the hotel, rental vehicle (rent- a-car) or public transport. Therefore, the intermodality of means of transport is indispensable for the smooth operation of the yachting market. However, the spatial discontinuity and the special multi-insularity of the Greek island area require the creation of an integrated information system that is useful to leisure tourists.

b. Cruise Sector

The international cruise offer has attracted several new companies in recent years, while the activity in the field of tour operators is also important, in the context of the verticalization strategies they apply. The cruise offer is more and more diversified and specializes its product through cruise ships that offer more and more experiences (e.g. sky-diving simulation, branded chefs, etc.) but also by modifying the offered experience to meet the requirements of both families and individual travelers traveling alone, trying to address a wide range of passenger needs and requirements. Following the developments that characterize the international tourism offer, the cruise industry is dominated by a small number of powerful companies that own a large part of the fleet and of course the lion's share in terms of supply. This is largely due to the acquisition and merger strategies adopted by the leading companies in the global market (Pallis, et al. 2017).

Characteristic of the growing trend of the global cruise offer is the fact that Carnival Cruise Lines added to its fleet 30 new vessels in the period 2007-2016 while the Royal Caribbean Cruise Lines in turn invests in larger vessels with a capacity of more than 6,000 passengers and crew of about 2,000, trends followed by several other smaller companies. Thus, by 2020 the global cruise ship supply is expected to reach 370 vessels (Pallis, et al. 2017).

Greece does not have any cruise companies and that is why the emphasis is on attracting existing international companies and utilizing the existing port infrastructure.

The regional distribution of cruise ports in Greece shows that there is dominance in the regions of the South Aegean, Crete and the Peloponnese and lagging in the other Regions. Except for the port of Piraeus, there is a strong absence of ports that can accommodate large cruise ships, even in well-known tourism destinations.

A total of 42 Greek ports host 5.2 million cruise passenger movements annually, corresponding to 4,300 cruise ship approaches. Eight (8) of the Greek ports receive more than 100,000 cruise visitors annually, with significant benefits for local economies.

The evolution of the demand for cruising in Greece in recent years clearly presents both the impossibility of substantial strengthening and its sharp fluctuation. This demand is unevenly distributed in the 42 ports of the mainland and island country that receive cruise ships with the lion's

portion having five ports, which account for 74.2% of total traffic. At the Mediterranean level, the share of cruise passenger arrivals in Greece reached 8.38% in 2016 (Pallis, et al. 2017).

In terms of quality features, the demand for cruising in Greece is overwhelmingly expressed by foreign tourists who have a high educational and economic level, SETE (2018). It is worth mentioning that according to PwC estimates, the growth rates of cruising in Greece can lead to quantitative data by 2021, where one in ten foreign arrivals in the country is due to the cruise with a contribution of 3% to tourism revenue (PwC-REMACO, 2016). Unfortunately, the Covid-19 health crisis overturns this optimistic forecast.

Based on the above analysis made in the maritime activity of the cruise we estimate that intermodality opportunities may exist in the following cases:

- The development of cruise tourism (especially home porting) is directly linked to the existence, within walking distance of the port, of an international airport where a significant number of both scheduled and charter airlines will operate, with which the destination and the port will develop strategic partnerships. This cooperation should aim at supporting both companies and passengers through actions such as: a) providing cruise check-in counters at airports, b) existence of airport check-in counters in the ports, c) direct transfer of luggage from the airport to the port and vice versa etc. At the same time, at local and regional - national level, cooperation relations should be developed with the wider stakeholders who in one way or another shape the local - national tourism policy or are involved in decision making that can directly or indirectly affect the development of the cruise.

- The cooperation of the city and/or the tourism destination with the port that hosts the cruise ships is particularly important, in order to preserve not only the support of the cruise, but also to protect the city and the destination from possible negative consequences that may cause the development of cruise (e.g. exceeding spatial carrying capacity due to the presence of cruise ship passengers - visitors to small but well-known tourism destinations such as Santorini).

