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IMPACT OF COVID-19 ON THE CRUISE INDUSTRY

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ABSTRACT

The cruise industry is a market largely belonging to a few large groups that operate mainly through a variety of brands and which has seen significant growth dynamics in the last 20 years. Historically, most of the passengers came from the U.S. while the main geographic areas involved in cruises are the Caribbean / Bahamas / Bermuda. The impact of the pandemic caused by COVID-19 was very strong, bringing the market, in terms of the number of passengers carried and depending on the statistical sources used, back to the levels recorded in 1999. Some episodes of COVID contamination that occurred onboard cruise ships in February / March 2020 (with more than 3,900 passengers and crew involved and over 110 deaths), led to the total suspension of activities and also caused serious damage to the image of safety onboard. This research concerns the economic, financial and statistical results recorded in 2020 regarding the main cruise groups (Carnival Corporation, Royal Caribbean Cruises, Norwegian Cruise Line, MSC Cruises). These results appear to be largely influenced by the pandemic. The research is carried out through the analysis of the annual reports, the deployment of the ships and the trend of stock market prices for listed groups. The strategies used by these groups to deal with the current crisis are also considered, along with the main changes that occurred in terms of market exit / new entries of companies. The conclusions concern the future implications in the cruise industry both in terms of the market and the timing of recovery, also in relation to the medical and therapeutic prerequisites required and adopted in the various countries concerning both the demand and supply of cruises.

Key Words: Cruise industry, COVID-19, Economic impact, Market impact

THE DEMAND SIDE

Dozens of papers on the cruise industry start with "Modern cruising, originating around 1970, is the fastest growing, most dynamic segment of the travel and tourism industry" or with similar sentences. The author suggests to also add "depending on the sources examined". The main statistical source used by researchers is that of the U.S. Cruise Line International Association (CLIA) but there are other sources from commercial publications that may present different results. According to CLIA, global cruise demand reached 29.7 million passengers in 2019 (CLIA, 2020a). Compared to the 1,466 million overnight visitors to destinations (World Tourism Organization, 2020), the ratio of cruise passengers is a modest 2%. This figure rises to 10% if the ports of call are being considered as well (CLIA, 2020b).

In 2019 the North America region was the largest source market, counting for 52% of global cruise passengers. Europe counted for 26% of the global cruise market and the Rest of the World for the remaining 22%. In summary, a total of 25.5 million passengers were sourced from the top ten countries in 2019. This counts for 86% of global cruise passengers. The United States with 14.2 million passengers was the largest source country by far, counting for 48% of global cruise passengers. The last nine countries: Germany, UK, China, Australia, Canada, Italy, Brazil, Spain, and France generated about 38% of the global passengers (CLIA, 2020b, cit.).

As noted by CLIA, in 2019 51% of the cruisers were older than 50 years (14% more than 70 years) (CLIA, 2020c).

THE SUPPLY SIDE

The cruise industry is strongly polarized primarily in terms of passenger capacity. In fact, in 2019 the five most important companies held 85% of the market (62% in terms of number of ships) while the main two had a share of 64% (Antonellini, 2019). The most important operator is Carnival Corporation & plc (CCL) which owns nine brands; the second operator, Royal Caribbean Cruises, owns three brands to which is added the participation in TUIC (50% with the homonymous German tour operator). The third group, Norwegian Cruise Line Holdings (NCLH), has three brands while the fourth operator, MSC Cruises (MSC), is present with only one brand

and has a different ownership structure than the others. The fifth group, Genting Hong Kong, also has three brands.

The process of mergers and acquisitions that started from the 80's, along with the widening of the fleet through the building of new ships or the acquisition of ships already existing, have been the main strategies that the great groups pursued in order to increase their own dimension.

The oligopolistic market structure is rooted from two factors: the enormous fixed costs required in cruise line operation and the high entry barrier (Papatheodorou, 2006).

The most important organizational option for a company is the deployment, which is generally determined by the entire fleet and not the individual ship.The capacity deployed by the cruise industry, as measured by bed days, in 2019 reached 190.6 million. The Caribbean is the principal cruise destination with a share of the cruise industry's global of 34% of all deployment days. Eleven Caribbean destinations had passenger arrivals in excess of one million passengers during the 2017-18 cruise year. Including the Mediterranean, Europe was the second destination with a share of 28.4%. Asia had a large growth over the 5-year period of 2014 to 2019 with an increase of 191 percent and a share for 2019 of 9.4%. The following position were for Australia/New Zealand (4.9%), Alaska (4.7%) and the Rest of the World (18.3%) (CLIA, 2020b, cit.).

Referring to Porter (1980), the three strategic options for a company are cost leadership, differentiation and the focus strategy. As noted by Gross & Luck (2012), CCL is widely accepted as a cost leader in the industry, and of thus employing an aggressive pricing strategy. In the current worldwide cruise market, premium and luxury ships attempt to establish an image or a brand, so that (potential) passengers perceive the cruise line to be unique in a certain sector, and are willing to pay a higher price. The niche strategy is most often applied by smaller providers in particular markets or for particular themes (e.g. food, wellness, photography, art, wine, dancing) and customer groups (e.g. seniors, families, nudists or the gay community). These include, for example, adventure cruises, expedition cruises, freighter cruises or round-the-world cruises.

The cruise orderbook for the period 2021-2027 is the following: 104 ships on order, 208,898 new berths expected for a total value of $61,3 billion (Cruise Industry News, 2021a). Larger ships command higher booking prices since they offer more amenities, but current trends indicate that the cruise industry has no ships larger than the Oasis class (belonging to RCL) in its order books. Optimal economies of scale may have been reached, which could leave additional opportunities for new entrants to exploit niche markets (Rodrigue & Notteboom, 2013; Chaos et al., 2020).

COVID-19 & CRUISES

It is important to note that global tourism has been exposed to a wide range of crises in the past. Between 2000 and 2015, major disruptive events include the September 11 terrorist attacks (2001), the severe acute respiratory syndrome (SARS) outbreak (2003), the global economic crisis unfolding in 2008/2009, and the 2015 Middle East Respiratory Syndrome (MERS) outbreak. None of them led to a longer-term decline in the global development of tourism, and some of them are not even notable, with only SARS (-0.4%) and the global economic crisis (-4.0%) leading to declines in international arrivals. This would suggest that tourism as a system has been resilient to external shocks (Gossling et al., 2020). In the same years the number of cruisers has kept growing also during the specific crisis for the cruise industry in January 2012 caused after the shipwreck of Costa Concordia.

In 2020, on cruise ships, Coronavirus had affected 3,908 people (passengers plus crew, only officially confirmed cases) of whom 111 passengers died (Blaskey et al., 2020**)**. The first epidemic outbreak occurred on Diamond Princess (February) resulting in a 15-day ship quarantine in Port Yokohama (Japan) and 712 infected (including 14 deaths). The second outbreak was on Grand Princess (February-March), two consecutive voyages back to back (132 total infected 7 deaths). The third/largest outbreak was on Ruby Princess with 852 cases (passengers plus crew, included with 28 deaths) but those were confirmed after a debarkation in Sidney NSW and also the ship was quarantined in Australia (Cruismapper, 2021). As of October 2020, over 87 cruise ships had confirmed cases of coronavirus on board (Blaskey et al., 2020, cit.).

The Diamond Princess outbreak was the event that pushed cruise tourism into the crisis (Radic et al., 2020). Many authors described the event from different points of view (Zhang et al., 2020; Mizumoto & Chowell, 2020; Sahu & Naqvi, 2020; Rocklöv et al. 2020; *inter alia*).

Moriarty (2020) reported that “cruise ships are often settings for outbreaks of infectious diseas because of their closed environment, contact between travelers from many countries, and crew transfers between ships”.

Ito et al. (2020) indicated the risk of infection on board a ship increases proportionately as the number of passengers increase. In addition the cruise ships infected with COVID-19 were sailing mostly from the same home-port to the same port of call in a week’s time.

CLIA announced the first changes to its public health policy at the end of January, within 24 hours of the World Health Organization's initial declaration of a public health emergency. By mid-March, CLIA members voluntarily suspended cruise passenger sailings worldwide, making the cruise industry one of the first industries to temporarily pause commercial (CLIA, 2020a, cit.).

On March, 2020, the U.S. Centers for Disease Control and Prevention (CDC) issued a "No Sail Order" for cruise ships due to the risk cruise ship travel introducing, transmitting or spreading COVID-19. This Order was confirmed in the following months and expired on October 31, 2020 (CDC, 2020a).

In July 2020, RCL and NCLH announced a collaboration to form a group of experts called the "Healthy Sail Panel" to guide the industry in the development of new and enhanced cruise health and safety standards. The panel consists of globally recognized experts from various disciplines, including public health, infectious disease, biosecurity, hospitality and maritime operations. On September 21, 2020, the expert panel published a report, which included 74 detailed best practices across five key areas of focus to protect the public health and safety of guests, crew and the communities where their cruise ships visit.

On October 30, 2020, the CDC issued a "Conditional Order" that introduced a phased approach for the resumption of passenger cruises. These phases include: a) the establishment of laboratory testing of crew onboard cruise ships in U.S. waters; b) simulated voyages designed to test a cruise ship operator's ability to mitigate COVID-19 on cruise ships; c) a certification process; and d) a return to passenger voyages in a manner that mitigates the risk of COVID-19 introduction, transmission or spread among passenger and crew onboard ships and ashore to communities. The Conditional Order replaced the CDC's No Sail Order and will remain in effect until the earlier of a) the expiration of the Secretary of Health and Human Services' declaration that COVID-19 constitutes a public health emergency, b) the CDC Director's rescission or modification of the Conditional Order based on specific public health or other considerations, or c) November 1, 2021 (CDC, 2020b). On April 2, 2021, CDC released a new phase of the Framework for Conditional Sailing Order (contested by the companies) for cruise ships operating or seeking to operate in U.S. waters.

Following the global pause in cruise operations in mid-March, cruises resumed sailing in parts of Europe, Asia and the South Pacific beginning in July 2020. From early July through mid-December 2020, there were more than 200 sailings (CLIA, 2020a, cit.).

There is much evidence that the impact of COVID-19 has caused a collapse. Cruise Market Watch (2021) estimated that the number of passengers has fallen to 7.1 million (level recorded in 1999). In the Caribbean the cruise traffic has lost 70% regarding 2019 (Caribbean Tourism Organization, 2021).

ECONOMIC IMPACT

The three leading cruise companies have their shares listed and traded on international stock exchanges (New York, London); thus, useful empirical reflections can be gained by their stock market behavior, performance, and market value.

The revenues for 2019 of CCL, RCL, NCLH and MSC have been of 41,8 billion dollars, 83% of the total of the cruise industry (Cruise Market Watch, 2019). In 2019 the four groups transported 24,87 million passengers with MSC that exceeded NCLH of approximately 55k passengers.

In the period from 2008 to 2019 the average annual growth of revenues in nominal terms was 4.8%. In the same period the revenues from the sales of the tickets were diminished average of 6% (9% for CCL) in favour of the revenues from onboard activities (in 2019 pairs to 31% of the revenues). This has allowed a higher degree of freedom in companies' sales strategies through more aggressive pricing policies.

According to Vogel (2017), to cope with the various crisis, the cruise lines preferred lowering ticket prices, even drastically, in order to secure full occupancy, to the alternative of keeping ticket prices constant and risking lower occupancy. This policy makes economic sense when demand is price-elastic.

The effects of COVID-19 on the cruise industry in 2020 have been very important causing a loss of 76% of the revenues and the operating income passed from $7,1 bln. to -$17,9 bln. (Table 1).

Table 1 Consolidated statement of income of the main four cruise groups (million $)

	2020	2019
Revenues		
Passenger ticket	6,669	29,119
Onboard and other	3,260	12,674
	9,929	**41,794**
Operating costs and expenses		
Commissions, transportation and other	-2,031	-6,085
Onboard and other	-939	-3,445
Payroll and related	-3,313	-4,721
Fuel	-1,676	-2,937
Food	-695	-2,052
Ship and other impairments	-1,967	-26
Otheroperating	-3,146	-5,548
	-13,767	-24,816
Marketing, selling and administrative	-4,120	-5,444
Depreciation and amortization	-4,680	-4,398
Impairment loss	-5,270	0
	-27,837	-34,658
Operating income	**-17,908**	**7,135**

Passenger ticket revenues primarily consist of revenues for accommodation, meals, certain types of onboard entertainment, and include revenues for service charges, air and land transportation to and from the ship that guests choose to purchase from the companies. Onboard revenues primarily consist of revenues from beverage sales, retail sales, shore excursions, gaming, speciality dining, certain spa services and photo services. Some services may be managed through contracts with third-party concessionaires. As noted by Clancy (2017) "once aboard passengers are captive consumers".

During 2020 cruise companies have experienced detrimental financial implications, in terms of revenue and profits and at the same time of upward additional costs (for instance, costs associated with substantial refunds for cancellations, costs associated with docking ships at ports where ships were quarantined, costs of maintenance even when not sailing for utilizing cruise ship engines to provide power to maintain onboard services, etc.) (Syriopolous et al., 2020).

The detrimental COVID-19 financial implications for cruise revenue, profits and the gloomy business prospects are underlined indeed by the highly volatile and dramatic collapse of share prices for the largest listed cruise groups. Indicatively, CCL, RCL and NCLH share prices declined sharply at $9.30, $22.33, and $7.77, respectively, as the virus burst (March 18, 2020), recording losses by 80-90% from the beginning of the year (share prices at $49.89, $133.49, and $57.60, respectively, on January 3). Cruise share prices, nevertheless, rebounded later, returning up at $27.21, $84.90, and $30.31, respectively (April 29, 2021), partly mitigating the earlier heavy losses (Figure 1).

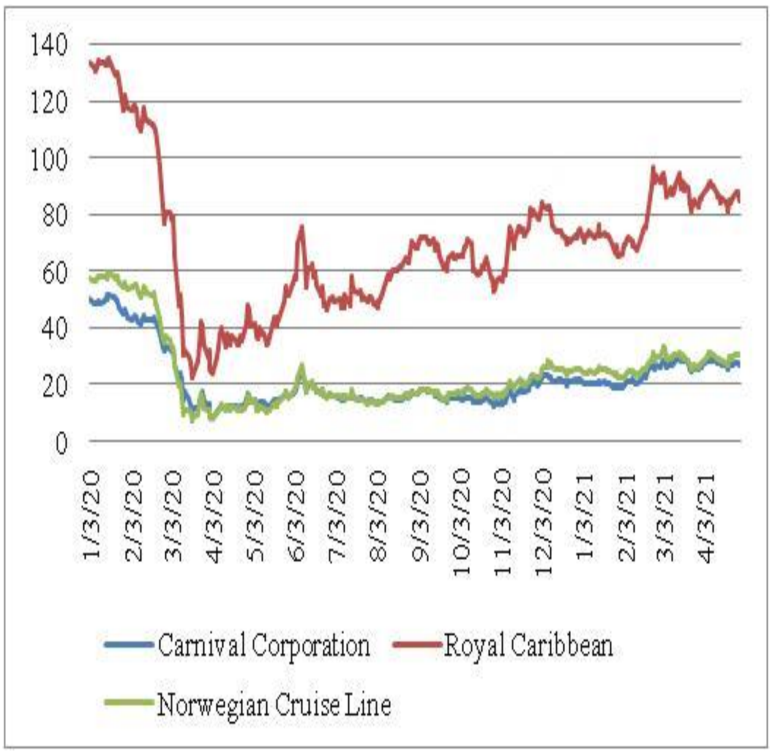

Figure 1 Stock market daily trends of the three main cruise groups ($)

According to a KPMG report (Giese, 2020), a set of direct responsive actions was under play by the cruise industry to keep future business intact, including bonus credit offers (110–125% of booking amount) instead of cash refunds, as an option to cruise passengers whose trips have been cancelled due to the pandemic, providing flexibility for future bookings.

As noted by Nhamo et al. (2020), major cruise ship companies were not included in many economic stimuli, and bailout packages rolled out by countries to support their productive sectors.

This was as a result of the cruise ships companies avoiding paying taxes in the past, registering in tax haven countries such as Panama, Bermuda, Malta, the Bahamas and the Marshall Islands (Frittelli, 2020). In that way cruise ship companies employed more workers from the developing countries, overworked them and pay them less. According to annual report filings, the major cruise lines pay an average tax rate of 0.8% — for below the 21% US corporate tax rate (Crockett, 2020). Based on 2020 figures, all three major cruise companies have seen their long-term debt exposure increased a lot against 2019, by 129% at $22.13 bln. for CCL, by 113% at $17.96 bln. for RCL, and by 93% at $11.68 bln. for NCLH.

In addition to the bad publicity the cruise ship companies got during tours in the midst of the COVID-19 pandemic, the industry has had to contend with potentially costly lawsuits and criminal investigations from all over the world (Nhamo et al., 2020, cit.).

STRATEGIES

To face the crisis, in 2020 CCL accelerated the exit of 19 vessels, negotiated the delay of 16 ships on order, executing a rationalization of the fleet reducing capacity by 13 percent (Carnival, 2021). In March 2021, RCL sold the Azamara brand, including its three-ship fleet, to private equity firm Sycamore Partners for $201 million.

By October 2020, at least three cruise lines: Birka Cruises, Cruise & Maritime Voyages and Pullmantur Cruises had gone out of business because of the pandemic (The Maritime Executive, 2020). Pullmantur Holdings (51% Cruises Investments Holding and 49% RCL) filed for reorganization under the terms of the Spanish insolvency laws due to the negative impact of COVID-19.

However, a number of new cruise lines announced their intentions to enter the cruise market in 2020, launching sales and marketing efforts during the COVID-19 pandemic. In some cases, the startups were carefully planned prior to the pandemic, while in some, cheap ships or other circumstances gave birth to a number of new cruise lines. Among them, the Greek Seajets, the English Tradewing Voyages, the Cypriot Swan Hellenic, the Indiana Cordelia Cruises, the Turkish Selectum Blu Cruises and the Chinese Foresee Cruises (Cruise Industry News, 2021).

The cruise traffic for 2021, estimated assuming post COVID-19 sailings begin March 1, 2021 at 50% capacity and reach 90% capacity by end of year, is around 13.9 million passengers (about the values of 2006/2007) (Cruise Market Watch, 2021, cit.). On the other hand, according to the forecasts of Maritime Strategies International, the cruisers for 2021 will be 11.9 million (Hellenic Shipping News, 2021).

From the point of view of itineraries, it is possible that some of them will change depending on the evolution of the pandemic and the maritime regulations of each country. Kalosh (2020) suggested offering short itineraries –such as three to seven days– with a limited number of ports of call. This solution is specifically indicated for cruise companies that own specific islands (as it happens in the Caribbean) and will be able to control easily shoreside experience. Focusing on national travellers has been a partial solution for other types of lodgements, and it could be the solution for the cruise industry (Sharples & Sit, 2020). If this happens, Espinet et al. (2021) predicted that in the coming years the target of cruise ships will change and will be addressed to domestic passengers. Maybe, another solution could be to stay more ‘at sea’.