A Roadmap for Policymakers

a. Sustainable and Socially Responsible Policies and Practices

The implementation of sustainable policies, practices and products from the late 80's affected the ways, means and modes of Travelling. Tourists started to travel more in different destinations and using different means of Transport for their journeys to and in the destination. Selecting sustainable and alternative means of transport (beside planes and charter flights) thus became a mode and this was also related with the efforts made by Tourist Enterprises and Destinations to reduce carbon emission and environmental footprint related to the development of Tourism. It is a policy issue the last 20 years to implement and use sustainable products which could achieve these crucial goals for transport companies and tourist enterprise of all short in Tourism Destinations.

In that aspect, socially responsible tourism practices also played a sustainable role for both demand and supply regarding the relation of transport to sustainable tourism. Tourists wanted more sustainable means of transport and destinations, tourism enterprises and tour operators started offering the necessary product and infrastructure e.g., parking in tourism destinations, implementation of electric vehicles or the use of less polluting fuels for airplanes. The socially responsible practices became an issue from the 90's for Tour Operators in their Initiatives regarding the adaptation of such practices in their function and the collaboration with Hotels and Destinations for their implementation by Tourists and Locals. In that manner Sustainable and Socially Responsible Practices became also an issue of promotional policies Destinations in their effort to be more competitive in this new era of sustainable tourism.

b. Geographical Dispersion of Tourism Destinations

The 80's was the decade from which quick augmentation of the number of destinations occurred in the global level. This was mainly because Tourism was by then considered a safe and cohesive way to develop the economy both in terms of incomes and employment. We witnessed a shift of the overall economic policy of countries and regions toward the adaptation of Tourism as their main or important sector of their development. This was the case for regions which may be considered as far (regarding their geographical proximity to some of the major markets) or exotic regarding their characteristics.

In this evolution Transport (especially planes and trains) played a significant role in this ongoing process through which almost every country of the globe is now possessing several Destinations. This of course meant also that these newly developed destinations had to compete with a number (even in the same country) of older and more Known destinations so mainly planes and their different types of tourist transports offered became the pillar of this effort: conventional flights, nonstop flights (in areas were before a stop was necessary e.g., to Asia's destinations) in faraway destinations Asia and the Pacific), charter flights and travels with low cost companies.

The cost of flights, the type of planes used the environmental impact of their use and of course the developmental economic benefits for the region and its destinations thus became a crucial issue. Another issue which also occurred was the fact that in some cases (in Europe or the USA) trains and boats became (for both economic and environmental reasons) a more competitive mean of Transport both for Domestic and International travels.

c. A change on Tourist Motives

Tourist motives have changed after the 90's following the boost on the number of national and international trips by year and the emergence of the dynamic market of the vast number of SIT products. At first this produced a bigger number of Travels per year with the use of different means of Transport and of course with different types and characteristics regarding trips e.g., cultural tourism, vacations, educational tourism, MICE etc. The tourists as consumer tends nowadays to behave more in a multi-motivational manner regarding their trips and this also affects the type of Transport means they use (Plains, Trains, Cars, Boats, Buses or Bicycles). Their decisions are also related to the fact that the SIT products as a pluri-dimensional market are now a vast part of the offered products and services of almost all Tourism Destinations worldwide. In some cases, we also have several specialized destinations for different SIT products namely: Cultural, Historical, Ethnic, Sport Tourism, Theme Parks, Scuba Diving, Bird Watching, Eco tourism, City Tourism, Religious, etc. All these destinations tend to produce different type of demand uses of transport means- for the travels undertaken. In many cases also the specific characteristic of these Destinations e.g., City Tourism, Ecotourism, Sports

etc. impose the type and means of transport e.g., bikes, bicycles, boats, cars, electric vehicles of all sorts.

d. Climate Change impacts and Environmental considerations

The issue of Climate change in the last 20 years is vastly affecting – and will continue to affect in many aspects- the type and means of transports. This issue followed similar considerations from the 80's - but in a less decisive scale – for the environmental impacts (pollution, sound pollution, environmental footprint) of Tourism Development and especially transports by planes and cars.