Some countries may benefit from COVID-19 policies. Others, however, may be excluded. For example, in 2021 the port of Haifa (Israel) was chosen as an home-port by RCL for cruises where both crew and guests above sixteen years old will be vaccinated. On the opposite side Alaska risks for the second year to remain without cruises because of the norms of the U.S. and Canada (Rowan Kelleher, 2021).

CONCLUSIONS

The cruise industry has been heavily targeted by COVID-19 pandemic. It has caused the arrest of ships, the collapse of the number of cruisers with heavy financial losses for the companies. The outbreak of COVID-19 onboard several cruise ships, as well as the sudden termination of hundreds of voyages, significantly affected the perception and promotion of cruising as a ‘safe’ holiday (Holland et al., 2020; Pan et al. 2020).The cruise industry has also been affected by a narrative in the wider media of cruise ships as ‘petri-dishes’ (Awoniyi, 2020) and this lasting negative image may be difficult to overcome.

According to Skift Research (2020) “There is no question that the industry will come out of this crisis looking very different from when it went in”.

Although the time lapse for recovery is unknown and it will depend on the measures implemented, such as travel restrictions and the closure of borders, some sources estimated that it will take between 2 years and 4 years (Mayling, 2021; Reuters, 2021; Espinet et al., 2021, cit.) to obtain the same results than before the pandemic. Other sources believed it will take more years (Christoforous, 2020; Holland, 2021).

For the resumption of the cruise industry, it will be fundamental to see the course of the pandemic in the Caribbean and in the U.S. The Caribbean has currently a lower number of cases of COVID-19 and deaths per million inhabitants than North American or the EU (with some exceptions such as Puerto Rico and the French Guiana). However, today, there are few countries with high vaccination rates. It should also be noted that in the Caribbean the number of beds in intensive care in hospitals is limited with the risk of saturation even with a low number of admissions.

The average age of the cruisers, moreover, will have to be considered and could become lower.

According to NCLH and MSC (2021) the cruise industry expect a gradual phased relaunch of the ships after the voyage suspension period, with the ships initially operating at reduced occupancy levels. The timing for returning to service and the percentage of the global fleet in service will depend on a number of factors including, but not limited to, the duration and extent of the COVID-19 pandemic, including further resurgences and new variants of COVID-19, the availability, distribution and efficacy of vaccines and therapeutics for COVID-19, the ability to comply with the Conditional Order for U.S. cruises, port availability, travel restrictions, bans and advisories and ability to re-staff ships and implement new enhanced health and safety protocols.

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Cultural Journey to the 'seventh-gate city' focusing on the Museum of Thebes

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ABSTRACT

This project deals with the city of Thebes through a historical background and references to the monuments that the visitor encounters today on a cultural journey in the ''seventh-gate city''. The starting point of this project is the God of wine and entertainment Dionysus, it continues with the semi-god Hercules and concludes with the Theban Circle of the ancient tragedy of Oedipus. Thebes, has been the inspiration for famous men of letters, such as Sophocles and Aeschylus. Today the renovated museum encloses its long history in its exhibits. Those exhibits are of invaluable historical and cultural value. Because of these, the museum of Thebes is ranked as one of the most impressive in Greece.

Keywords: Thebes, excavations, Theban Tragedy Cycle, monuments, Excavators, Museum of Thebes, Kadmeia.

Introduction

Te seventh-gate city is said to have been founded by the mythical Prince of Phenicia Cadmus and in its early years it took his name, Kadmeia, as reported by Berman (2015). In the historical land of Boeotia that stands between the Evian gulf, in the north, and in the Gulf of Corinth, to the south, took root a city that would meant to be a decisive historical factor of developments and development for the area. The Boeotian plain thanks to the land riches offered by Lake Kopaida in the middle, but also its close distance from the two bays as we mentioned, made it a center of prosperity, according to Fossey (2019), and the dominant City in the area, strong enough to abound in abundance. During the city's time of glory, we meet Mycenaean Thebes, who seems to have kept in touch with rich Mediterranean centers as seen in Fappas and Galanakis (2012).

At the end of the classical era, Thebes under the leadership of Pelopidas and Epameinondas assumes a short-lived nine-year hegemony in Mainly Greece, according to Buxton (2017), having significantly reduced the dominance of Athens and Sparta which used to be superpowers. In 335 BC the city of Thebes was destroyed by Alexander the Great, because of a revolt (Charami, 2012). After a millennium and more of relative obscurity, Thebes, mainly because of the ability to cultivate Silk on her plain, is defined as capital of the Greek "Thema" during the middle Byzantine Period (8th - 12th century). (Ghilardi, and others, 2013) In addition, the City also plays an important role during the later Latin Empire (13th -15th century), until her fall, in 1460 to the Ottomans and their Leader Muhammad II, according to Rockwell (2017). We can add that after this event the area and the city of Thebes fall into decline, due to both oppression and change in ownership of the land which was mainly transferred to the Ottomans.

Theban Myth - Theban Circle

The historic city of Thebes according to legend was founded by Cadmus, prince of Phenicia, who was looking for his sister who had been kidnapped by Zeus. In a fertile valley on seven hills according to an oracle, Cadmus founded a city that was to write history, and in fact the Gods gave Harmony as his wife. The daughter of the royal couple was Semeli, who in turn gave birth to Dionysus, the god of Fun and wine, in Thebes. (Martin, 2019)

In the legendary town of Thebes the mythical hero and demigod Hercules was born, who was especially worshiped by the Thebans, as Colomo mentions (2017). In fact, outside the city and near the Electric Gates stood a sanctuary dedicated to Hercules, which was recently discovered, and the votive offerings found in it, according to Charami (2017), are exhibited in the

New Museum of Thebes. Thebes and Boeotia were important places of various sanctuaries and temples, which were dedicated to the ancient period according to Kubatzki (2018).

As for the Theban cycle of Tragedy, it is based mainly on the myth of the son of the king of Thebes Laius, Oedipus. According to legend, Laios learns from an oracle that his son will kill him when he grows up, so he orders a slave to kill his son. The slave disobeys him and relocates the child elsewhere. After years, and without knowing, Oedipus kills his father Laius, and marries his mother Iokasti. Together they have four children. When he learns the tragic truth he blinds himself and leaves Thebes. His sons who were rivalries for the throne kill each other, after a siege of the city by Polynikis, who lead the army of the city of Argos, against Thebes and his brother Eteocles. With Oedipus sons dead, all that remains are his two daughters Ismene and Antigone, as successors of his generation. Antigone reacts to the order not to bury the body of Polyneiki's brother and violates it by burying him (Larson, 2017). Her uncle Creon sentences her to death, but before this happens Antigone commits suicide on her own. This Tragic mythical story of an early period of Thebes life, even if it is true or not, inspired many writers and tragedians in the following years.

The cursed generation, as Oedipus generation is called, created many tragedies during the classical era of the 5th century. The tragic poet Sophocles wrote the most important of them, such as Oedipus the Tyrant, Oedipus on Kolono, with the narration of the exile of Oedipus in Athens according to Montanari (2017). He also wrote the Antigone Tragedy. Finally, a well known tragedy is that of Aeschylus, called "seven on Thebes", which describes the siege of the city by the army of Argos to the seven gates of Thebes.

Excavations and Excavators in Thebes

The first contact of younger travelers with the Boeotian land is due to a general interest foreign archaeologists had for Greece. Two of the first travelers as mentioned by Aravantinos (2015), are Leake and Dodwell, at the dawn of the 19th century. Then, after the creation of the new Greek State, K. Pittakis and P. Stamatakis are the first Greeks to excavate and protect the antiquities of Thebes and Boeotia from illicit dealers. Together with Pittakis and Stamatakis, Schliemann, according to Aravantino (2015), also shows a first interest in the area. At the end of the 19th century research is carried out by foreign archaeological companies in the area of Voiotia . At the same time, , according to Eidinow and Kindt (2015) Theban lawyer E. Kalopaidas discovers with the financial help of the Archaeological Society of Athens, the Sanctuary and the theater of Kaveiria.

The first to write a list of the antiquities of Thebes was the Curator of Antiquities Euclid Vagiannis in 1894(Charami, 2017). Furthermore, the first archaeologist to conduct systematic research in Thebes and in fact in the palace complex of the Mycenaean period was Antonios Keramopoulos who originated from Macedonia. During Keramopoulos' tenure in Thebes, exceptional archeological discoveries were made from 1905 to 1930, according to Vika, E. (2011). In continuous excavations at the central hill of Thebes, the Macedonian archaeologist discovered spacious rooms filled with rich treasures and pseudo-mouth inscribed amphorae (1929). (Armsatrong, 1980) These discoveries brought admiration in the world scientific community, and not unjustly, since those were unprecedented at least in mainland Greece until then. Keramopoulos identified his discovery with the ancient mythical palace of Cadmus, as Evans and Schliemann did with their own discoveries in Troy, Mycenae and Knossos, which they identified based on mythological and Homeric references. The important pseudo-mouthed amphorae of the palace complex of Thebes were inscribed in Linear B writing, an extremely rare writing for the Greek area that also certified the relationship between Thebes and Crete, according to Theologidou (2018). Keramopoulos according to Mozhasky (2014), also conducted excavations in his homeland Macedonia, Zakros of Crete and Kastoria. Antonis Keramopoulos contribution was recognized by the Greek State. He was given the honorary position of director of the Archaeological Museum of Athens.

During the interwar period (1920-1940), Ch. Karouzos is appointed curator of antiquities in Thebes which means he is responsible for the protection of antiquities during the German-Italian occupation (1940-1944) and also managing the Archaeological Museum of Athens but also that of Thebes. Many antiquities were hidden and buried inside Catalan tower of St. Omer, in the courtyard of the Museum. Despite of this, the Museum was eventually looted and some artifacts that weren’t protected were stolen. (Charami, 2015)

In those turbulent years before World War II, no great and organized archaeological discovery did take place, while the new curator of Antiquities I. Threpsiadis, undertakes to protect the antiquities as well as the museum from the constant looting. After the war with the initiative of Threpsiadis according to Aravantinos (2015), the old Museum was demolished, and a new one was built in 1962.

Important discoveries that caused worldwide admiration were conducted in Thebes by Evi Touloupas and Nikolaos Platon. Specifically, the two archaeologists discovered spacious rooms near the palace complex of Thebes that used to be the Armory and the Palace Treasury, according to Papadopoulou (2016). In the two central sites of Thebes, around Cadmium, weapons, horsepower, ivory objects, signs with Linear B writing etc, were found in the so-called "Armory". While in the famous "Treasury" room, according to Tsitsani (2019), quantities of cylinder seals from the East were found, but also jewelry and necklaces from cyan and gold, samples of which are now housed in the New Museum of Thebes.

In the 70's the curator of antiquities Th. Spyropoulos conducts excavations in the monumental tomb of Kastelia and in the tomb of Amfionos, according to Dakouri-Hild (2012), which looks like a pyramid. At the end of the 20th century V. Aravantinos undertakes extensive excavations mainly in the outside area of Kadmeia city. In 1993, according to Aravantinos (2015), signs of Linear BW writing are located randomly after drainage works, while in excavations that lasted from 1992 to 2000 a significant number of treasures, other burial objects and ancient cities of the dead were found around Thebes. (Vika, 2011)

First and Second museum of Thebes and the new Museum

The first Museum which was built in the city of Thebes opened its gates to the public in 1905, at the expense of the Archaeological Society of Athens. The building which housed the museum was the old barracks near the medieval tower of St. Omer according to Charami (2017). The first collected antiquities from all over Boeotia were already placed in that barracks until then. The first building, as characteristically mentioned by Aravantinos (2015), was a simple two-storey stone building, which hosted the archeological exhibition organized by Antonios Keramopoulos. According to Charami (2017), Keramopoulos' exhibition for the first museum was particularly groundbreaking for its time, because it exposed the findings, burial or not, in sets and not on the basis of their artistic significance.

This museum of exceptional importance for the city of Thebes, was of limited capacity for an area that was constantly giving new foundings. So it was decided to be replaced after World War II for a new, modern and more spacious building. From 1956 to 1962, Ioannis Threpsiadis, according to Aravantinos (2015), supervised the completion of the project and planned the re-exhibition of the archeological sites and findings of the area of Thebes. But he did not manage to rejoice in his creation, since he passed away shortly before the official opening of the museum. The second museum in Thebes was also relatively small and had at its entrance portico and bright rooms for the great exhibits that adorned it. As Charami (2015) reports, among the most interesting exhibits on display were, seal-cylinders from the East, inscribed amphorae and engraved columns of warriors of the Classical era.

At the dawn of the second millennium, the need for a new modern museum, worthy of the rich archeology and the history of Thebes was deemed necessary to construct. The old museum stood there since 1962 without any exterior or interior change for 45 years until 2007 where it finally closed for 9 years in order to be completely renewed and a modern archeological site using digital media and new technology took its place. During excavations concerning the expansion works of the new Museum of Thebes, a house which belonged in the 3rd millennium era was found, as reported by Theologidou (2019). The New Archaeological Museum of Thebes was consecrated in 2016 and some of the exceptional exhibits which can be admired by each visitor are Tanagra shrines from the Mycenaean period, of exceptional aesthetics stone objects and figurines, gold gifts and jewelry from the Mycenaean palace etc. (Riley, 2006). The figurines of the Cycladic culture look like those found in Thebes, an issue that testifies to Thebes' relationship with the rich Aegean culture according to the experts (Andrikou, 2019). According to Brysbaert (2008), amazing and majestic murals were discovered inside the palace complex of Thebes. Two of the most important archaeological exhibits of the Museum, are the design representations of these murals on pedestals, one with the procession of women from the Mycenaean Palace of Thebes and the other from the Mycenaean Palace of Gla in Kopaida with a mural of dolphins. As Charami reports (2017), the new Archaeological Museum of Thebes refers to Mycenaean palaces characteristics, and has an area of 1000 square meters containing a total of 18 sections of all historical periods of Thebes. The 11 main sections of the report findings / objects of the Museum, are related to those of the Paleolithic period in the area, and also to the objects of Thebes from the dawn of the young Hellenic State (1832). According to Charami (2015), the last stop in the tour of the new Museum of Thebes is the courtyard, where the visitors meet tombstones of exceptional artistic value, as mentioned by Papazarkadas (2014). There is also an excellent exhibition inside the medieval tower of St. Omer.

Located in the surrounding area of the Museum is the medieval tower of the 13th century of the family of the Duchy of Athens - Thebes, built by Lord Nicholas II St. Omer according to

Waksman, Kontogiannis, Skartsis and Vaxevanis (2015). One such rectangular tower of the medieval period also existed in the Athenian Parthenon, but was demolished by the competent authorities at the end of the 19th century. Today, as Charami (2015) reports, two of the three floors of the tower have survived. On the ground floor there is a short exhibition concerning the operation of the tower, as well as other towers of characteristic landmarks of the wider Boeotian province.

Based on the data of the Greek statistical authority[1], since 2016, when the museum of Thebes opened, we observe a fairly large number of visitors. For example, in the first year of operation of the museum, specifically in July, it had 28000 visitors, while the next year in 2017 it had 36500 visitors. In the following years this numbers declined. In 2020 due to the Covid -19 pandemic the museum had only 4500 visitors. In general, there is an increased number of visitors in the months of April - June. Bellow you can see the relevant diagrams.

Chart 1.

[1] Greek statistical authority. [Accessed December 29, 2020]. Available from: https://www.statistics.gr/el/statistics/-/publication/SCI21/2020-M07.

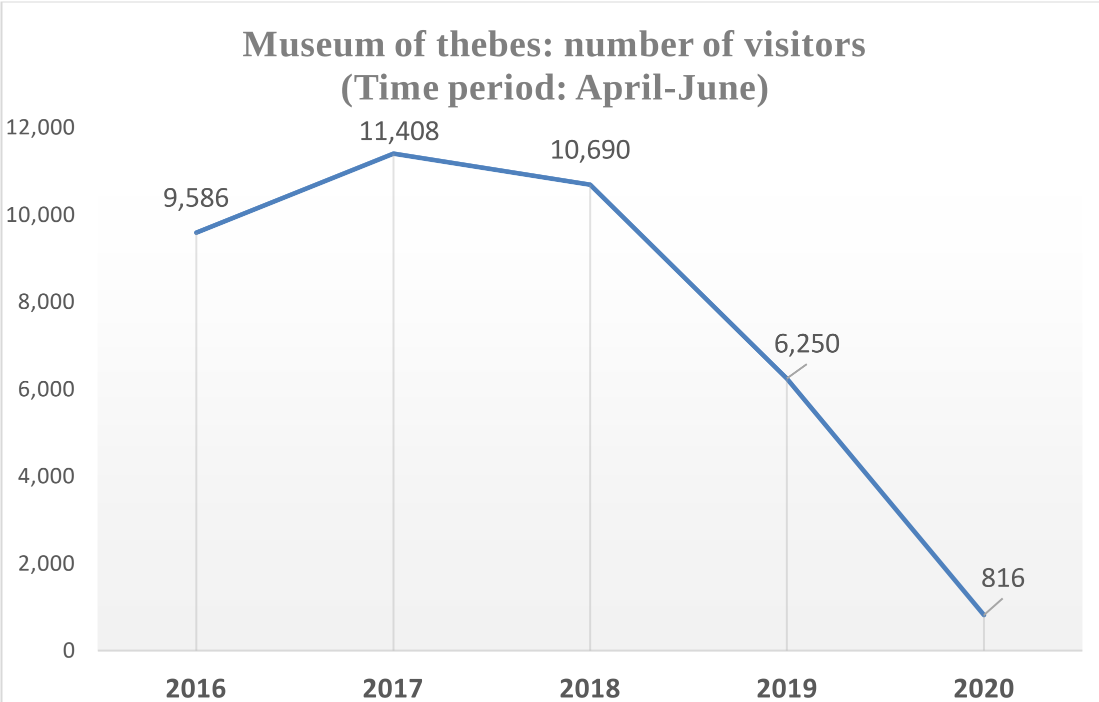

Chart 2.

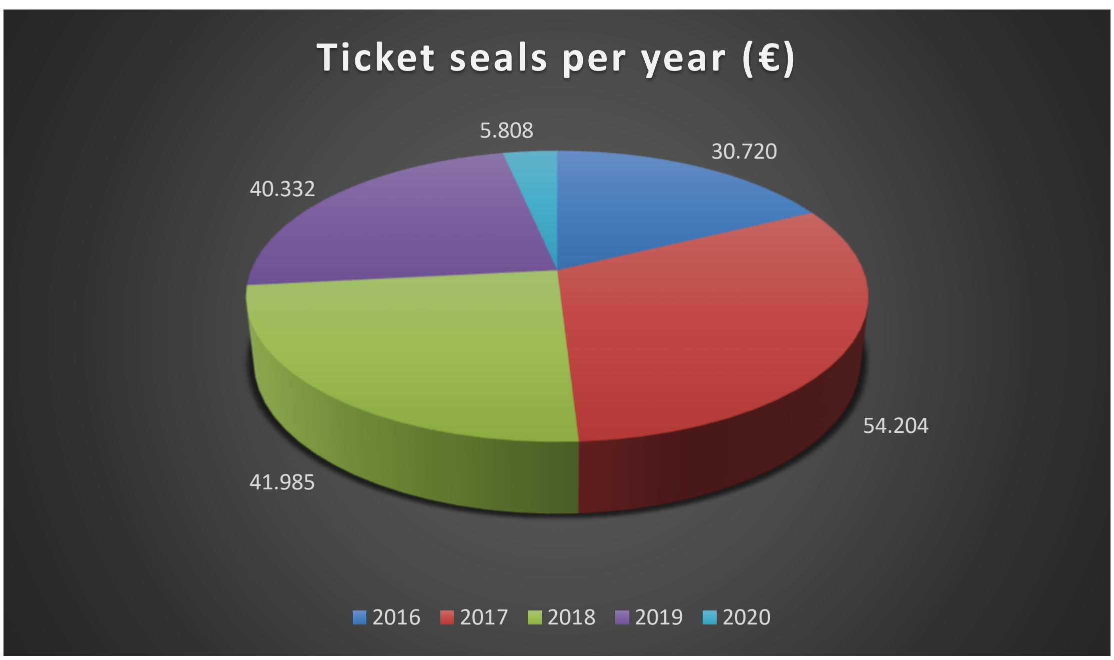

Chart 3.