This initial discussions of the environmental impacts of Tourism Transports was also an issue on the following Climate change discussions. They had also produced some of the first policy measures regarding the reduce of fuel consumption and the reduce of environmental footprints caused by the excessive use of airplanes for Tourism Transport. The climate change discussions reinforced these, policies and measures and oblige the Global Tourism Industry to undertake specific measures regarding the future of tourism as a whole and especially that of Transports of all sorts. All the recommendations and proposed policies lead to changes with economic and developmental costs for many tourism regions and destinations (especially those who are dependent on long haul travels and geographically faraway markets and tourism target-groups). Sustainability and Social Response Policies on Tourism in the meantime underlined that for the future of Tourism Transports the adoption of serious measures is a one way street which will ensure a more environmentally friendly type of Travel soon.

e. Digital innovations affecting transport

Several digital innovations of the last 30years affects directly or indirectly transports. In that group we have:

- E-tourism policies for tourism destinations and enterprises which promote less fuel consumption and alternative means of transport especially in the destinations p.e. bicycles instead of cars, electric vetches instead of conventional ones, public means of transports instead of private vehicles

- Policies and measures regarding smart cities or culturally and environmentally fragile environments. In these cases, we have policies and measures which facilitate- using technology- tourists in their touring,

parking, or hiking in the specific areas. Plus, this is also becoming a promotional tool for the destinations (sustainable destinations, environmentally conscious destinations, protection policies implementation).

- Digital Tourism Travels or experiences. Long before covid 19 this was an issue, but in a marginal way. Innovation technologies and covid 19 pandemic reinforced the efforts and we now have specific products regarding this type of travels and experiences. In some cases, innovative (e.g., Mice Industry) this may lead to considerable changes in the types and characteristics of travels namely reducing the conventional type of Business travels and Congresses. In the overall picture in any case there is no evidence that this may seriously affect Tourism Travels and Experiences in the destination and replace them by digital ones.

In particular, nowadays, Industry 4.0 and its applications, contribute to the transformation of Tourism industry Services provided by Internet of Things (IoT), Block chain, Big Data Analysis, refer to measurable results in the fields of consolidation, promotion and creation of brand name, positive consumer behavior, extension of the tourist season, facilitation of reservations, saving time, finding and hiring a suitable person, maximizing visibility, cost compression, speed / quality of communications etc.

The integrated online destination management refers to dynamic platform, where “modern traveler”, could organize a customized trip (accommodation, means of transport, visits to museums, tickets to theaters, etc.), so that the trip could fit exactly to his/her needs. Digital marketing aims to attract individual tourists, who manage by themselves their final destination. From the business side it is a strategic choice and a key tool for organizing the promotional activities of tourism businesses. Digital marketing methods could make a site extremely friendly to users by offering services such as automatic identification of the visitor's country of origin and the appearance of a welcome message in its language. By using technics of Machine Learning, a tour operator could change the position of a tourist site on search engines such as Google, Yahoo, and increases a website's traffic. Finally, at the forefront of e-marketing are various promotions that use original and attractive promotion methods with well-designed e-mails, banners, e-games and e-cards that reach the potential customer to find the more suitable destination.

E-marketing methods in tourism are supported by social networks and Web 4.0 applications. These are tools of mass collaboration, which allow internet users to participate simultaneously, and to collaborate directly with other users for the production, extraction and transmission of information and knowledge through the internet. Examples include:

- The online magazines and personal Blogs
- Social - Collaborative Networking Websites
- Podcasting and Online Videos
- Tagging technology for marking and categorizing information
- Mash-ups technology for combining different content sources or software
- Wikis technologies that allow users to write content together.
- The RSS (Really Simple Syndication) technology for sending information directly to a web page
- The technological combination of AJAX (Asynchronous JavaScript And XML) to create better, faster and more web-friendly applications.
- The use of advanced multimedia technologies, digital maps and virtual reality to highlight tourist destinations

The above framework also includes multimedia, digital maps, and virtual reality techniques, which are increasingly used in tourist geoportals to highlight destinations in conjunction with other applications, such as mobile platform technologies and electronic destination management. The use of multimedia in tourism aims to provide more complete information in a variety of ways, from national tourism operators to tourism businesses. 3D imaging, video, audio, and e-books are used to effectively promote tourist destinations.

The use of mobile platform technologies in tourism (m-tourism) is one of the most important technological developments in tourism and a key example of personalized service. M-tourism applications are mainly used in the promotion and management of alternative tourism and in particular eco-tourism (tours in natural parks, cycling routes, mountaineering) as well as in touring cities in the form of a portable guide.

Moreover, data mining and business intelligence techniques are key tools for companies interested in developing useful search engine optimization systems that collect data for customer relationship management purposes and aim at the focused marketing. These systems

allow the systematization and utilization of data from market research, studies and the analysis of the results of advertising campaigns.

Finally, one of the modern trends in technological development is to serve the needs of People with Disabilities (PWDs) and the elderly, who until recently were minorities in the use of the Internet. Nowadays, more and more companies and institutions consider when promoting their websites and electronic services the promotion of their products to disabled and the elderly people.

f. Issues related to the Post –Covid period

The post covid period will be heavily related with travels with more sustainable and safer –regarding health- protocols, norms, and characteristics. In this new framework transport (means, types, and characteristics) will have to adapt and implement several norms and protocols. They will also have to invent new types and means of transports technologically and environmentally related to these new norms. In this same period the consumer behavior of tourists will most probably lead to decisions which will reduce travels to faraway destinations because of cost and because of considerations regarding the implementation of safety and healthy norms from specific destinations and regions. This may lead to a new era of competition where sustainability will be the key issue.

CONCLUSIONS

This paper reviewed practices in the transport for tourism sector emphasizing issues related to rail, yacht, and cruises. Policy implications were then discussed in detail. Over the last thirty years we have witnessed major changes regarding Tourism Development and Tourism Travels. Most of these affected or will affect different aspects of Travel Transport: Sustainable policies and practices, Geographical dispersion of Tourism Development, Tourist motives, Climate changes impacts on Tourism, e-tourism policies for Destinations and Enterprises, Digital Tourism experiences versus in situ Tourist experiences, Smart cities, Implementation of new norms for travels on the post-covid period, Substitution of tourist consumer choices on travels related to the cost and the distance of destination. All these issues created- and will recreate-specific policies and measures for Tourism Transports. In many cases we also have new tourism products or types of destinations which also influenced the synthesis, mode and types of Transport use for Tourism.

Bearing in mind that Transport is a crucial pillar in the fast growing – in a global scale Tourism market all these issues create a totally new era for the transport sector in the first 20 years of the 21st century and the post covid-19 period.