As we can see in the charts above the Archaeological Museum of Thebes made and excellent opening in 2016 (chart 1). In 2020 visiting rates have declined due to the covid-19 pandemic. Evidence of the decline of the visiting rates can be found even on the months which had the highest pick of visitors (chart 2). Another interesting factor can be found in the museum ticket sales, which were high in the previous years but also declined in the years 2019 and 2020 (chart 3). Furthermore, a contributing factor that lead the tourist visits to declined is the lack of proper advertising, of the museum to travel agents.

Conclusion

The city of Thebes with a history of more than 3,500 years, may considered to be an important attraction of global tourist interest thanks to its excavation findings and its, crown – jewel, the new museum of Thebes. Thebes and the surrounding area need more attention from researchers and agencies. Such an example could be organized cultural routes to be offered as a lure to tourist packages of foreign and domestic tour operators. In conclusion we can add that, with a new and modern Museum the city stares to the future with optimism representing itself and all of Greece.

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MAP'S PRESENTATION SERVICE OF THE CULTURAL EVENTS OF THE REGION OF CRETE: CONTRIBUTION TO THE TOURIST AND CULTURAL PRODUCT?

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ABSTRACT

This paper is about how a map's presentation service of the cultural events of the region of Crete contributes to the tourist and cultural product.

Its aim is to investigate the effectiveness of this online service, i.e. to demonstrate whether the way cultural events are presented promotes both the cultural and tourism sector. Therefore, the research question is whether the service of map's presentation of cultural events is useful to the artists/creators who wish to make their event public, as well as to the audience that may include tourists and who wish to discover the cultural activities of the region of Crete. Moreover, its usefulness in terms of drawing historical conclusions from the study of events that are recorded, organized and digitally retained on the platform is explored.

During this research we followed the method of questionnaires. Specially designed questionnaires were given to scholars (mainly from academia) and managers of the tourist and cultural product. We have processed the results and presented them in this article.

Based on the conclusions derived from the questionnaires, this new service of map's presentation of events throughout the region of Crete is useful in the tourism sector since it promotes cultural events by connecting both the tourist and general audience with Greek culture, while promoting cultural-historic locations in which these events take place.

Some of these locations become famous (through the events and the map), attractive for visits and guided tours (tourist, educational), especially through the publication of the event.

Therefore, the service contributes to the wider publicity of cultural events which acts as an additional support for artists-creators and mainly for the promotion of culture in the region of Crete.

On the other hand, the results of the questionnaires showed that no in-depth historical conclusions can be drawn which could be used in academic studies. Therefore, the facts and the way they are recorded in this service cannot contribute to the increase of knowledge about the history of Crete.

Our research question was answered by the above results and, at the same time, the connection of culture with tourism was established. This means that, even in this service, promoting the cultural product is a precondition for the promotion of tourism.

Keywords: Tourism sector, cultural events, event's location.

1. INTRODUCTION

Culture is inextricably linked with tourism, especially in Greece, where there so many historical sites and a rich cultural heritage. Crete is an excellent example as there is a great number of cultural activities and events taken place throughout the year, most of them during the summer months.

Through the need to collect and publish the cultural events held in the entire region of Crete in order to highlight Cretan culture, while also acting as an additional support for tourism, an online service for the map presentation of these cultural events was created.

Purpose of this study is to demonstrate the contribution of this service to the tourist and cultural product. The effectiveness of this map's presentation service is investigated, in the intention to prove that the way cultural events are presented through this service promotes the tourism and cultural sector. Therefore, the research question is whether the event map's presentation service is useful to artists/creators who want to make their event public, as well as to the general public (users), who want to find all the cultural events that take place throughout the region of Crete. Moreover, its usefulness in terms of drawing historical conclusions from the study of events that are published, organized and digitally maintained on the platform is also investigated.

The public also includes Greek and foreign tourists vacationing in Crete, especially during the summer months, who are interested in getting to know the Cretan culture through the local events and the locations where they are held.

At the same time, this service seems to also support other parties involved in the tourism sector, such as tour guides, travel agents and hoteliers, who can use the service to organize guided tours, tourist visits, etc.

In this paper, the map's presentation service of cultural events is presented, and the method of questionnaires is applied to draw conclusions on its contribution to the tourist and cultural product. Specially designed questionnaires were given to scholars (mainly from academia) and managers of the tourist and cultural product. More specifically, twenty questionnaires were given to hoteliers, twenty to travel agents, twenty to tour guides, twenty to artists and twenty to academic historians. The results were processed and presented in this article to substantiate the research hypothesis.

All the above are part of the project entitled "Promotion of the tourist and cultural product through the symbolic representation of some of its components on VR 360 video map: the case of events" under the frame of the state aid action "Research – Create – Innovate" funded by the Special Management & Implementation Authority for Research, Technological Development and Innovation Actions.

First, in this study, the online map's presentation service of cultural events is briefly described. Next, the research methodology followed is presented. Then, the conclusions drawn are recorded and lastly, a summary is made to answer the research question and to present possible applications of the service and possibilities for its further development.

1. BRIEF DESCRIPTION OF THE MAP'S PRESENTATION SERVICE OF CULTURAL EVENTS

This service has the form of a space-time map of events[2] as it provides a geographical (spatial) depiction of events that take place in all areas of Crete throughout the year. It includes two pages.

The first page consists of a website (form)[3] that provides easy registration and description of cultural events (with semantic terms or tags) by their creators or administrators in an appropriate content management system or repository.

The second page is an online search engine that collects data describing cultural events from specific URLs. It has search filters such as dates, areas, category, location, entrance, and social event tags. As result of the search filters, "pins" appear on a Google map and by clicking on them, one can view basic information regarding the specific event: title, date, time, and location.

Then, by clicking on the title of the event, a card with a short description of it is displayed, which is connected to its full description, as well as to a VR 360-degree video of the location where the event takes place, thus constituting an added tourist and cultural product.

VR 360-degree videos have narration and subtitles in English and Greek, giving historical information about the location of the cultural event, as well as information about the use of the location and technical data, which are useful for the creator of the event but also for the visitor who gains knowledge of the location where the event will be attended.

In addition, the visitor can evaluate the event afterwards, with comments, reviews, and the use of social tags.

2. METHODOLOGY

The purpose of the article as mentioned above is to investigate the usefulness of this service for the tourism, cultural, educational, or historical sector.

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[2]http://ncrawl.nmlabs.gr:8090/ui.
[3]http://ncrawl.nmlabs.gr:8090/ui/login

To prove the usefulness of the service, the study followed the method of questionnaires. Questionnaires are used in quantitative surveys combining also qualitative results.

The questionnaires given were structured and designed with a defined set of closed questions (Bernard 1999). Nevertheless, there was some relative freedom in discussing the given research subject with the respondents. Since the questionnaires were completed in a live meeting with each respondent, the respondent was verbally informed of the introductory research data, such as the research conducting organization, the name of the company, etc. Anonymity was agreed. The researchers asked the questions, gave clarifications, where needed, and filled out the answers of the respondents.

The questions asked first were directly related to the topic under investigation. In the responses to the closed questions there might be some further discussion. In the end, some biographical data were asked and noted, not to be made public, but to be taken into consideration for the interpretation of the responses.

The public to which the questionnaires were addressed included different job categories, such as hoteliers, tour agents, tour guides, artists, and academic historians, in order to be able to cross-check through their responses our original research hypothesis concerning the promotion of the tourism and cultural sector through the event map's presentation service. The questions were common to all these groups so that there be a single questionnaire with answers around the same topics.

More specifically, the questions were as follows:

1. Does this service include the categories of information that you consider useful for the publication of each event?
2. Do you think that the process of registering events in this service is easy and functional?
3. Is the classification followed by this service effective in searching for information?
4. When it comes to information retrieval, do you think tags are effective?
5. Do you think that the search filters of this service meet the specific goal of the user?
6. Did you find the representation of the event's location in the 360-degree video useful?
7. Do you think that 360-degree videos of the locations maximize the user experience by giving the location information in audiovisual manner?
8. From the artists' point of view, is the information and functionality of the location useful?

9. Do you think that locations in Crete that host cultural events can be advertised through this service?
10. In your opinion, does this service promote Crete as a tourist destination?
11. Do you think that the cultural events that take place are promoted enough by this service?
12. Through the thematic, spatial or temporal study of this service, could historical conclusions be drawn?
13. To what extent does the use of such a service increase the existing knowledge about the history of Crete, based on the facts as recorded in the service?
14. Do you think that this service can be useful in organizing tourist visits/ tours in Crete?
15. Do you think that this service contributes to the organization of student educational visits to cultural sites within Crete?

The answer options were in two groups. One included “yes”, “no”, “maybe”, “other” and the second included “a lot”, “a little”, “not at all”, “other”.

The sample consisted of 100 people, both men and women. 20 questionnaires were given to artists/ creators, 20 to hoteliers, 20 to travel agents and tourist guides, 20 to the general public including Greek and foreign tourists and 20 to academic historians and archaeologists. Their average age was 50 years with a higher level of education and Cretan descent.

Fist, the participants were presented with the service online, and they were given time to browse the service on their own to get a general picture.

3. QUESTIONNAIRE RESULTS

The following answers were given to the questions asked.

When asked if the service includes the categories of information that are useful in relation to the publication of each event, everyone answered in the affirmative. They also considered that the process of registering events in this service is very functional and easy.

Regarding whether the classification followed by this service is effective in searching for information, most of them answered in the negative.

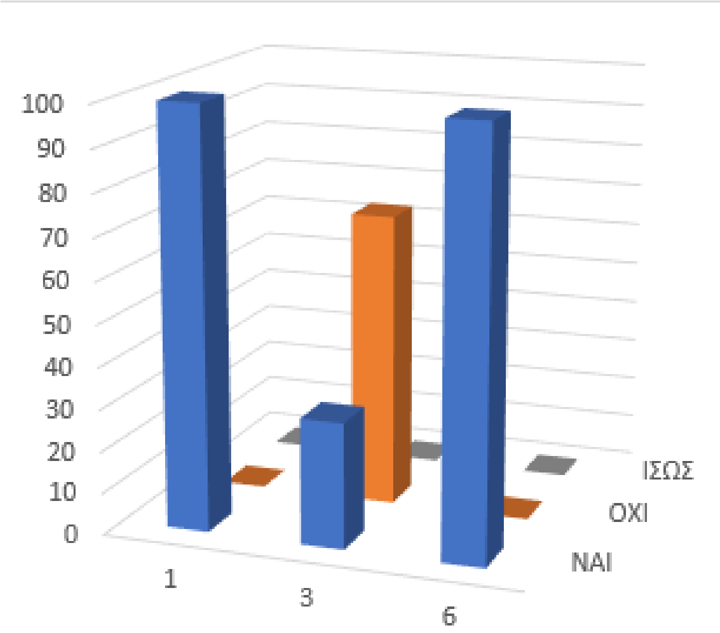

Figure 1: Usefulness of Information

On the contrary, everyone thought that tags are effective when searching for information.

When asked if the search filters of the service meet the goal of the user, everyone answered in the affirmative and even checked the option “a lot”.

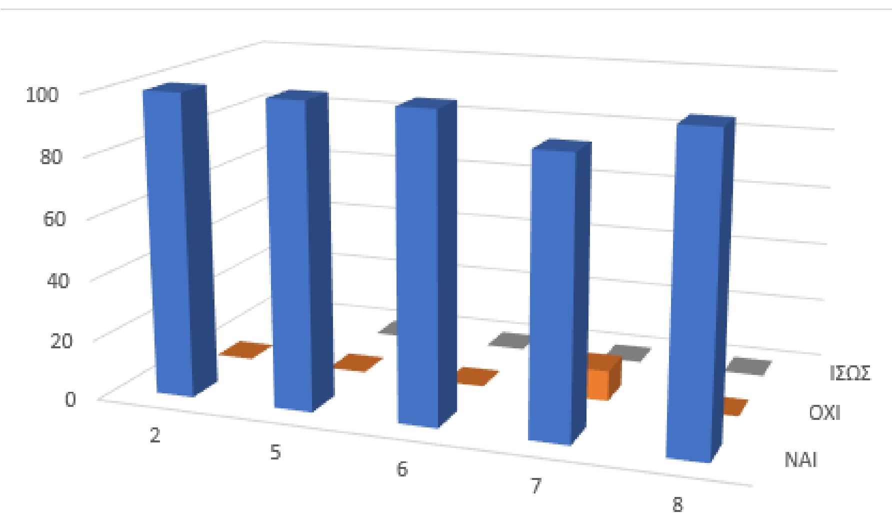

Figure 2: User-friendly services & user experience

Everyone found the representation of the event's location in the 360-degree video very useful.

In addition, most respondents answered that the 360-degree video presentation of the locations greatly maximizes the user experience by providing information about the locations in audiovisual manner.

Moreover, everyone agreed that the information and functionality of the location is very useful from the artists' point of view.

When asked if they believe that locations in Crete that host cultural events can be advertised through this service, all 100 respondents gave a positive answer.

The same number answered that Cretan tourism is promoted by this service a lot, and so are the cultural events that take place, as they suggested.

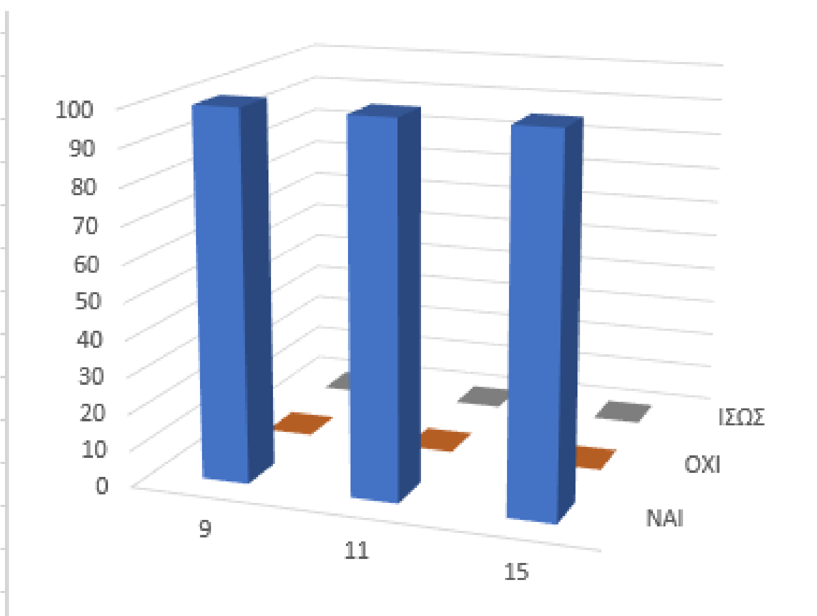

Figure 3: Promotion of cultural events

When asked whether historical conclusions could be drawn from the thematic, spatial or temporal study of this service, 80 answered "maybe" and 20 "no". It should be noted, however, that those 20 who answered "no" are all academic historians and archaeologists, whose views have different significance because this question is directly related to their field.

To the next supplementary question about whether the use of such a service increases the existing knowledge about the history of Crete, based on the facts as recorded in it, 40 answered “not at all”, another 40 “a little” and only 20 “a lot”. It should be noted again that 20 of those who gave a negative answer were the academic historians and archaeologists.

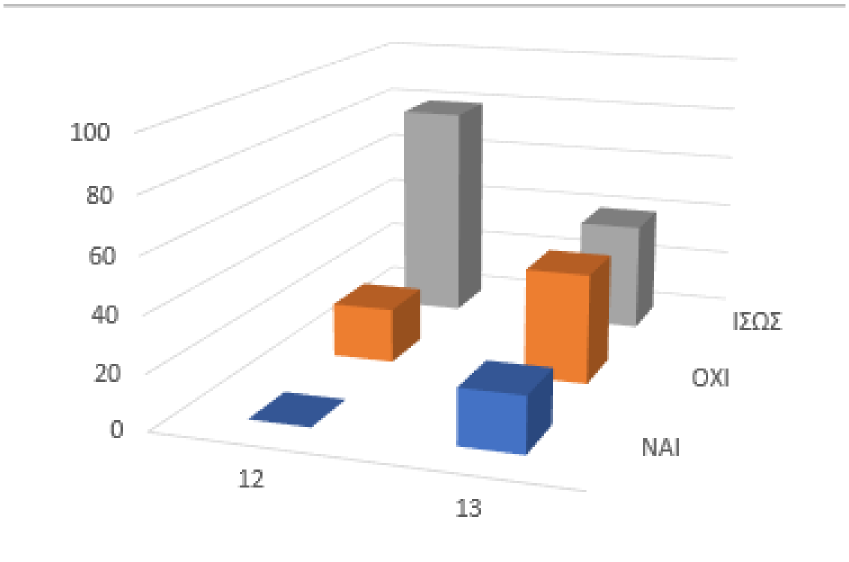

Figure 4: Science/ History

To the penultimate question regarding whether this service can be useful in the organization of tourist visits and tours in Crete, all 100 answered in the affirmative, showing that this service can have a significant contribution to the promotion of tourism.

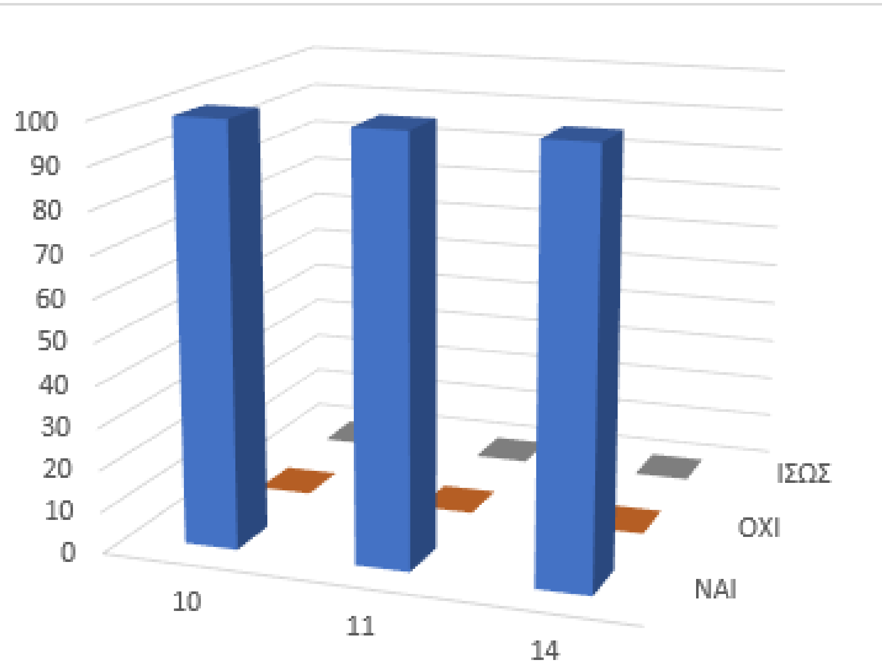

Figure 5: Tourism

The above statement is confirmed in the very last question. Everyone responded positively on whether the service contributes to the organization of student educational visits to cultural sites within Crete.

The answers given to the questionnaire confirm the research question of this study.

In particular, from the perspective of tourism, tourists and visitors as the general public, travel agents, tour guides and hoteliers said that such a service seems to be user-friendly and useful as it gathers a lot of information about cultural events and their locations in all four prefectures of Crete. As they claim, it gives them the opportunity to direct tourists to possible local events and visits to historical and cultural sites when cultural events are held there.

They also said during the conversation we had that the representation of the event's location on a 360-degree video that gives all the audiovisual information, can also work as an advertisement, arousing the visitor's interest to visit the location and attend the events held there.

In general, they think that this service promotes Crete both in terms of tourism and culture. Regarding the cultural sector, all the participants, and most of all artists/creators, found the service quite easy to use and functional in terms of registering their events and searching for an event by using the filters, as well as complete as to the information provided on the events.

Regarding the representation of the event's location in the 360-degree video giving the information in audiovisual manner, the artists/creators said that they found it very useful because they can understand, especially from the technical features of the location as well as from the spherical video view, whether the specific location is the right one to organize their event. Moreover, if they do not have the opportunity to come to Crete and visit the location themselves, this video is very helpful.

Finally, everyone said that cultural events seem to be promoted a lot by this service.

Regarding whether historical conclusions can be drawn from the thematic, spatial or temporal study of this service, most of them said "maybe". Some of them said that if, for example, one searches the period 2020-2021, one can see a greatly reduced number of events, if not at all at some points, which is a solid reference to the lockdown period we were going through during the Covid-19 pandemic, and this cannot be but a historical conclusion.

Academic historians and archaeologists, on the other hand, who interpreted the question differently, possibly as to whether the service promotes in-depth historical knowledge, answered in the negative. In other words, they do not think that this service could be useful in the historical aspect.

To the possible connection of the service with the increase of the existing knowledge about the history of Crete, most answered "not at all" or "a little", showing that they do not share this view. Especially, it was all the academic historians and archaeologists who answered that "not at all" can this service increase the knowledge about the history of Crete.

On the other hand, the same portion of respondents (academic historians and archaeologists) said that this service can promote the tourist and cultural product. They also pointed out the usefulness of mapping the locations, giving the visitors and tourists the possibility to see the cultural venues on the map and to organize day trips (itineraries), visits and guided tours combined with the dates of the events.

4. CONCLUSIONS

It is, therefore, concluded that this new map's presentation service of cultural events of the region of Crete is useful in the tourism sector because it promotes the cultural events and the cultural and historical locations in which they take place. Some of these locations become known (through the events held and the map) and attractive to visits and guided tours (tourist, educational purposes), especially through the publication of the event.

The service also contributes to the wider publicity of cultural events, a fact that acts as an additional support for artists/creators, especially for the promotion of culture in the region of Crete.

The VR audiovisual representation of the locations with 360-degree videos also plays a major role as it highlights historical information, functional and technical features of the locations, which is very useful for artists/creators who search for the right location to organize their event and may come from another city or even another country and have no opportunity to visit the location beforehand.

On the other hand, the results that came from the questionnaires showed that no in-depth historical conclusions can be drawn that could be used in academic studies. Therefore, the historical facts and the way they are recorded in this service cannot contribute to the increase of the knowledge about the history of Crete.

Our research question was confirmed and at the same time the connection of culture with tourism became obvious. In other words, even in this service, the promotion of the cultural product is a precondition for the promotion of tourism, because tourism among other things somehow manages to transfer our culture to other peoples.

This service can have various commercial and non-commercial applications. It could be used by the Region of Crete or the Municipalities of Crete and constitute a type of dynamic, constantly updated repository of the cultural events held in Crete to promote the cultural and historical sites of each prefecture.

In general, however, this service can also be a springboard for other online services or applications designed and equipped with new technologies that could be broadly involved in the promotion of tourism combined with culture.

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A Travelogue in Film Tourism

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ABSTRACT

The purpose of this article is to display the role of lands and places that have a special cinematic significance, since they have been spots of inspiration for directors and producers to shoot films on the big screen. This text aims to investigate the role of cinema to economy, culture and tourism of the mentioned areas and its contribution to their promotion and development. References from United Kingdom, Italy and Greece will be presented and utilized as case studies that research the main frame of film tourism management in destinations.

Key Words: film tourism, cultural tourism, economy, image, tourism destinations

An introduction to cultural tourism

In 1985, UNTWO introduced cultural tourism as a cultural motivated journey (Moira, Parthenis, 2011) which includes a wider range of cultural activities, such us history, arts, museums, religion, gastronomy, etc., configures the global heritage and highlights a location as a potential tourism destination. The proper management of above activities can imply to positive impacts in local or national economy, society, job creation, reduction of seasonality and extension of tourism season, attracting tourists/visitors of high standard of living, redistribution of tourism flows in rural and mountainous areas and reconfiguration of prices (Michopoulou, Maniou, 2020).

In tourism industry, products are provided that focus on sustainable tourism development. Specifically, it isn't about goods or services but about products in a wider meaning, which use sustainable policies and are offered as alternative ways of the tourism experience. The foundation of the tourism sustainability is the development of alternative tourism and its forms, where special issues such as environment, culture, nature, gastronomy, etc. are combined with each other (Coccossis, Tsartas, 2001) and simultaneously it is provided an opportunity for both tourists and locals to share new experiences and positive feedback (Galani-Moutafi, 2002). Culture is the most valuable and important element of any host country, because it contributes to the development of tourism by offering resources such as monuments, archaeological sites, customs, arts, letters, human rights, landscapes of ecological interest, sporting events, etc. As places become "sights, historical events become today's tourism "experiences" and as every aspect of the real is reshaped for the "tourism look", reality becomes one with the hyper-reality, at least for tourists (Buchmann, et al., 2010). *"Visual culture"* dominates societies that have invested so deeply in the visual reproduction and archiving of living experience (Barnaby, 2018).

Film tourism

The evolution of image digitization has replaced reading and many literary texts have been transferred to cinema screens. Many popular and classic books became movies and TV series, such as Les Miserables (2000), The Lord of the Rings (2001-2003), The Game of Thrones (2011-2019), through which, many locations have become top tourism destinations. People with longing for the cinema, also become potential tourists / visitors to destinations where films have been shooted. As a result, the specific locations have gained high demand, exploitation and tourism development (Kim, et al., 2017). According to Hahm & Wang (2011), nostalgia combined to the "pilgrimage" and the escape from everyday life, motivate tourists / visitors to choose such destinations.

Heitmann (2010) claims that, tourism based on movies includes sightseeing tours to a destination or to an attraction that appears on TV, video or on cinema. A new form of tourism arises, film tourism, whose precursor is mainly the literary tourism. Common point of the two forms constitutes the creation of new tourism destinations and familiar images through narratives, which now become visual (O'Connor & Kim, 2013). Film tourism and related tourism concepts including the effects of television, film and media culture have become more popular and discussions on this topic include economic impacts research, marketing and placement products, tourist's motivation and experiences and the image of each destination (Heitmann, 2010).

Dyer (1981), as reported by Papadimitriou (2000), points out that entertainment, like tourism, offers the image of something better in order to help someone escape or something that someone wants deeply and everyday life does not offer it to him, i.e. alternative choices, hopes, desires, the feeling that things could be better, that something other than what can be imagined that might come true. Films are capable of creating positive impacts on local economy, destination image, property prices, traffic and infrastructure, but also are capable of having a negative impact on the environment, infrastructure, traffic, property values, host community, visitor's experience, economy, culture and privacy (Hahm & Wang, 2011).

Busby and Klug (2001) provide an extensive list of different forms and characteristics of film-induced tourism:

• The location of a movie can be an attraction itself (before or as a result of the movie).

• Film tourism can be a part of the holidays

• Film tourism appears as a unique and main purpose due to special interest.

• Film tourism packages can be created by the private sector,

• Natural landscape, historical background, story theme, actors, symbolic content and human relationships can serve as images and important events for the cinema

• Film tourism in places where romantic scenes have been shot

• Travel programs

A survey conducted in the summer of 2004/2005 and 2005/2006 focused on analysing three 15-day national tours each, with each tour covering at least 30 locations between Queenstown on South Island and Auckland on North Island of New Zealand and relatively on-site study of these conducted tours, allowed in-depth the examination of selected features related to the tourists' expectations and experience of the trilogy ''The Lord of the Rings (2001-2003)'' for a period. Results from two questionnaires which were shared before and after the tour, and through interviews, showed that most of the participants did not consider themselves fans of the movies but were looking forward to living the experience of landscapes and specific locations. However, they had differences significantly in their motivations and expectations regarding their tourism experience in New Zealand. Many others claimed that they wanted to live in New Zealand and that was extremely important to them. Also, everyone perceived the position of New Zealand as a fair presentation of Middle-Earth described in Tolkien's novel and many considered its setting to be authentic and worth a visit. Finally, almost all participants continued to interpret this destination as a green and friendly place without significant issues. In this case the supporting role of the landscape both in the Lord of the Rings films and as a background for the trip could not be underestimated, as it offered a satisfying tourism experience, unlike other films where there was a difficulty in this combination (Buchmann, et al., 2010).

Indeed, film productions are attracting a growing niche market of tourists who are fascinated by the images of destinations as portrayed in the films and have positive effects, such as enhancing the image of the destination and developing tourism flows (Volo, Irimiás, 2015). There are many benefits that become apparent, such as increased economic activity and traffic, maintenance and further utilization of attractions, improvements in existing infrastructure, but there are also many negative impacts, such as the burden of the natural environment, resulting in the change of the landscape compared to film, mass, rising prices and exploitation of the locals in matters of labor (Hudson & Ritchie, 2005).

Film Tourism – Case studies

The destination image through *"filmography"*, in some cases, can reverse the preferences of potential tourists, so it is required by countries a destination image management strategy plan (Glen, 2010). The necessity to project a strong image of each destination is unanimously the key to a marketing strategy, which has to be followed (O'Connor, et al., 2008), by each country in order to attract more tourists / visitors. Marketing activities of a destination are divided into the following:

- film tourism marketing plan
- Innovation and product development
- mediation and new technology
- brand name - configuration of the destination image
- marketing in the film industry

(Volo & Irimiás, 2015).

United Kingdom

There are plenty of countries that have developed tourism through films/movies, such as the example of Great Britain, which has a wide range of films: *Mary Poppins (1964), Four Weddings and a Funeral (1994), Fever Pitch (1996), Mission Impossible (1996) and Sliding Doors (1998), Harry Potter (2001-2011), Sherlock Holmes (2009, 2011), 'Da Vinci Code' (2006), Pride* & *Prejustice (2003),* etc. and through these films it has been financially supported by tax revenues for the shooting of them, it has created a film industry that contributes to the cultural life of United Kingdom (Oxford Economics, 2007) and has formed a literary-cinematic identity as a tourism destination.

Figure 1. The National and Regional Screen Agencies

According to a study by Oxford Economics (2007), the film industry in 2006 contributed more than 4.3 million pounds to the country's GDP, some of which supported the creation of about 95,000 jobs. For the development of the film tourism product, a strategic plan for the creation of film infrastructure (studios) was set up and a network of regional agencies was developed (Figure

1) for the whole island, under the supervision of the UK Film Council, where a variety of resources was provided, aimed at the development of public access and its education in cinema and image (Oxford Economics, 2007).

Italy: Sicelia, Capri

Vacanze d'Amore (1954), was the first film that raised the awareness of the image of Cefalù's as a tourism destination. The production added glamour to the coastal zone of Sicily showing the idyllic seaside landscape and warm atmosphere and promoted its newly built tourism infrastructure (the French-owned resort "Village Magique"). Among marketing initiatives, events such as the Rally of Cinema with Anita Ekberg and the *Cefalù Fashion Event* related to films hosted by celebrities in collaboration with the newly formed DMO were organized (Volo & Irimiás, 2015).

The beauty of the unique place where Casa Malaparte is located, island of Capri, did not get unnoticed by the director Jean-Luc Godard, who directed in 1961 the famous film ''Le Mépris'', where the architecture portrays a leading role and it closely related to the script of the film (Romano, 2020), (Yunis, 2019). In 2016, in Cannes Film Festival, a poster for the event was published, immortalizing Casa Malaparte through Godard's film.

Film tourism, Greece – Development prospects

Greece's fame apart from its history, was expanded mainly in the 50's- 60's, when "Hollywood" productions, such as *The Child and the Dolphin (1957)*, *The Cannons of Navarone (1961)*, *Zorbas (1963)*, turned Greek islands into attractive tourism destinations. The promotion of the country, continues in the 80's, when Roger Moore starred in the film James Bond*: For Your Eyes Only (1981)* and magical images of Corfu and the imposing Meteora[4] unfold on the movie screen. Greece also enchants European cinema, with the director Luk Besson choosing Amorgos as the location for the filming of *The Infinite Blue (1988),* resulting in the large association of the island with its commercial success.

[4] It's a complexion of formative rocks in central Greece, near to Kalambaka city, hosting one of the largest and most precipitously built complexes of Eastern Orthodox monasteries

In 2001, Louis de Barnieres' *"Captain Corelli's Mandolin" (1994)* was screened in the cinema, where the island of Cephalonia was extensively promoted. The island gained a great reputation and the demand for visiting was boosted mainly by UK tourists, because according to Hudson and Ritchie (2005), a book and a movie together had a positive effect on that tourism movement. Local economy and society were strengthened, but at the same time mass tourism was increased and as a result the film remained as a memory and none of the building blocks left by the producers was used to promote film tourism in the area, everything was demolished and those in charge, local and national, in tourism simply contented themselves with the phenomenon of mass tourism.

The ´´cinematic journey´´ continues in the Aegean Sea, on the island of Mykonos, where Matt Damon as Jason Bourne in the film *Without Identity (2002)* enjoys its beauties, in Santorini with the film *Lara Croft - Tomb Raider: The Cradle of Life (2003)* with Angelina Jolie praises the volcanic landscape, in Skopelos with *Mama Mia (2008)*, where Meryl Streep, Pierce Brosnan, Colin Firth and Amanda Seyfried, take off the island enjoying its beauties under the sounds of Abba and in historical Mani, where the end of the romantic comedy story *Before Midnight (2013)* between Ethan Hawke and Julie Delby took place.

Also, Greek films and musicals have made special and extensive use of tourist images, depicting characters, landscapes and emphasizing the lines and images related to tourism. The characters travel to islands, historical monuments, picturesque villages, but also modern hotels, beaches and nightclubs, visit Athens and Thessaloniki, which are identified by the Parthenon and the White Tower, as well as their modern developments - streets, hotels, new buildings. (Papadimitriou, 2000).

Although Greece is one of the most important cultural destinations with a variety of cultural activities, according to the results of a study by SETE (2018)[5] which concerned the profile of incoming tourists, it turned out that the largest percentage of the European tourism market, 90%, prefers the country mainly for the sun and the sea in contrast to non-European tourists where 41% choose it for educational purposes. Although there is a background for the development of film tourism, in the aforementioned parts, there has never been a state initiative to create a development framework for implementation. It has settled for the contribution of Hollywood stars, who display the destinations for the promotion of their films, the fame of the past and the mass tourism.

[5] Greek Tourism Confederation – SETE (1991) - its mission is to constantly enhance the competitiveness of tourism and to promote its leading role in the Greek economy and society.

In particular, there could be a network of cinematic routes, part of the cultural paths, where the tourist / visitor through maps could experience the cinematic experience. In Kefalonia, although Horgota beach (Pelagia beach) is still a tourist attraction due to Captain Corelli's Mandolin film, and its scenes with Penelope Cruz, the abandonment and neglect of the podium set up by production, tarnish the idyllic landscape, which could be a landmark for the island.

Management film tourism destinations

Barich and Kotler (1991) recognize that measurements of a destination image are a useful marketing planning tool. The first step is to evaluate the image of the destination, where it involves two relevant parts: evaluation of the real image and evaluation of the ideal image of the target market. The second step is to measure the image periodically and systematically. The third is to compare the real picture to the ideal picture of the target market destination in order to identify differences between them. The fourth step is to develop strategies to address the identified differences, which then feeds the first or second step of the process. These strategic steps must be inherent in the management of a destination, focusing on the future by defining the management of its image as more than just a simple promotion of it.

The most important thing for destination managers is that the movie can change the image of the location and modify the availability and evaluation of a destination (Croy, 2010). The impact it can have on tourism is well documented through several case studies and is recognized in tourism council marketing campaigns around the world. For example, Movie Maps are available to direct tourists to key locations depicted in movies e.g. *Match Point, Closer, Bridget Jones, Love Actually, Thunderbirds, Miss Potter, Pride and Prejudice.*

Conclusions

The trend of today is the alternative journey that challenges and fascinates (Nathanail, 2007). The development of an AFT grid in a spatial unit enables it to be a remarkable destination (Varvaresos, 2009), which should be displayed and promoted in the tourism market, as a place with identity (Middleton & Hawkins, 1998). The modern tourist/consumer is more demanding, is possessed of ecological, cultural and consumer consciousness and seeks uniqueness in a tourist destination

(Varvaresos, 2009). The initial stage of image formation before the trip is the most important phase in the destination selection process (Hahm & Wang, 2011).

The image of the destination is a key component of the tourism decision-making process, and therefore, a key element in the management of a sustainable destination, while also influences future markets by creating awareness, availability and evaluation of the place and ensuring tourist's choice of destination (Croy, 2010). In film tourism, celebrities also play an important role in tourism selection processes and travel behaviours. Therefore, film tourism studies have recognized the important role of celebrity participation in the influence of travel destinations as tourism choices (Chen, 2017). All films play a key role in the holistic tourism experience and can have a positive impact on the destination and the community, if they are managed in a wise way.

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APPLICATON OF ELECTRONIC TICKETING AT THE HUNGARIAN RAILWAY

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ABSTRACT

The expansion of cyberspace is playing an increasingly important role in electronic commerce of goods and services. Public transport cannot be excluded from this process, as service providers who recognized the benefits of the system in time and applied it, could gain a huge competitive advantage over their competitors. U.S. airlines first introduced e-commerce solutions in the early 1980s because competition was so fierce that market players had to seize all the means to reap the benefits. Today, the vast majority of airline ticket sales take place electronically. E-tickets also appeared in rail transport, with European distribution starting in the early 2000s. In the case of the railway, new methods had to be developed, especially for different travel habits, open access, and so on. Of course, in this case, too, capital-intensive and large passenger railway companies such as Deutsche Bahn (DB), Schweizerische Bundesbahnen (SBB) and Société Nationale des Chemins de Fer Français (SNCF) first introduced it. In Hungarian railway transport, electronic ticketing options were introduced few years later. Today, less than 60% of tickets and passes are sold in physical form at ticket offices. According to company statistics for 2021, the number of tickets and season tickets sold in alternative ways (vending machines, internet, application) is constantly increasing. The aim of my research is to investigate the challenges of the implementation of the electronic ticketing system and experience of its application at MÁV-START Zrt. In my research, I typically use secondary data, foreign scientific results, and internal data of the company.