REFERENCES

- Association of Greek Tourism Enterprises (SETE), 2018. The contribution of Tourism to the Greek economy in 2017, available at: http://www.insete.gr/Portals/0/meletes-INSETE/01/2018_SymvolhTourismou-2017.pdf (date access 20/2/2019).
- Blancheton, B. and Marchi, J.J. (2013). The three systems of rail tourism: French case. *Tourism Management Perspectives*, 5, pp. 31-40.
- Chen, J., Balomenou, Ch., Nijkamp, P., Poulaki P., Lagos, D., 2016. The Sustainability of Yachting Tourism: A Case Study on Greece. *International Journal of Research in Tourism and Hospitality (IJRTH)*, Volume 2, Issue 2, 2016, pp. 42-49.
- Cruise Lines International Association [CLIA] (2019), 2019 Cruise Trends & Industry Outlook, [Online], Available at: <https://cruising.org/news-and-research-/media/CLIA/Research/CLIA%202019%20State%20of%20the%20Industry.pdf> [Accessed 11/10/2020]
- Etravelnews (2015, 15 May). Promoting rail tourism in Greece [Online]. Available at: <https://etravelnews.gr/sidirodromikos-tourismos-ellada/>.
- Etravelnews (2016, 3 March). Low cost trains' schedules start [Online]. Available at: <https://etravelnews.gr/ksekinoun-dromologia-low-cost-trena/>.
- Etravelnews (2018a, 20 August). Low cost trains in Europe's rail transport [Online]. Available at: <https://etravelnews.gr/trena-hamilou-kostous-stin-europi/>.
- Etravelnews (2018b, 2 October). The plans for the reopening of the tourist railway line Katakolo - Pyrgos - Ancient Olympia are in progress [Online]. Available at: <https://etravelnews.gr/prohoroun-sxedia-sidirodromikis-grammis-katakolo-pyrgos-arhaia-olympia/>
- Etravelnews (2018c, 1 November). Record increase in traffic on the "train of Pelion" [Online]. Available at: <https://etravelnews.gr/rekor-kinisis-sto-trenaki-ipirou/>
- European Commission (2018). Europeans' satisfaction with passenger rail services [Online]. Available at: <http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/search/train/surveyKy/2172>
- European Parliament (2018). Rail Transport [Online]. Available at: <http://www.europarl.europa.eu/factsheets/el/sheet/130/rail-transport>
- Eurostat (2020). Railway passenger transport statistics - quarterly and annual data [online]. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Railway_passenger_transport_statistics_-_quarterly_and_annual_data
- Holloway, J. C., & Humphreys, C. (2016). *The Business of Tourism*. Tenth Edition, Harlow, England; New York: Pearson Education Limited

- IATA (2020). Industry Losses to Top \$84 Billion in 2020, Available at: <https://www.iata.org/en/pressroom/pr/2020-06-09-01/> [Accessed 11/10/2020]
- ICOMIA, 2015. ICOMIA Trend Report 2014-2015. Monday, February 16, 2015. ICOMIA's Statistics Committee coordinates the collection of international marine industry statistics.
- Marchi, J.J, (2010). Le tourisme ferroviaire a petite Vitesse. Ph.D thesis, Universite Montesquieu Bordeaux IV, France, as referred to in Blancheton, B. and Marchi, J.J, (2013).
- Metaforespress (2019, 26 February). The main points of the National Strategic Transport Plan [Online]. Available at: <https://www.metaforespress.gr/autokinitodromoi/τα-βασικά-σημεία-του-εθνικού-στρατηγ/>
- Page, S. J.,(2003). *Tourism Management, Managing for change* "Tourism Management, Butterworth Heineman Elsevier, Oxford, UK
- Pallis, Th., Vangelas, G., Arapi, K., Kladaki, P. and Papachristou, A., 2017. The development perspective of the starting cruise in Greece, diANEOsis.
- Pastori, A. (2010). A inovacao tecnologica "verde" e seus possiveis afeitos na matriz de transportes do Brasil- consideracoes sobre o veiculo de levitacao magnetica supercondutora (Maglev -Cobra). BNDES Setorial 321-352 n. 31, marc, as referred to in Sampaio, P.R.P and Daychoun, M.T (2017).
- PwC-REMACO, 2016. Greek tourism: perspectives and possibilities. In the proceedings of the 15th conference of SETE "Greek tourism: new data and future challenges", Athens, October 17-18.
- Rodrigue, J. P. (2020) *The Geography of Transport Systems*, New York: Routledge
- Sampaio, P.R.P and Daychoun, M.T (2017). Two decades of rail regulatory reform in Brazil (1996-2016). *Utilities Policy*, 49, pp.93-103.
- Shah, A. (2019). The Importance of transportation to tourism development, *International Journal of Tourism and Hotel Management*, 1(1): 07-09
- UNWTO (2019). *International Tourism Highlights 2019 Edition* [Online], Available at: <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152> [Accessed 11/10/2020].

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