Keywords: rail, electronic commerce, efficiency

INTRODUCTION

In transportation, the sale of e-tickets as a revolutionary innovation first appeared in the aviation industry in the United States in the 1980s. In 1984, United Airlines introduced the electronic ticketing service on an experimental basis. The trial period lasted 6 years, after which this form of ticketing was actually introduced in the live.

The airline's courage and innovative idea provided a significant competitive advantage over its competitors. The industry has already undergone significant development during this period, showing a booming trend until the unfortunate events of 2001 (terrorist attacks against New York and Washington using planes).

Other airlines soon woke up to the huge potential of electronic, paperless ticketing systems (such as electronic documentation of sales, usage tracking, and billing processes). With this new method, passengers from anywhere in the world could book tickets online, pay for them and use their e-tickets after printing.

Due to the rapid changes of the technology, the role of the new online tools like social media and mobile applications formed a very strong influencing power on the customers' decision making procedure on travelling. (Grotte 2015)

Electronic commercial opportunities were introduced in Hungarian railway transport a few years later. In my research, my goal is to analyse the challenges of the introduction of the electronic ticketing system and the experience of its application at MÁV-START Zrt. In my research, I typically use secondary data (internal data of the railway company).

Railway in hungary

In the more than 150 years since the handover of the first Hungarian railway line (Pest-Vác) in 1846, the continuously expanding Hungarian railway network was able to follow the needs of industrializing economy, while being the engine of the development of modern society.

The era of the Hungarian railways up to World War I coincided with the intensive integration of the country into the European economic system and the booming pace of rail transport as a developing transport sector in an international context. During this period, one of the basic conditions for the economic recovery of the country, individual regions and settlements was the construction of an adequate railway network and the establishment of a railway connection (Erdeiné Késmárki-Gally–Fenyvesi, 2012).

In response to this need, one of the most dynamically developing railway networks in contemporary Europe was created in a few decades (Köller, 2005).

The Hungarian railway network was established in sync with European development and until the World War II it was able to keep pace with technical developments (network density, proportion of double-track lines, proportion of electrified lines, speed allowed on the track, proportion of seamless superstructure, proportion of bulky rails, number of stations, level crossings, structures, interlocking, etc.).

Today, the MÁV Group is Hungary's largest and most important fixed-track transport service provider. The responsibilities of the 30 member companies of the company group include, among other things, the operation of the track network, passenger transport, traction, maintenance and vehicle production. On July 1, 2007, the passenger transport subsidiary, MÁV-START Zrt. was established, which serves passengers on the Hungarian 7,273 km railway network at a total of 1,344 points (railway stations, stops) every day, with thousands of trains a day. The company currently operates 1863 passenger cars, 467 motor cars and 976 (diesel / electric) locomotives (MÁV-START, 2021). The changes in recent decades (such as motorization, the development of transport, changes in travel habits and needs, digitalisation, environmental protection, etc.) are having an impact on the environment and challenging the railways to respond.

Examining the passenger transport data (Figure 1) it can be identified that the measured data has been steadily declined since the 1970s, and with the development of motorization, the railways have been gradually pushed out of the traditional transport market. With the emergence of the market economy in the 1990s, and the disappearance of the previously artificially maintained economic environment, the railways collapsed as the adverse effects on rail transport occurred simultaneously. After the deepest point of 2010, due to developments and railway renovations, the decline has stopped, and the number of passengers has even increased by about 10 million in the last 10 years. This promising trend was broken by the downturn caused by the Covid-19 epidemic in 2020.

Today, the Hungarian railway network is characterized by a central layout that follows the centrality of Budapest arising from historical and economic conditions of the country. A significant proportion of the transit and long-distance segments of rail passenger and freight transport affects the capital. The national network structure has a positive effect on the direct provision of agglomeration and long-distance connections for Budapest (Tóth et. al 2014). The central role of the capital culminates in commuting among employees and students. More than 50% of the domestic railway passenger traffic appears on the railway network of Budapest and its surroundings

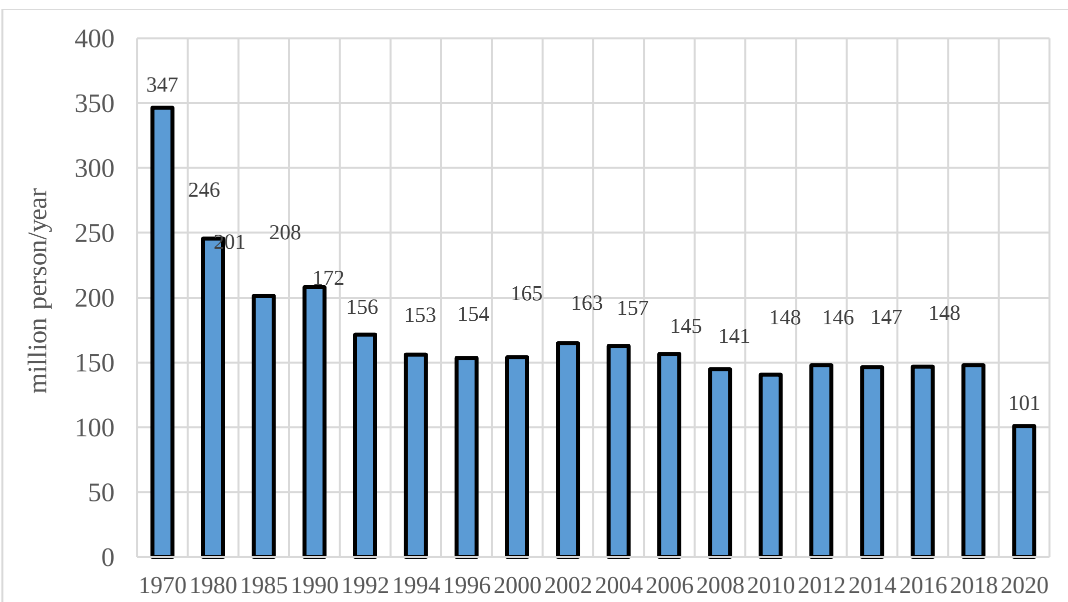

Figure 1: Statistics on rail passenger transport (1970–2020; million persons/year)

Source: (Köller, 2005; KSH, 2021)

Electronic ticketing in passanger transport

Beginning by U.S. airlines

Business passengers accounted for a significant portion of U.S. air traffic (nearly 70%) in the 1980s. They had a higher level of IT and technological background, so they could more easily adapt to the new ticket booking system than the so-called ordinary passengers.

The main benefits of the system for passengers were the comfort and a safer travel. While traditional tickets had to be carried by passengers throughout their journey, the use of e-tickets stored in digital format in the central database reduced the chances of losing the ticket to a minimum. The only condition for using the ticket is that the user can credibly identify himself with the help of a suitable card.

The main function of a traditional ticket is to prove to the transport company that the passenger has paid for the trip, document the ticket sales and allow the management of free / booked seats. The e-ticket allows booking and tracking through a central database. For the airline, e-tickets provide a number of clear benefits, the most important of which are the reduction of paper production and handling costs, and the elimination of the possibility of counterfeiting paper-based tickets. The introduction of electronic tickets has significantly reduced the number of lost, stolen tickets and made the use of pre-exchanged tickets unnecessary.

The benefits of e-ticketing have been so great that the International Air Transport Association (IATA) has discontinued the sale and processing of paper tickets since December 2007 (Bisignani – Peters, 2005).

There are many types of “smart” tickets in their material appearance, but they can actually be divided into two main groups: “barcode” tickets and “smart card” tickets. Both types include encryption, making them harder to counterfeit than traditional paper-based tickets, and this reduces the chance of ticket misuse. Each “barcode” type ticket has a barcode that allows it to be read by the appropriate electronic device and the contents contained in it to be displayed. In contrast, in the case of “smart card” tickets, the ticket is recorded on a plastic card-sized plastic sheet, thus allowing contactless reading using radio waves.

Railway application in Europe (Deutsche Bahn)

The spread of IT systems also appeared in the sale of railway tickets. In the early 2000s, it was introduced at the most capital-intensive railway companies with high passenger traffic, such as the Deutsche Bahn (DB), the Schweizerische Bundesbahnen (SBB) and the Société Nationale des Chemins de Fer Français (SNCF). electronic ticketing.

The main features of an electronic train ticket are very similar to a plane ticket. Like airline tickets, Deutsch Bahn (DB) online tickets are paid for in advance by passengers. Each ticket is assigned a unique number (Passenger Number Record) (PNR) and customized for each booking (Ng-Kruelle et al., 2006).

However, the system of selling electronic rail tickets has shown significant differences from the sale of e-tickets in the aviation industry from the very beginning. Table 1 shows the differences between the two systems through the example of Deutsche Bahn.

Table 1. Comparison of e-ticketing systems for airlines and railways

	Airlines - IATA	**Railways (DB Mobility specifically)**
Seat Reservation	• Obligatory • Limited seats	• Recommended but not necessary • Number of passengers on the train is not dependant on the number of seats. In some situations, passengers may also stand.
Checkpoint	• Before boarding • Closed public access	• Not applicable • Open public access
Ticket control	• Centralised computer booking system, • Online control units.	• Decentralised • Offline control units. These are based on existing IT and on board infrastructure.

	• Before boarding and checking in	• On board trains
Travel flexibility	• Not flexible with fixed travel plan • Fixed passenger list, thus paperless e-Ticket is possible when only the passenger identity is verified at given check points.	• Flexible. Not bound to trains or trips with options to break/interrupt journeys (depending upon tariff). • No passenger list exists. With no fixed exit points, it is also not certain which conductor will perform the control check.
Online booking and cancellation	• E-Tickets (or otherwise) need to be converted to boarding pass upon checking in. • After confirmed online bookings, online cancellation or changes to travel plans not possible	• E-Tickets are boarding passes, with or without reservations • Online cancellation or modifications to travel plans possible even after confirmed bookings.

Source: (Ng-Kruelle et al., 2006)

As it can be seen in Table 1, the biggest differences are in the accessibility (open / closed) and flexibility of the system.

Electronic ticket sales at MÁV-START Zrt

In recent years, the ticket sales of MÁV-START Zrt. Have undergone significant development. Following the international trends, sales of electronic tickets started at the end of 2011. Initially, it was possible to buy tickets online, print them at home or present them electronically on quality long-distance trains (IC, EC, EN, Express).

The biggest breakthrough came in November 2016, when the pdf-based electronic train ticket became available on all passenger trains of MÁV-START Zrt.

Another important sales opportunity for electronic sales is ticket vending machines, which are becoming more widespread across the country and, in addition to ticket purchase, also allow you to display timetable information and pick up tickets purchased online. Using MÁV-START ticket vending machines, tickets, season tickets, supplementary tickets, seat reservations, tickets for bicycle and live animals can be purchased for any domestic destination. The vending machines can be used to pay with cash and credit cards 24 hours a day, and it is possible to use contactless credit cards. The company recommends using of the vending machine to avoid having to queue at the ticket office, which not only saves time, but also money, since they offer a 5% discount off the ticket office price for these purchases.

The latest and most dynamically developing sales channel is the Internet electronic ticket purchase application, which has received almost 2.5 million purchase transactions in the past year, with a total value of approximately HUF 1.2 billion.

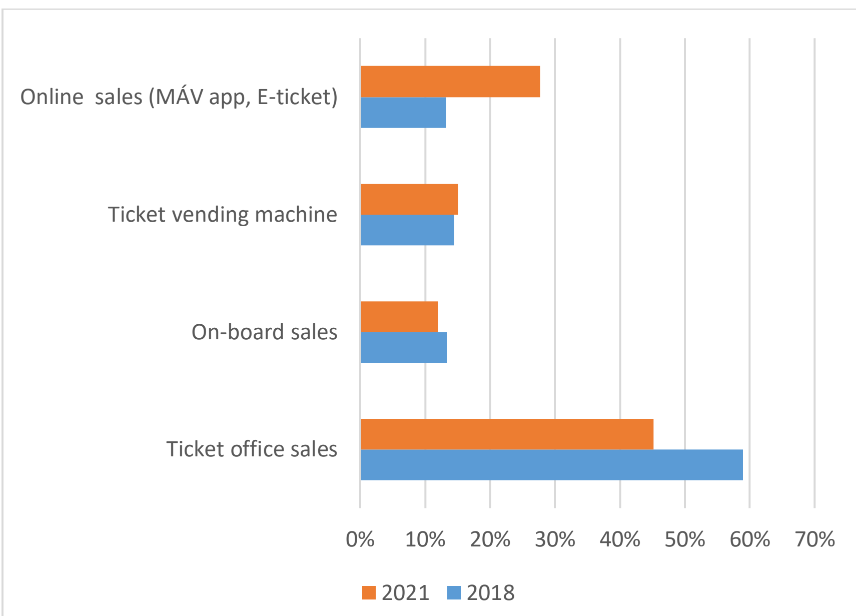

Figure 2: MÁV-START ticket sales channels in 2018 and 2021 (percent)

Source: Self-editing based on MÁV-START internal data (2021)

In addition to buying tickets, it also has a timetable finder and a map train tracking system. Since the launch of the timetable and map passenger information application and the introduction of e-train tickets, there has been a great demand from passengers to be able to buy tickets in the mobile phone application as well. MÁV-START has therefore expanded its very popular mobile application with 400,000 downloads with the ticket purchase function.

In December 2020, at the same time as its new schedule came into force, MÁV announced a significant change in its online ticket sales system. After more than a decade, the company's Elvira ticketing system has finally received a new, modern interface. In this context, Hungary's first full-offer online ticketing interface will be completely renewed this year: the new Elvira will already operate in the railway company's unified ticketing system, connected to the MÁV mobile application, so passengers can use both on their own or independently.

The most striking change when using the new Elvira is the modern, clean interface. The other key development is that users can use a common user account with the MÁV application, so the ticket purchased on the new Elvira can also be displayed in the MÁV app and received in PDF format by e-mail. This allows the ticket to be downloaded, printed, or forwarded to the person in whose name it is addressed.

They can manage their shopping and travel data in a single convenient interface, and can be modified by passengers if necessary. Users can initiate a refund for tickets purchased online on any interface, provided that this option was not excluded in the terms of purchase. Users can also use their saved billing and credit card information for both the web and app. Tickets can be purchased later on the new Elvira, but this feature is still available in the MÁV app.

In the recent period, the MÁV mobile application has been expanded with several important innovations. After the latest version update, in the case of domestic railway tickets redeemed in the MÁV application and some international START offers, the e-mail confirming the successful purchase also contains the tickets in PDF format. These can be printed out during the inspection or on the screen of a suitable device.

Modern, electronic ticket purchase is not only available for domestic trips, but also for those traveling abroad and foreigners traveling to Hungary.

START Europa tickets provide the best prices to Austria, Germany, Switzerland, Czech Republic, Slovakia, Poland and Romania from Hungary. The company’s cash decks sell tickets from nearly every Hungarian station to nearly every one of the destination countries – or return. To destinations, accessible by direct day trains tickets are also available from the online sales system and mobile app „MÁV”. START tickets in the app can be purchased only for the direct trains. Free seat reservation is included. Children traveling with adults, who have START Europa ticket, can get a ticket to Austria, Germany, Switzerland, Czech Republic and Slovakia for 5 € on 2nd class and for 10 € on 1st class. Price of child tickets to Romania and Poland depends on distance. With an adult holding a START ticket maximum three children can travel between the age of 6–14. (MÁV-START, 2021)

Conclusions

Maintaining and increasing the market share of the railway in transport is expected only if a quality service is implemented. Its main features: adequate frequency, punctual timetable, punctuality, modern, clean, comfortable fleet, safe take-off and landing conditions, intermodality with short walking distances, complex service at stations, P+R, B+R option, load handling, ticketing development of channels.

Improving the service level is one of the most important objectives of the Hungarian railway company. In addition to infrastructure and vehicle improvements, this is why the development of ticketing channels has also appeared. With the traditional sales methods for today's X, Y, Z generation – where the use of a smartphone or laptop is almost a necessity – it is not possible to increase the use of the service. It is therefore important that they have a high quality, reliable and reliable ticketing system.

This development is particularly important in the agglomeration of the capital, where more than 10,000 people use the services of the railway company every day.

Online ticketing is becoming more and more popular among passengers. According to the latest statistical data, the number of tickets and season tickets sold in alternative ways (automatic, internet, MÁV app) is constantly increasing.

The popularity of the e-train ticket is due not only to its speed and convenience, but also to the discounts given to passengers. With the significant discount, the railway company aims to make convenient and modern ticketing solutions even more attractive, thus reducing the workload of ticket offices and convincing new passengers that it is worth choosing the railway.

The railway company's medium- and long-term goal is to reduce the use of traditional ticketing methods, while further increasing the proportion of modern, convenient and cheaper ways of shopping.

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HOTEL FRONT OFFICE MANAGEMENT: THEORETICAL AND EMPIRICAL APPROACH

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Abstract

This work aims to investigate and record all aspects of organization, operation and efficiency of the Front Office for hotels. It refers to basic functionality parameters, namely: skills, staff skills, motivation and rewarding methodology, training and efficiency issues, and the general practices observed, for the proper functioning of the department.

Each department, and especially the reception, must continuously offer and improve the quality of services provided to customers. The ability of the reception's staff to answer questions, offer alternative solutions and fulfill customer's requirements is very important for the hotel to achieve its scope, Tania Kapiki Piveropoulou (1998).

Keywords: Front Office, training, staff motivation, performance

Reception staff - required skills

Reception and reservation staff must be fluent in foreign languages, especially those that are mainly used as mother tongue by hotel clients. They must also be acquainted with the online hotel program that uses the Hotel Office they are working with. A person working in Reception and Hospitality is required to be able to serve all kinds of needs of customers, at the same time being able to provide any necessary information for the customer. In this context, they should be able to be acquainted with: Customer Arrival Preparation, Customer Service on Arrival, Customer Quality and Hosting Supervision and Customer Departure Organization.

Along with that, receptionists must be able to prepare and update themselves with the necessary newest information on the tasks they are undertaking. Concluding, the number of responsibilities and duties of the reception and reservation staff along with their combined role can result to functional and organizational/administrative problems for the Front Office <u>if no clear delimitation</u> as to both type of works and time consuming for these works is established. Any delimitation alone, though, cannot be enough. Reception staff must be sufficiently experienced and trained so they often take the initiative to organize and resolve problems themselves without being obliged to wait for orders by their supervisor.

Front Office Software

Front Office consists of the following segments: Front Desk (or reception), Reservation Department, Concierge, Call Center (PBX), Executive Floor and Client Account Monitoring Department. Reception systems were not always the same; they evolved over time. For example, on a customer arrival, the employee was obliged to write customer details (name, number of persons, room number, etc.) in different forms and several times. As a result, the employee needed about half an hour's work to care for each arrival. After that, a system came around by the name "Roof", first appeared in America. This system made use of sophisticated forms affixed on a special support board, all filled in simultaneously using carbon paper. But today, with the use of computers, these systems have been replaced, Laloumis, D. & Roupas, B. (1996). In detail, the choice of an electronic system depends on the needs of the hotel business and the way of its function (size, type of tourists, interconnection of departments, etc.) Today several online programs (systems) are used by hotel companies in the Front Office (Opera, Protel, Hermis, Fidelio, etc.) These programs are also used in the hotel's reservation department; they are called PMS (Property Management Systems). It is worth mentioning that today most of the reservations come from the internet. Hotels run a web site providing complete information on the services provided and the possibility of direct booking. Furthermore, for the better functioning of the reservations department, many hotels that are members of large hotel chains (Marriott, Intercontinental, Hilton etc.) have installed a separate CRS - Computerized Reservation System in addition to the Front Desk system.

Training of the Staff of Front Office

The skills and qualifications of persons working in the Front Office depend on the tasks they are assigned to do. All Front Office employees must be polite, honest, pleasant, know how to deal with and solve customer problems, and most of all, be armed with enough patience. To achieve this, the management must set as a primary objective the continuous training of the staff in all fields of knowledge they deem necessary. In this way, hotel executives and employees know and understand the philosophy, mission and goals of the business, identify the procedures and processes they must follow to carry out their own tasks, and interact with other departments of the business. Exarchos G. (2004).

Additionally, the necessity of education lies in the fact that a large percentage of hotel employees tend to switch from one occupation to another thus creating this instability in the Reception Department. Again, many of them consider their job temporary with few of them returning next year.

Three basic types of training can be distinguished in the reception department:

- <u>Intra-department education</u>. It is about in-house training within the department. Usually the director of the department or the assistant director shall be responsible for training the staff on matters concerning this department. Intra-department education is provided on a regular basis and is continuous. Some well-organized hotels emphasize in staff training and integrate this training into the daily tasks of the manager and employees with few-minute training sessions usually taking place in shift change to ensure that all employees are involved.

- <u>Intra-company training</u>. Hotels periodically organize in-house seminars. These seminars are usually held on the hotel's site. For a hotel belonging to an international chain the training can be done at another chain hotel abroad. Staff specialized in training, already professionally experienced in the subject matter of the seminar undertake this training. Front Office employees are among the first in the business to be invited to attend in-house seminars since they must be well trained as front line employees.

- Out-of-business training. Often, reception staff participate in training programs organized by training companies. These programs usually have to do with learning new electronic systems and new technologies.

Lately, with the development of new technologies, distance education is often applied. However, this form of training is applicable mainly to global hotel chains that have educational platforms and employees have access to them by use of a personal code.

Staff Motivation

The Front Office Hotel staff motivation is based on the human factor. The products and services thus become of social character in the tourism market. So the surplus, or even the whole quantity of services offered, is not only intended to satisfy one's own individual needs, the employee, but especially the hotel's customers.

Let us consider the following diagram.

LOW

1: Psychological - Hunger, Thirst, Relaxation, Activity

2: Security - Free of fear and anxiety

3: Sociality & Love - Feelings, Love Relationships

4: Appreciation - Personal and by others

5: Satisfaction - Personal Acceptance

HIGH

above Maslow pyramid diagram argues that the theory of motivation is holistic and dynamic and can be applied to both work and non-work life level. Herzberg on the other hand (1968) proposed the idea of job enrichment as a follow-up to the KITA (kick-in-the-ass) which for most executives was an approach to employee motivation. This strategy includes the ability to modify the work of the employee so that it is more important and gives them the opportunity for recognition and greater responsibility: Tanke, M. (2001).

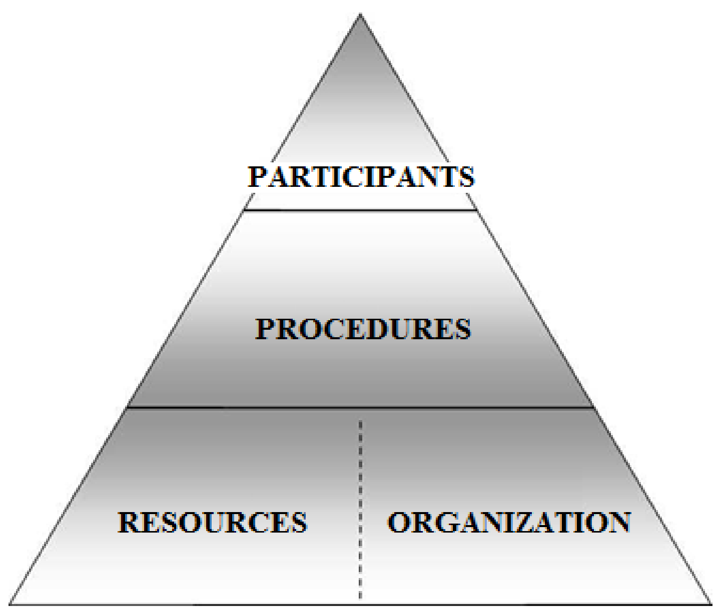
However, Herzberg's research found six incentives and eight disincentives. The incentives are related to the work itself and the disincentives to the work environment and are presented in the following table of the incentives and disincentives of Herzberg's theory.

Incentives	**Disincentives**
- Achieving a goal	- Administration and policy of the organization
- Recognition of effort	- Supervision
- Evolution at work	- Working conditions
- The very object of the work	- Interpersonal relationships in the organization
- Responsibility	- The salary
- Possibility of personal development	- Prestige
	- Personal life
	- Occupational safety

It is about a theory that is based on any workplace. Objections have been raised about the potential for motivation of some disincentives such as salary, prestige and interpersonal relations which, according to Herzberg, are not capable of substantially motivating the employee. In fact, however, everyday experience has shown that they can as well act as incentives. Vahari, A. (2006).

Performance of Front Office

Performance is defined as the quality of efficient, that is, productive, thriving (Tegopoulos & Fitrakis, 1993). In Business, performance is defined as a four-factor model. These are: The Participants, The Procedures, The Resources and The Organization (Kotler. P, 2000).

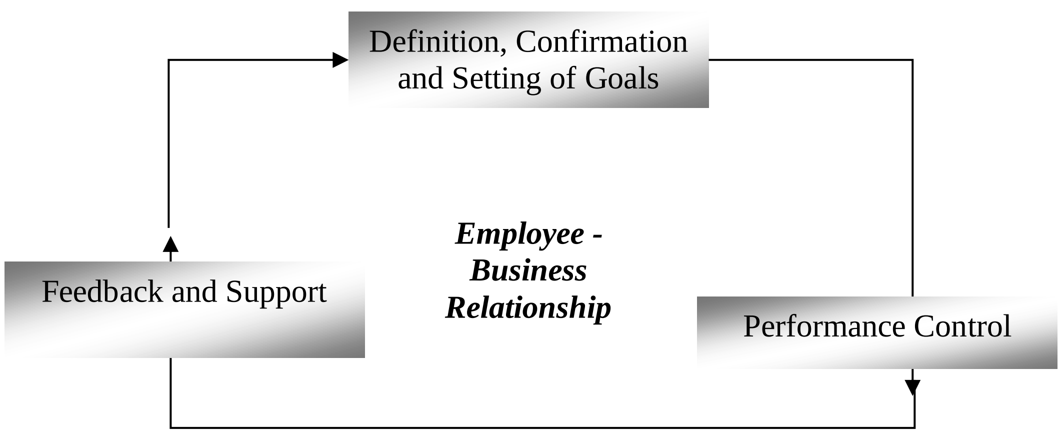


Source: Nayak & co. 1992

The question for the business is how it can add value, especially at a time when the business must increasingly rely on the knowledge, qualifications and commitment of its employees in order to remain competitive. The scientific management of performance first emerged in the early 20th century as a result of the studies of Taylor and others, which focused on identifying the ideal way of working.

Although there is no specific manageable model, performance management is an umbrella term, generally described as an activity cycle that combines similar elements. It is a cycle of activities where the employment relationship is influenced by the continuous process of setting goals, measuring efficiency and supply (Storey & Sisson, 1993; Clark, 1998).

The Effective Performance Management Cycle in the Reception Department is the central scheme in a Performance Management System and is based on the employee's psychological contact with the client. This means that when an employee signs a formal employment contract, this also includes the psychological contract, which is a set of expectations and understandings developed between the hotel employee and the client, since every client's expectations during their stay have been determined: Laloumis D. - Loupa Ch., (2007).



Karagiannis St. (1997)

Performance for the reception department focuses on the following: D. Laloumis, K. Sergopoulos (2017):

- Check in Speed: The speed at which the customer is served upon arrival at the hotel. The higher the speed of service, the more efficient the Check in Speed.

- Check out Speed: Similarly to Check in Speed, only this is about the customer leaving the hotel.
- Upselling: The attempt to sell further products and/or services to the customer that have not been requested for. This is directly related to the satisfaction of the client's hidden desires as discussed above.
- Loyalty Club: The hotel's attempt to accept "repeaters" who are also listed as "loyal customers". This effort can be linked to additional benefits to the customers on this list (e.g. discounts on accommodation, tour packages, etc.).
- Test Calls: Virtual request for booking and / or customer service from Front Office employees. The virtual request is made by an authorized person in the business without the receptionist knowing that a performance check-in process is currently taking place. Test calls are the best way to determine if the reception staff really provide quality service and whether the services offered meet high quality standards.

- Overtime Operating Cost Reduction: Front Office management tries to reduce operating costs from overtime by department employees without creating customer service droops (e.g. variation of shifts based on anticipated occupancy).

In fact, any increase in performance in a business must be accompanied by the proportionate quality. Efforts should not only focus on increasing employee productivity and efficiency, but also give a proportionate, perhaps even more substantial, basis to quality. For example, if in a hotel the effort to increase employee productivity for rapid customer arrival is not accompanied by simultaneous quality customer service, the work pressure on the employee at the time of arrival will produce "rude" behavior towards the client and possibly a tendency to impolite manners. As a result, any "high marks" to the hotel business due to quick service are essentially lost because of the negative behavior experienced by the customers.

Conclusions

One of the hotel's neural departments, the Front Office, whose vital role in a hotel is unquestionable has described and analyzed. The method used is a simple empirical approach to the tasks that allow for its estimation and evaluation.

In fact, it can be said that this department is the brain of the entire hotel business. The grounds for this fact are: In the field of customers' impression about the hotel, the Front Office is what primarily comes into contact with the customers, resolves their problems and fulfills their requirements. It is what gives the necessary information to the rest departments of the hotel unit.

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FILM TOURISM – CASE STUDY OF MATERA

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Abstract

Film tourism represents a large part of the global tourism industry and its targeted audience is still growing. The reason behind it, is the fact that for a wide range of people, the characters of a story, its events, which take place in altered realities, are the reason to travel. As a result, all the above are transformed into a tourist product. This article aims to highlight the dynamics of film tourism as well as the large percentage of its economic, cultural, anthropological, political and cultural impact in a country. This will be achieved by presenting a case study concerning the city of Matera and even smaller villages such as Sassi, which through the awareness of literal and then cinematic works written about them, managed to have the publicity and attention they deserved and as a result, these areas not only recovered financially but also improved the living standards of their inhabitants.

Key words: *Matera, cinema, Sassi, film tourism. Culture.*

Introduction

The term film tourism, according to Buchmann, is a visit to an area or place that has been used or is related to the production of a movie. Since the end of World War II, the Basilicata area has been used for more than 40 film productions. Most of these movies, from Pier Paolo Pasolini's "The Gospel According to St. Matthew" to Francesco Rosi's "Christ Stopped at Eboli", portrayed the Basilicata's regression and sadness, inspired by works by authors such as Carlo Levi and Ernesto De Martino. Matera is an excellent case study for film tourism and that is, because the first film productions made there depicted the same sad scenario as the productions in Basilicata. In recent years, it has starred in movies such as "The Passion of the

Christ" of Mel Gibson, who played a very important role in shaping the current image of Matera as a mysterious, cultural and dynamic city. Eventually, Matera received the title of European Capital of Culture for the year 2019[6] and this proves the impact and recognition it gained pan-European.

Matera in the past

In 1950, Sassi, the oldest part of Matera, was a set of caves and very poorly built houses inhabited by peasant families as well as the animals they kept and raised. People there lived in a "Paleolithic" world, which according to Togliatti was defined as "national shame".[7] After a series of laws, the city of Sassi was finally evacuated. However, in 1945 in "Cristo si è fermato a Eboli", Carlo Levi according to Manola (Manola et alias 2020) described the peasant world of Sassi as an ancestral universe, which was sacred, mysterious and magical but at the same time, poor, unhealthy and backward. People and their animals lived in humiliating hygienic conditions while being socially and physically alienated from the bourgeoisie. More specifically, Carlo Levi describes in his memoir at “Christ Stopped at Eboli”: “The houses were open to heat, as I walked through the caves, I could only see with the light coming from the front door. Some of them did not even have a door but a staircase or a trapdoor. In these dark holes with the torn walls of the earth I could see some pieces of miserable furniture, beds as well as tattered clothes hanging to dry. Dogs, sheep, goats and pigs were lying on the floor. Most families lived in a cave where they all slept together: Men, women, children and animals. This is how 20 thousand people live. As for the children, they were infinite. They appeared from everywhere, through the dust and heat, among the flies, dressed in rags or half-naked. "I have never seen such a picture of poverty in my life." (Levi 2006, p.85 cit in Manola et alias). Levi's memoir, which narrate his exile in the Basilicata from 1935 to 1936, testify to the brutal degradation and poverty that characterized the Sassi of Matera in a period of fascism. Manola (2020: 9) states that the writers who are the protagonists of their literary work act as guides, “but not only in mental journeys but also in real ones, and many times in particular messages that have to do with the society in which the novel writers and protagonists live and act". In 1937, a survey was conducted to determine the sanitary conditions of the houses that were around 3000: 17% of them were considered unfit for habitation. Many of them were dug into stones, with very little light, insufficient oxygen and a high level of humidity. By the mid-1960s, Sassi was almost completely evacuated and with it "the feeling that along with the people, the identity of the city had disappeared"(Felicetti M.,2016). At the same time, the evacuation of Sassi was not accompanied by an upgrade of the houses, which eventually led to the complete evacuation of the historic center. The issue of Sassi resurfaced in 1970. Law 126 in 1967 and Law 1043 of 1971 imposed the improvement and preservation of Sassi as a site of "historical, artistic,

[6] The European Capital of Culture is an initiative established in 1985 to reward each country for its culture and cultural heritage and is supervised by the European Commission.

[7] Palmiro Togliatti: He was an Italian politician and leader of the Italian Communist Party from 1927 to 1964.

archaeological and ethnographic interest". The legislative approach was considered not only from a social point of view but also from a historical-artistic perspective. However, funding provided by the Law of 1971 was cut short due to the country's financial obligations, and so the renovation finally began in 1986 with the Law 771. Subsequently, two two-year projects were created, each focusing exclusively on the remodeling of Sassi and the promotion of tertiary activities such as crafts. Eventually, the population of the area, the development of commercial activities and the infrastructures for accommodation increased in 1990.

Matera as European Capital of Culture in 2019

Matera has been a World Heritage Site since the early 1990s. The decision was made to participate as a candidate in 2013 for the European Capital of Culture of 2019[8]. The dossier, which was presented and accepted by the European Union, states that 52 million euros were allocated for cultural planning and 650 million euros for infrastructure, transport, urban regeneration, energy and digital programming. The resources allocated for cultural planning came from various organizations such as the Basilicata Region, by the Municipality of Matera, by the Government, while only 3% would be given by the European Commission. Many social and cultural organizations, political parties, church people and individual volunteers collaborated to make the design. Some organizations such as the La Scaletta Cultural Organization and the Oppido Lucano Film Library merged into one, as the Institute for Demo - Ethno Anthropology (I-DEA), which was one of Matera's main projects. One of the ideas for this project was the idea of the "Open Design School" which aimed to continue the tradition of furniture manufacturing that was going through a period of crisis. To be successful, writers, bloggers, designers, artists, hackers, students and academics would have to work together. There were many more projects that were in the design and had a positive result since Matera claimed the title of European Capital of Culture. According to Manola (2019:34-35) all this publicity created many positive outcomes for the tourism in Matera. Specifically, in 2014 there was a 16.4% increase in arrivals and an 18.5% increase in overnight stays, which translates to 153 tourists and 244 thousand more nights compared to 2013. In Basilicata there has been an increase in tourism by 8.7% and with a greater deepening of the data it shows that there has been a more than double increase in tourists in the last six years, with the majority of them coming from France, the United States, Germany and the United Kingdom, while Italians who chose to visit Basilicata were from the areas of Puglia, Campania, Lazio and Lombardy.

[8] That is happening because, the European Commission gives countries the opportunity to prepare several years in advance before one of them is finally declared as the winner.

Matera and Cinema

In all the events surrounding the historic center of Matera, the cinema played an important role in the ability to withstand the remodeling of Sassi but also in its active participation in it. Matera has been used as a main location for over 30 movies. There are two fundamental trends that can be identified in the presentation of Sassi's setting: the first is, the presentation of the area authentically, with the presentation that had the post-war period and the second, uses the setting to tell stories which are not part of the local identity of the area now.

The film productions in Matera in the 50's and 60's were influenced by the popular thoughts and reasoning of Levi and De Martino, that were focused on the problems of Basilicata. Specifically, the film focused on the dramatic and poor living conditions in Sassi, presenting it as a "dark land without sin and redemption", as Levi mentions in his memoir. The first film to be shot exclusively in Sassi was "La Lupa", directed by Alberto Lattuada, a rendition of the literary book with the same title by Giovanni Verga. The film tells the story of a woman whose uncontrollable sexuality causes a scandal in a small town. Lattuada makes the interesting decision to use Sassi not as a background to represent a Sicilian city (as in the literary book), but as the actual location where the events occurred. The landscape also adds dramatic dynamics to the film and is thus integrated with Verga's work. For example, the first part of the film is dedicated to the Matera's Festa della Bruna[9], where the story begins to unfold. The inclusion of Matera's traditions and customs served to keep the film intertwined with the new local context. Many documentaries were made after the war. In 1949, Carlo Lizzani made his directorial debut with the documentary "Nel Mezzogiorno qualcosa è cambiato", meaning, "Something has changed in the South". It was created during the "Renaissance" of the South, when a group of farmers, workers and students all came together to live in various southern cities, including Matera, Lizzani. It presented the procedures of the re-establishment of the cities and as a result, it gave hopes for the future. In contrast to Levi's work, which was intended to be a social, political and anthropological description of the Basilicata, Lizzani emphasized the spirit of "renaissance" that was prevalent in the southern cities (Bernagozzi, 2002). While the documentary begins by showing the interior of the caves in Sassi, showing people sharing the same space with the animals, it ends with a happy note and that is when all the farmers return to their homes after the remodeling of the cities. There were many directors who were interested in presenting life in Matera and Basilicata: even more so after the anthropological expeditions organized by Ernesto De Martino, which presented the rituals and superstitions that existed in the area. A few more documentaries were made in Basilicata, which wanted to depict the cultural and social conditions of the city. One of them is the "Superstizione" but also films such as "Magia Lucana" and "La Madonna di Pierno", directed by Luigi di Gianni, one of the most important documentary directors of anthropological interest. Another movie was "Il Demonio" by Brunello Rondi. His goal was to reflect the Basilicata as the "magic world" that everyone described in the '50s and' 60s. It is half documentary and half drama and presents the rituals that were performed against the

[9] Festa della Bruna is the main festival of Matera, which takes place in the area of Basilicata. It is made in honor of the protector of the city, Madonna della Bruna.

"evil eye", the exorcisms and the superstitions, which according to De Martino (1973) had the necessary imagination to provide support to people living in adverse conditions. The protagonist in the film can't cope with the grief caused by the death of his beloved and thus, ends up with the problem of possession, but still hoping that he will not lose his love. The film does not have a happy ending and it includes many sacrifices, magical practices, exorcisms and funerals, which the director manages to present as a documentary. Everything presented in the film shows the regression and dissimilarity that existed in Basilicata in relation to the economic development that existed in other parts of Italy. This kind of representation, which weakened in the '70s has another very important example and that is, the film "Cristo si è fermato a Eboli" by Francesco Rosi, which was based on the book by Carlo Levi, who presents the identity of the area and some pieces from the history of Basilicata with absolute realism. The film, like the book, focuses on the city of Aliano, where the author lived, but there are also descriptions of Matera, which mention the difficult living conditions in Sassi as well as concerns about the future of the area.

In the mid-1960s, Pasolini's "The Gospel According to St. Matthew" (1964) began a new trend, that of biblical events in the Sassi of Matera. The film, which narrates the life of Jesus in this underdeveloped area of the South, can be considered a synthesis of the two trends mentioned above. Pasolini did not choose Matera because of its resemblance to Jerusalem but because it was a representation of the socio-economic situation in southern Italy. The film was shot in the areas of Basilicata, Lazio and Puglia. Sassi became the Jerusalem of Christian preaching while Murgia Materana Park was the scene of Jesus' crucifixion and resurrection. In addition to the general purpose of Pasolini's work, which was to emphasize the revolutionary power of the Christian message and to give the viewers contact with something sacred, he also wanted to reveal and draw people's attention to the inadmissible living conditions people endured in those areas.
After Pasolini's work, the center of Matera began to be used as a backdrop for many film productions with its depiction far removed from reality. An example is the Hollywood version of "The Passion of the Christ" (2004) produced by Mel Gibson. Most of the exterior shots were made in Sassi and show the passions of Christ. Like "Il Vangelo secondo Matteo", the film ends at Murgia Materana park, the site that represents Golgotha , where the crucifixion takes place. In this film, the social presentation did not exist as in Pasolini's work, but Sassi was used only for his resemblance to Jerusalem. This work and many more, such as "King David" (1985) and "The Nativity Story" (2006) offered another depiction of Sassi, which was far from reality, but at the same time presented the image of the Matera countryside with mysticism and architectural peculiarities, which brought great tourist and cultural fame to Sassi.

Conclusion

As mentioned above, on the one hand, the cinema distances itself from the local identity of Matera and tells stories that have nothing to do with it, but on the other hand, the arrival of many producers is a "showcase" for the city. Mel Gibson's "The Passion" is very often used as an example of film tourism and has a great impact on the city from an economic / tourist point of view. With its global readership and internationally renowned actors, the project successfully promoted Matera to the global tourism market. Even if the film uses Matera to tell a story which originally happened in Jerusalem, following the passions of Christ, the viewer can admire the iconic landscapes of Sassi through the camera. There has been a huge increase in tourism in the following years since the premiere of the film. Specifically, in 2006 there was a 40% increase in tourist arrivals and 30% in overnight stays compared to 2003 (the film premiered in 2004) with an 83% increase in arrivals and a 53% increase in overnight stays for foreign tourists (De Falco,2006). These changes inevitably created awareness of the situation for the residents themselves, but also for the local governments to see the tourism prospects of the city and its protentional promotion through the cinema. In 2013, the Lucana Film Commission was created, an organization that aims to attract film producers in the region, providing services and financial support for film productions. As a result, in 2015 many producers became interested in making films in Matera, a typical example being Ben Hur's blockbuster. No one can deny the impact that cinema has on a city or even a country, and Matera should be an example, which according to Manola (2020) literaly and then film tourism not only offered her economic growth but thanks to its popularity in the following years, the people in Sassi began to have a more dignified life with better living conditions. Tourism may be a carefree journey but taking Matera's case study into consideration, it has a lot to teach the visitor about both cinema and literature (Manola, 2019).

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Ecological Footprint Of Ecotourism Packages: The Case Study Of Siwa, Egypt.

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ABSTRACT

Tourism represents a key economic sector worldwide, constituting great leverage for local economic development but also putting noticeable environmental pressures on local natural resources. Ecotourism may be a viable alternative to mass tourism to minimize impacts on ecosystems, but it needs shared sustainability standards and monitoring tools to evaluate impacts through Ecological Footprint.

The tourism footprint family comprises the tourism ecological footprint (TEF), the tourism carbon footprint (TCF) and the tourism water footprint (TWF). The tourism footprint represents an important tool for quantitatively assessing the impact of tourism activities on the ecosystem of a tourist destination (Wang, Hu, He and Wang, 2017).

This research proposes the use of the Ecological Footprint (EF) as a tool to assess the sustainability of different consumption patterns and to address human choice in daily life. Considering that different kinds of tourism can have different impacts on the environment, there is the need for development of a valuable tool to compare sustainability of different issues related to tourism. In this study, the EF method was fitted to the Egyptian situation and to an assessment of the potential impact of tourism at the local scale, underlining how tourists' choices could affect the quality of the environment in a tourist destination.

A qualitative method was used which focuses on collecting and analyzing data. Interviews were conducting among domestic tourism staff in travel agencies in Alexandria, further interviews with the employees in the Eco lodges in Siwa. Then, the ecological footprint was used as an environmental accounting tool. In order to evaluate the ecological footprint of ecotourism packaged in Egypt to help the local ecotourism businesses and public authorities understand and address the impact of their ecotourism products while ensuring their high quality.

Key Words: tourism ecological footprint, sustainable tourism, tourist impact; tourism carbon footprint; tourism water footprint

INTRODUCTION

Tourism activities, as a part of the human lifestyle and a form of ecological consumption, have a profound impact on ecosystems (such as soil erosion, air and marine pollution, and natural habit loss) in tourist destination areas by appropriating and consuming sightseeing resources, travel facilities (such as roads and airports), and tourism services (such as resorts, restaurants, hotels, marinas, shops, and golf courses). Therefore, the rapid growth in tourism might cause major problems in terms of environmental (Kisi, 2019). However, increasing numbers of researchers, governments and international organizations have been considering the impacts of large-scale tourism industries on the environment in light of the rapid development of the global tourism industry and the burgeoning environmental issues of climate change and water resource scarcity.

Consistent with this focus, many tourism footprint analyses have emerged in recent years, including tourism ecological footprint (TEF) analysis, tourism carbon footprint (TCF) analysis, and tourism water footprint (TWF) analysis, which share the research target of better integrating tourism industry development with the protection of the ecological environment. TEF analysis emphasizes the comprehensive assessment of tourism activities' impact on the environment, which has the advantage of being a comprehensive evaluation. TCF and TWF analysis emphasize specific evaluations (TCF analysis focuses on the effects of carbon emissions from tourism activities on climate change, and TWF analysis focuses on the effects of water consumption from tourism activities on water resources). Impacts related to tourism activities can be divided into two main categories (Sala, 2008):

1.1 Impacts due to the building of hospitality structures and tourism facilities.

The first class consists of all impacts due to the building of hotels, restaurants, camping sites and tourist facilities, which can be summarized as: loss of soil previously used for agriculture, pasture or other activities; the necessity to build new roads to connect new tourist structures or to improve and enlarge existing roads to make them adequate for an increased level of traffic. It is important to consider that this kind of impact is persistent, because tourist structures, often scaled for the wider tourist flow of the destination, stay in the territory, even if they are almost empty during the whole year

1.2 Impacts due to the presence of tourists and, generally, to the fruition of the area.

The presence of tourists can generate two main kinds of problems: the production of solid and liquid wastes (that imply a cost for the disposal which is paid by the local community and needs the organization of a service of collection dimensioned with reference to the maximum volume generated during the year, i.e. in the tourist season); the possibility of conflict between residents and tourists in the use of local resources and services (use of drinkable water and treatment of wastewater, air pollution, noise pollution, traffic, crowding, etc.)

Thence, to assure sustainable development of the tourism sector, it is important that the planning of tourism offered to a destination is based on a robust analysis of environmental, social and economic conditions of the area and of the current and potential impact of tourist activities, in comparison with the carrying capacity of the destination. According to this purpose, the assessment of the EF of tourists and of the bio capacity of the area represent an attempt to provide a supporting tool to decision makers, with the aim of addressing tourism strategies for the future development of the destination in a more sustainable way. Moreover, the aim of the present study is to analyze the impact of tourism on a destination, and to compare the sustainability of different kinds of holiday, to evaluate the current situation, and to identify solutions that assure the development of tourism with fewer environmental costs.

2. Literature review

2.1 The concept of Ecological footprint

Often considered a primary focus of sustainable development, the reduction in resource use and environmental degradation is key to the preservation of natural capital. Integral to this goal is a system of measuring the draw of human activity on the environment (Ayers, 1996). Therefore, Ecological Footprint has emerged as one of the more tested and implemented methods of ecological resource accounting. The ecological footprint was first discussed by Rees (1992). Wackernagel and Rees (1996) defined the ecological footprint as "the total area of productive land and aquatic ecosystems required to produce the resources used and to assimilate the wastes produced, by a defined population at a specified material standard of living, wherever on Earth that land may be located".

The Ecological Footprint is a measure that aggregates data to compare the resource use of one lifestyle versus another (Wackernagel and Rees, 1996). Simply put "Ecological Footprint analysis is an accounting tool that enables us to estimate the resource consumption and waste assimilation requirements of a defined human population or economy in terms of a corresponding productive land area" (Wackernagel and Rees, 1996, p.9)

Some other scholars also defined the ecological footprint. For example, Global Footprint Network (2019) defined the ecological footprint as "a measure of how much area of biologically productive land and water an individual, population or activity requires to produce all the resources it consumes and to absorb the waste it generates, using prevailing technology and resource management practices." Therefore, the ecological footprint is a more comprehensive measure of environmental damage (Mrabet et al., 2016) .

The footprint of humanity (average 2.3 hectares per person) is not evenly distributed throughout the globe. When one looks at the Ecological Footprint on a country-by-country basis, severe disparity is evident. For example, the Canadian footprint is estimated at 8.8 ha/person, the Costa Rican footprint at 1.95 ha/person, and the Indian footprint at 0.77 ha/person (Wackernagel et al, 1999, World Wildlife Fund, 2002). This simple comparison immediately gives an idea of the level of resources consumed by citizens of different countries, with a wide range of lifestyles. The essential message of the EF is that “A world upon which everyone imposed an over-sized Ecological Footprint would not be sustainable-the EF of humanity as a whole must be smaller than the ecologically productive portion of the planet’s surface” (Wackernagel and Rees, 1996, p.9). Hence, the EF seeks to apply limits to the levels of human resource use, based upon a balance between consumption, waste assimilation, and available land to support these activities. As a way of promoting an equal quality of life for all (Wackernagel and Rees, 1996).

The Ecological Footprint is about staking claim to the earth’s resources in an equitable manner. Some citizens of the world have over-sized footprints and others are dramatically undersized, so much so that survival is questionable. The equalization of resource use, while maintaining a respectable quality of life is one primary goal of sustainable development (Wackernagel and Rees, 1996). The EF concept then is an indicator of current-state sustainability placing all humans within a common scale. In this way, the EF not only raises awareness of currently unsustainable behavior, but also highlights where action could be taken (Wackernagel and Rees,1996; Costanza, 2000). “Ecological footprints can become an easy-to-read measurement tool for ecological sustainability, by summarizing the diverse ecological impacts in an ecologically meaningful way (Wackernagel et al., 1999).

2.2 The Tourism Ecological Footprint

Recent academic articles have called for investigation into the use of the Ecological Footprint as a tool to compare the sustainability of various types of tourism (Hunter, 2002). The ultimate goal of such an exercise would be to establish a measure of what is and what is not sustainable tourism. Supporting this idea is the work of Wackernagel & Yount (2000) who suggest the use of the Ecological Footprint to assist decision makers in identifying sustainable options. This idea is expanded by Hunter (2002), who makes a case for the use of the Ecological Footprint to clarify the status of sustainable tourism.

The application of the Ecological Footprint concept to the study of tourism has been explored by a very small number of researchers in recent years (Hunter, 2002; Cole and Sinclair, 2002; World Wildlife Fund, 2002).

Two of the more widely available examples include The World Wildlife Fund’s “Holiday Foot printing: A Practical Tool for Responsible Tourism” (2002), and Cole and Sinclair’s “Measuring the Ecological Footprint of a Himalayan Tourist Centre” (2002). Each work uses the Ecological Footprint model to compare different aspects of the tourism experience. The World Wildlife Fund example looks at the specific resource use of two different resorts, one in Majorca, and the other in Cyprus. These two package holidays are analyzed to provide an initial measure of the ecological cost of Mediterranean resorts. Cole and Sinclair use the Ecological Footprint to measure the change in resource use overtime for the village of Manali, in the Himalayan region of India.

2.3 Benefits and Limitations of the Ecological footprint

The ecological footprint has recently been proposed as a key indicator for measuring the environmental impacts of tourism (Hunter and Shaw, 2007). Unlike other locally-based measures, such as carrying capacity or environmental impact assessments, the ecological footprint takes into account the consequences of transit as it relates to tourism. In addition, this tool indicates the global impacts of activity and expresses resource demands in standardized hectares to facilitate understanding (Hunter and Shaw, 2007). As a result of these characteristics, Wackernagel and Yount (2000) were able to use the EF tool to prove that current levels of global resource consumption and waste generation were greater than the biosphere's biotically productive area. In addition, they could estimate from the EF indicator the amount of extra land that would be needed to satisfy current consumption levels. In a tourism context, Wackernagel and Yount (2000) were also able to determine that at least 10% of the world's ecological footprint was occupied by the tourism industry's international component. Furthermore, the WWF (2006) used the EF tool to determine that the world ecological footprint in 2003 exceeded available supplies by 25%, indicating that the needed resources for 2003 were only fully produced by the earth in March of 2004.

Unlike other indicators, the EF does not assume that ecological productivity can be continually replaced with technological advances, therefore it highlights the issues that could arise when substitutes are no longer available (Senbel et al,. 2003). Furthermore, the EF can be calculated for specific components of a lifestyle, for entire nations or for business activities, and is therefore a flexible and versatile indicator (Holland, 2003; Hunter and Shaw, 2007).

Concerning limitations, the largest weakness of the EF as a sustainability indicator is its inability to measure socio-economic factors, resulting in its need to be combined with other indicators in order to determine the overall sustainability of a lifestyle or activity (Hunter and Shaw, 2007). Furthermore, EF calculations require detailed information on consumption and biomass yield figures, which can be difficult to obtain when statistical databases are incomplete. In addition, current EF calculations cannot provide a realistic view of biodiversity loss (Wackernagel and Yount, 2000).

Clearly, although carrying a number of positive features, the limitations surrounding the ecological footprint enable it to only provide a rough indication of sustainability levels. These limitations appear to be well known and accepted by ecological footprint advocates. Rees (2000 p. 373) for instance states that "ecological footprint analysis was not intended to provide a dynamic window on the future, but rather a snapshot in time. As such it can both help to assess current reality and to test alternative scenarios on the road to sustainability".

2.4 Calculating the Ecological Footprint of Ecotourism Packages

The Ecological Footprint is an environmental accounting tool to track the human pressure on nature's capacity to provide life-supporting resources and sequester human wastes (Wackernagel and Rees, 1996; Wackernagel et al., 1999). Since its introduction, the Ecological Footprint methodology has been developed and standardized to build a robust accounting framework able to measure both the human appropriation (demand side) and the natural provision of (supply side) (Borucke et al., 2013; Kitzes et al.,2009). The established accounting framework is based on two fundamental metrics:

- **Ecological Footprint (EF),** measuring the demand side. This demand is measured in terms of biologically productive areas that humans and activities required for producing all the resources consumed and absorbing all waste produced.
- **Biocapacity (BC),** measuring the supply side. This supply is measured as the amount of biologically productive land and sea area available to provide the resources and ecosystem services that humanity consumes. It is also called nature's regenerative capacity.

Moreover, the Ecotourism Footprint Calculator is one of the final deliverables of the DestiMED project funded by the EU InterreMED Program (2016-2019). The project involved 13 Protected Areas (PAs) in 6 Mediterranean countries (Albania, Croatia, France, Greece, Italy, Spain) to create ecotourism experiences grounded on tangible sustainability criteria and standards. As pilot cases, 13 ecotourism products (one in each PA) were designed by Local Ecotourism Clusters (LECs) created as part of the project and consisting of local tourism actors and service providers; these products were then tested for their economic, social and cultural sustainability – through a quality assessment – as well as their impact on the use of natural resources (i.e., their environmental sustainability). This latter evaluation was performed by Global Footprint Network through a novel application of Ecological Footprint Accounting, which has been specifically customized to keep track of the resource consumption of ecotourism products (Mancini et al., 2018). Based on such customized methodology, this Ecotourism Footprint Calculator was developed by FreeRange, under the supervision of Global Footprint Network, IUCN, and WWF Adria.

Assessing Ecotourism Footprint packages are through one introductive section and four main sections corresponding to major macro-categories of tourism services offered within an ecotourism package (see also Figure 1).

Introductive section: this section collects general information on the Protected Area where the ecotourism product is conceived, as well as details of the specific product being calculated (name of the package, length, and a number of participants).

2.4.1Accommodation category: this section inquires about all the hosting facilities involved in the package that are used to accommodate tourists. For each hosting facility, questions deal with general information on the type of hosting facility and its characteristics, energy consumption (including electricity, heating and cooling system, hot water production, and water consumption), and the goods and services provided. All questions are mandatory and most require detailed research in collaboration with the hotel's manager for acquiring the precise data needed. If multiple accommodations are used throughout the package, this section must be compiled for each of them.

2.4.2 Food & Drinks category: this section inquires about the meals envisioned in the eco-tourism package, including breakfast, lunch, dinner, and other types of food-related activities (i.e. food/wine tasting, tea/coffee breaks, snacks, etc). Per each meal that is offered day by day, questions inquire into the origin, mode of production, and quantity of all food items served to the entire group of tourists. Also, some questions deal with the type of stove used, food preparation time, and the number of workers needed. Each question is mandatory. Collecting accurate data requires collaborating with the persons involved in the meal preparation.

2.4.3 Mobility & Transfer category: this section inquires about different types of transfers envisioned throughout the package for tourists to move from one place to another, as well as any kind of equipment or food delivery to the group of tourists. Per every single transfer done each day, questions regard the mode of transportation, duration, and characteristics of any motor vehicle used. Each question is mandatory and requires careful data collection with the service provider hired for each transfer

2.4.4 Activities & Service category: this section inquires about all the services and activities envisioned in the ecotourism product (i.e. excursions, visits, PA-related activities, birdwatching, kayaking, snorkeling/scuba diving, hiking etc.). For each activity, questions investigate its type, duration, number of needed workers/guides, and specifics of vehicles used. Each question is mandatory and requires careful data collection with the service provider in charge of each activity.

Figure 1 shows the four categories of main activities envisioned in an ecotourism package and the main parameters and data needed to assess the Ecological Footprint for each of the four categories.

Accommodation	Food & Drinks
-General information and characteristic (i.e. type of accommodation, opening season etc) -Number of **workers** -Total number of **bed-nights** -Building **surface** -**Energy consumptions**, including: oElectricity oHeating system oWater heating -Consumption/production of **alternative source of energy** (solar, PVs, LPG, geothermic, etc) -**Good and services** provided (i.e. laundry, replacement of linen, etc)	-**Origin** of ingredients: oOn-farm oLocal (up to 60km) oNational oInternational -**Mode of production** of ingredients: oOrganic oNon-organic -**Quantity** of ingredients (expressed for the entire group) -**Cooking time** and type of **stove** -Number of **workers**
Mobility & Transfers	**Activities & Services**
-**Duration** of the route -**Distance** covered -Type of transportation (**motor vehicle** or different) oFuel type oFuel efficiency -Number of **workers**	-**Duration** of the activity -**Distance** covered -**Means of transportation** used -For any **motor vehicle** used: oFuel type oFuel efficiency -Number of **workers**

Figure (1): Main categories in an ecotourism package and related parameters required to properly assess the Ecological Footprint

2.5 Area of study: Siwa as an eco-tourism destination (Alhaddad etal.,2017)

Siwa Oasis as an ecotourism destination. The five major oases (Baharia, Farafra, Dakhla, Kharga and Siwa) in the Egyptian desert; are a depression in a calcareous sandy plateau with many springs that are fed from the deep underground water. Siwa is the most fascinating of all the oases, not only for its history, but because of its natural beauty and its people's culture and traditions. Siwa had been known by a host of names through the centuries; Field of Palm Trees and Olive Land. Siwa Oasis is located in the extreme western part between Qattara Depression and Great Sand Sea, closer to Libyan Desert, 300 km South West of Marsa Matrouh, and 800 km of Cairo.

Potentials of ecotourism in the Siwa Oasis Ecotourism development in certain areas in Egypt cannot be ignored. Eco tourists now can enjoy its stunning desert landscapes, hot and cold springs, as well as its unique history and culture. Besides, Siwan people themselves, who preserve their own traditions and language over centuries. Siwa has many traditional attractions which focus on the oasis' charming landscape; its lakes, bird habitats, and desert areas, fossil remains of great world importance, varied cultural heritage sites reflects a great civilization through ages and its environmental nature, distinctive culture.

Therefore, Siwa was chosen as an eco-tourism destination to calculate the ecological footprint, highlight the weaknesses facing in Siwa, and determine the levels of sustainability in Siwa as an eco-tourism destination.

3. Methodology:

This study has followed two steps, the first step is used qualitative approach and second step is used the ecological footprint accounting.

Qualitative approach often involves the views or internal worlds of participants, and may include data generated through the use of interviews, focus groups, etc. Qualitative research often gathers data from relatively small samples of people, and can provide a 'micro' view of whatever issues you are examining (Bakker et al., 2002).

There are three types of interview are structured interviews, the interviewer asks a set of standard, predetermined questions about particular topics, then Semi-structured interviews, the interviewer uses a set of predetermined questions and the respondents answer in their own words based on these answers, ask supplementary questions for clarification, finally Unstructured interviews, the interviewer has no specific guidelines, predetermined questions, or list of options (Bakker et al., 2002).

The purpose of this form of research that combination of qualitative method develop analysis in order to provide richer data and enable confirmation of each other through triangulation (Johnson et al., 2007).

Firstly, conducting interviews with domestic tourism staff in travel agencies, further interviews with the employees in the Eco lodges in Siwa. Secondly data collected through personal interviews, are unloaded through the ecological footprint is used as an environmental accounting tool. In order to evaluate the ecological footprint of ecotourism packaged in Egypt to help the local ecotourism businesses and public authorities understand and address the impact of their ecotourism products while ensuring their high quality.

3.1 Research design

The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data. The research problem determines the type of design you should use, not the other way around (De Vaus, 2006).

This study utilizes a qualitative approach in order to evaluate the ecological footprint of ecotourism packaged in Egypt to help the local ecotourism businesses and public authorities understand and address the impact of their ecotourism products while ensuring their high quality.

3.2 Research sample

The sample method involves taking a representative selection of the population and using the data collected as research information. A sample is a "subgroup of a population" (Frey et al., 2000, P.125).

Sampling is the process of selecting units (e.g., people, organizations) from a population of interest so that by studying the sample, we may fairly generalize our results back to the population from which they were chosen (Latham, 2007).

The study was limited to two cities, Alexandria, Siwa Oasis. Siwa is characterized by ecotourism and natural landscapes The number of travel agencies in Alexandria is 349 travel agencies (Egyptian phone directory has been used in collecting data). The sample represented in (4) online interviews that were conducted with domestic tourism staff in travel agencies in Alexandria in May 2021. In addition, the number of hotels and lodges in Siwa is 37 hotels. The sample represented in (4) telephone interviews were conducted with the employees in Eco lodge in Siwa.

3.3 Data collection tools

The interview was used as a data collection tool. According to McNamara (1999) said that "Interviews are particularly useful for getting the story behind a participant's experience. The interviewer can pursue in-depth information around the topic".

Bakker et al. (2002) defined structured interviews as "Any enhancement of the interview that is intended to increase psychometric properties by increasing standardization or otherwise assisting the interviewer in determining what questions to ask or how to evaluate responses." Accordingly, this study has been followed the semi-structured interview as a data collection tool.

3.3.1 Interviews design

<u>3.3.1.1 Interviews with domestic tourism staff in travel agencies</u>

The interview includes 7 questions (appendix 1) divided into three parts: the first part consists of 2 questions, investigate Details of the itinerary to siwa, the second part consists of 3 questions, details of the type of accommodation and the third part consists of 2 questions, details of the ecotourism package.

3.3.1.2. interviews with the employees in the Eco lodges in Siwa

The interview includes 23 questions (appendix 2) divided into four parts: the first part consists of 6 questions, investigate Details of accommodation to Siwa, the second part consists of 5 questions, to measure the food and drink in hotels and restaurants, the third part consists of 6 questions, to measure all experiences included in the eco-tourism package and fourth part consists of 6 questions to measure the mobility and transfer.

4. Data Analysis

4.1 Interviews with domestic tourism staff in travel agencies

Interviews were conducted among 4 travel agencies with domestic tourism staff who were regarded due to their experience and organizational structure. Experience years' rate as follows: less than 5 years and from 5-10 years.

Table (1): Experience years of work

No	*Name of travel agency*	*Experience year*
1	Friends tours	5 to 10 years
2	Sondos tours	Less than 5 years
3	Go trips	Less than 5 years
4	Damas travel	5 to 10 years

4.2 Interviews with the employees in the Eco lodges in Siwa

Table (2): Name of the eco lodges in Siwa

No	*Name of eco lodge*	*Stars*
1	Dream lodge	3 stars
2	Galliet eco lodge	4 stars
3	Konoz shali lodge	3 stars
4	Siwa gardens lodge	4 stars

5. Results and Discussion

The main results obtained from the online footprint calculator of ecotourism packages of Siwa oasis in Egypt are as displayed in the following table:

Table (3): Ecological footprint of ecotourism packages o Siwa

The ecological footprint of the whole ecotourism packages	**12.14 gha (global hectare)**
A. By land	**Percentage (%)**
Cropland	11 %
Grazing	3 %
Forests	6 %
Fishing	1 %
Built-up	6 %
Carbon	74 %
B. By Activity	**Percentage (%)**
Accommodation	96 %
Food and Drink	3 %
Mobility and Transfers	1 %
Activities and Services	0 %
The ecotourism footprint per tourist per day	**22022.4 gm2 (square gigameter)**

Ecological footprint is a key indicator with which to evaluate the environmental impact of tourism for conservation issues, resources consumption, and sustainable practices. In siwa the EF of ecotourism packages scored 12.14 gha (global hectare) as shown in table (1). The highest EF ever scored was 16 and the lower number scored is better. Therefore, 12.14 gha means that ecotourism packages to siwa have a big negative ecological footprint on the environment.

According to the EF calculator, it is noted that the carbon is the biggest part of the ecological foot print and accounts 74 % of total ecological footprint of ecotourism packages to Siwa while the rest of EF on other types of land is minor as shown in figure (2). Carbon footprint is the amount of carbon dioxide released into the atmosphere as a result of human activities'. CF is also the biggest part of the world EF and it is the main cause of global warming issues. It is emitted from the burning of fossil fuels, the production and consumption of food, manufacturing goods, materials, wood, roads, building, transportation and other services. In the case of Siwa, carbon footprint might be high because of some bad practices in ecotourism whether from the supply side or demand side. Siwa mainly depend on non-renewable sources of energy and fossil fuel generated electricity from the national grid system. Another reason is their dependence on gasoline old model vehicles that generates huge amounts of carbon pollution. Therefore, it is necessary to set some solutions to reduce the amount of ecotourism carbon footprint on the environment of Siwa.

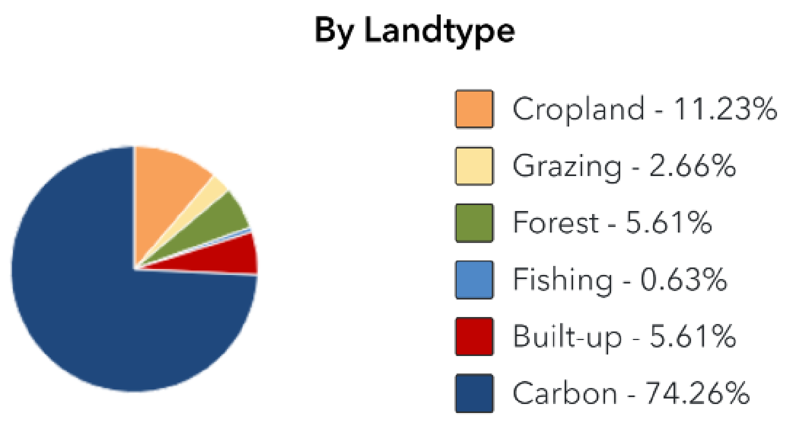


Figure (2): Ecological footprint of ecotourism packages by land

5.1Accommodation:

The most ecotourism activity that has a great impact on the ecological footprint of siwa is accommodation with nearly 96% of the total ecological footprint of the whole ecotourism packages as shown in figure (3). This category is about all the hosting facilities included in the package to accommodate tourists including general information and characteristics of the accommodation facility, number of workers, total number of bed-nights, energy consumptions including electricity, heating system, water heating, A/C, any alternative sources of energy and finally goods and services provided such as laundry, replacement of linen and etc. This high percentage is so much contradicted with the shape and nature of accommodation facilities in siwa, which mostly take the form of environmentally friendly ecologies. Thus, this gives an indication that not all the practices in these ecolodges are 100% eco-friendly as most of the ecolodges in the sample are not certified internationally or nationally with green labels to ensure the level of conveniency and suitability of their practices to the environment. Most of ecolodges in the sample don't depend on renewable sources of energy. They don't apply effective techniques and technologies to reduce energy consumption. Most of them don’t have the infrastructure needed to apply water recycling and conservation strategies.

Figure (3): Ecological footprint of ecotourism packages by activity

5.2 Food and Drink:

As mentioned previously, this category is about the main meals envisioned in the ecotourism package, including each meal menu, origin of ingredients, food quantity, cooking time, type of stove and number of workers. As viewed in the previous figure, food and drink account only 3% of the total ecological footprint of ecotourism packages of Siwa. This is relatively small footprint but this might be back to two main reasons. Firstly, most of the food consumed by tourists are not produced in the oasis but transported from other cities. Secondly, in food preparation process, gas stove/ovens and burned cool/wood are mainly used in preparing food.

5.3 Mobility and Transfers:

This Category is about all mobility and transfer services needed to transfer tourists from one place to another including duration, distance, type of transportation, fuel type, and fuel efficiency. Mobility and Transfer accounts only 1 % of the total ecological footprint of ecotourism packages of Siwa. This minor footprint may back to the fact that all transfers in all ecotourism package are short in distance and this 1% effect might be due to their dependence of gasoline old-model vehicles with low gas efficiency rate.

5.4 Activities and Services:

This category is about all the experiences included in the ecotourism packages and offered to tourists including duration of each activity, distance covered, motor vehicle used and number of workers. In Siwa, ecotourism packages' activities and services don't have any ecological footprint on Siwa's environment. That is because nearly all the activities are nature-based and ecofriendly such as hot/cold/sand bathing, watching sunset and sunrise, Salt Lake bathing and sand skiing.

6. Conclusion and Recommendation:

This study contributes to clarifying the role of the ecological footprint in maintaining biodiversity by providing information on human pressure on the environmental assets of the earth. The aim of the research is to use the ecological footprint as an environmental indicator that sheds light on the environmental problems facing the tourist destination, as it is considered an indicator of the levels of sustainability.

In order to achieve a low ecological footprint of ecotourism packages of Siwa oasis, the following recommendations should be followed: Local authorities of Siwa should encourage their Eco lodges to get certified internationally with different green labels. Tourism local authorities should increase the awareness of tour operators and different service suppliers with the concept of ecological footprint and encourage them to calculate their footprint on the destination to reduce it.

Travel agencies as well as tourists should choose to stay in small-scale, family-run, local Eco lodges, preferably with renewable energy sources in place. Travel agencies should encourage the slow travel trend by using alternative and motor-free modes of transportation as much as possible. Walking, as well as using bikes, horses, electric vehicles or even public transit, is preferred to reduce carbon footprint.

Hotels should conserve water by choosing drought-tolerant plants, in addition to using reclaimed wastewater to irrigate landscapes and trees in hotels. Also, it should Water management and treatment for consumption. In addition, integrating energy saving devices into hotel rooms. Increase energy efficiency and energy saving and also increase the role of renewable energy from total energy use to reduce carbon footprint of energy. Siwa's location in the sunny western desert qualifies it to use solar system instead of depending on fossil fuel generated electricity from the national grid system. As for food and drink, Hotel restaurants and other meal suppliers should depend on local and organic food ingredients and products in preparing meals to tourists. Eco lodges should provide the infrastructure needed to recycle wastes instead of dumbing it in the desert. Also, it should reuse of glass, plastic and paper from hotel waste for recycling purposes.

Utilizing these policies can help Siwa to reduce the environmental pressure induced by the tourism sector to make it more sustainable. Moreover, conducting programs for tourists to increase their environmental awareness is essential. Furthermore, it is also important to implement ecological footprint and energy conservation taxes on the tourism sector to reduce the environmental pressure produced by tourism. Lastly, providing a system that stimulates the behavior of tourists through the ecological footprint, as it can be an effective tool to stimulate the behavior of environmentally friendly tourists in order to track the consumption of resources by tourists.

Ecological footprint methodology application could be useful to understanding the impact of several kinds of human pressure and their capability to be "sustained" by a territory. The assessment of tourism impacts done through the evaluation of the EF of a tourist destination involves three categories of subjects: tourists, tourism operators and local administrators. this study focuses on tourism operators who act to make tourism structures more ecologically efficient, reducing impacts due to energy and water consumption, production of waste, etc. Future research should examine the evaluation of the EF of a tourist destination through the role of public administrators who are involved in the definition of land use planning and can influence the whole tourism system, promoting communication campaigns to raise environmental consciousness among residents, tourism operators and tourists, and supporting the development of the destination from a sustainable perspective.

TABLES AND FIGURES

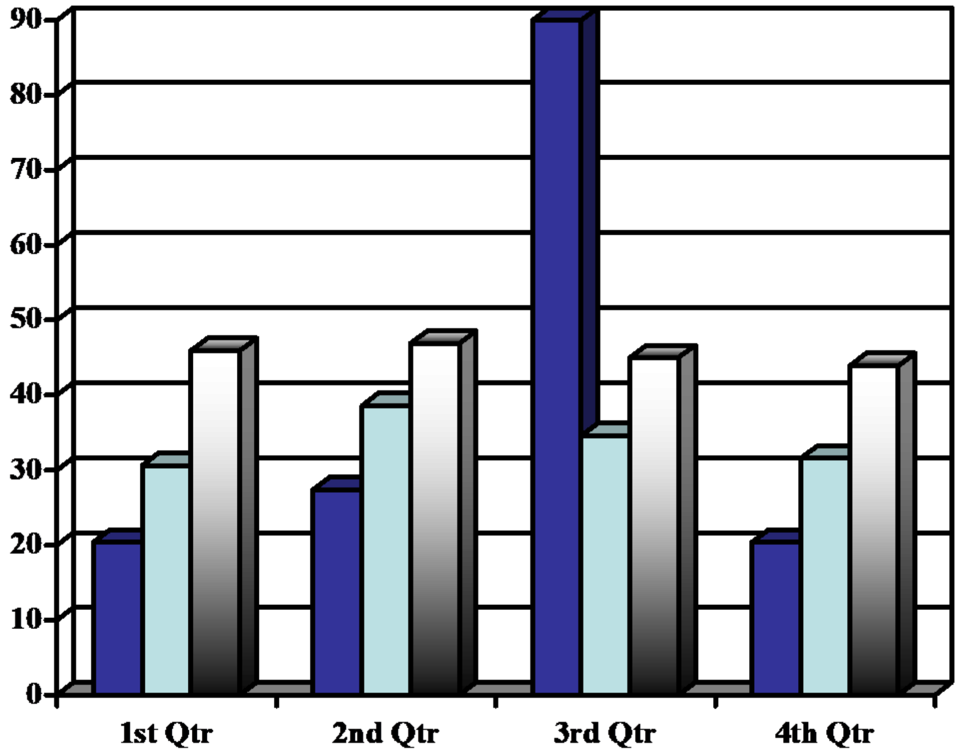
Tables and figures should be referred to and included in the text. Each table, figure and illustration should be numbered consecutively (in Arabic numbers) and titled. Tables, figures and illustrations should be kept to a minimum. Figure captions and table headings should be sufficient to explain the figure or table without needing to refer to the text. Headings and captions styles for tables and figures are available in this template. The following is the example for Table 1.

Table 2 Title of Example Table

	CFI	TLI	RMSEA
Single common factor model	0.772	0.744	0.104
Two-factor model	0.886	0.893	0.060
Six-factor model	0.811	0.787	0.106
Revised five-factor model	0.954	0.943	0.042

Tables and figures should be placed close after their first reference in the text. Table headings should be centred above the tables. Figure captions should be centred below the figures, maximum figure size is $6^{cm} \times 7^{cm}$ (72dpi).

Figure 2: Title of Example Figure


90
80
70
60
50
40
30
20
10
0
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr

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