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Yachting tourist expenditure and its effect on the local economy: The case of Lefkada

Nikolaos-Marios Diakomichalis[1], Petros Kalantonis[2], Mihail Diakomihalis[3]

Abstract

The present research examines the economic effects of marine tourism in Lefkada, an island which in recent years has seen great tourism development, especially in marine tourism. The research focused on sailing boats and motorboats mainly, that is, those that make up the Yachting activity. For our research, it was considered appropriate to create a questionnaire, which covered all the possible expenses of the passenger-tourists of a yacht during their trip. The tourism expenditure made by those on board the tourist boats is converted into income that flows into the businesses of the local and wider economy, as well as into public revenue through the payment of taxes and fees. The benefits from the yachting activity as well as from the operation of the marinas work multiplicatively in the economy both at the local and at the national level.

JEL Classifications: H710, L830, P440, R290

Keywords: Yachting, tourist expenditure, local economy, Lefkada, Greece

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1 Introduction

Marine tourism is a form of tourism and includes any kind of activity related not only to the sea and the coasts but also extends to activities related to entertainment and accommodation, but also includes infrastructure projects such as organized marinas and ports (Diakomihalis, 2007b). One of the forms of marine tourism is Yachting, i.e. the renting of pleasure boats for tourists' summer - and not only - vacations. As a type of leisure tourism, yachting tourism plays a big role in an experienced economy, and its positive impact on coastal regions has meant a substantial contribution to the local economy (Chen et al., 2016).

Many studies on marine tourism focus on the significant contribution of Yachting to local economies, without extensive research on the specific economic benefits that arise, except for a few isolated studies (Alcover, et al., 2011). It should be noted that yachting tourism in Greece contributes to about 4.5% of its GDP, while total tourism provides 18% (Diakomihalis, Lagos, 2011). The research question of this study concerns the investigation of the economic effects of marine tourism on an island that relies heavily on this tourist activity, having one of the largest and most modern marinas in the country. In addition, the work aims to determine the economic impact per category of tourist expenditure by visitors who choose to charter a boat for their holidays, but also to structure the economic benefits that the area receives through the operation of the private marina for mooring tourist boats. The research aspires to attribute the real economic dimension of the development of marine tourism in an island tourist destination in the country and to highlight the superiority of Yachting as a form of specialized tourism product, in terms of economic benefits compared to those brought about by mass tourism.

This specific research aims to study the tourism consumption of Yachting tourists by expenditure category, considering specific characteristics of the tourists, as well as the economic effects of this consumption on the island of Lefkada.

This work includes primary research. This specific research was carried out with the aim of studying, as naturally as possible, the economic effects of Yachting marine tourism on the island of Lefkada. In recent years, there has been a significant increase in tourism on the island, and one of the sectors that is experiencing a particular increase is marine tourism, because as is well known, Lefkada is not characterized by large hotel units in contrast to the rest of the touristic parts of Greece, with the result that the economy of island to rely to a significant extent on maritime tourism Diakomihalis, Lagos 2011). All the eligible expenses to which the respondents were asked to answer, through the questionnaires, are primarily income for the island and by extension for the entire economy.

2. Yachting in Lefkada

By the term yachting we mean the renting of pleasure boats for the realization of a journey, with stops at various ports or coasts. Chartering pleasure boats such as luxury yachts, sailboats, speedboats, etc., is no longer a high-cost vacation as it used to be, since boats are not only a means of transportation but also accommodation for travelers (Diakomihalis,

Lagos, 2008). The companies operating in the field of marine tourism have as their main objective the provision of services, for which the state must provide the corresponding supervision, since mainly pleasure boats are granted for rent and not for sale. Another characteristic is that the companies in the sector make large capital investments, which can mainly be characterized as fixed assets (Diakomihalis & Atlay, 2011).

One of the main advantages for someone choosing this type of vacation (yachting) is the absolute freedom to move to any destination the customer wishes and at any time of the day without restrictions. The complete freedom in the choice of the passengers' destinations acquires maximum importance especially in Greece with such wonderful islands and coasts. Marine yachting tourism is aimed at almost all income classes and tourists from almost all over the world (Giorgetti, 2017).

In the definition of yachting, we refer to sailing or motor vessels, with cabins for rest and sleeping, that is, we refer to medium-sized boats, over 6 meters for short distances, while by the term yacht we mean those luxurious boats, of larger dimensions, which can make longer journeys with more comfort. Also, another distinction is that those of these vessels that have cabins for passengers, in addition to those of the crew, are called tourist yachts, while those that do not have them are called tourist ships. So, one element that differentiates a tourist ship from a tourist boat, beyond its dimensions, is the existence or not of cabins for passengers. Finally, tourist boats, which are intended for participation in nautical competitions, are characterized as nautical, but on the condition that they are entered in the registers of recognized nautical groups (Diakomichalis, 2009).

Greece can be characterized as a "divine gift" for yachting because it has all the necessary characteristics and conditions that make it an ideal place for the development of marine tourism and in particular yachting services. The Greek islands are considered worldwide, mainly in the field of tourism, as a safe destination for a pleasant stay, entertainment as well as for any kind of business development (Mylonopoulos, Moira, 2005). In addition, the favorable climatic conditions for a particularly long period of time guarantee equally efficient activity in terms of the development of marinas and any other marine infrastructure, worthy of other countries (Diakomihalis, 2012). After all, something like this happened until 2008 when the sector contributed to the Greek economy 2.8% of the 18% of the total tourism revenues of the GDP.

The resulting revenue stimulates local communities and extends to entities not associated with the marinas (shops, hawkers, etc.). Of course, the main source of income is taxes, which are imposed on boats, while an important element is the inflow of foreign exchange and the creation of multiple jobs. However, a primary role in the development of the yacht rental market is played by both the services provided and the infrastructure that exists in the harbors hosting the boats.

The clients who approach the yachting market are overwhelmingly (95%) foreigners. Mainly Europeans and then Americans come to Greece choosing either sailing or motorized pleasure boats. In particular, the Italians, the French and the Germans prefer sailing ships, while the Americans, on the other hand, prefer boats with a mechanical means of propulsion. Regarding the Greek yachting public, in recent years there has been a preference for sailing boats without the presence of a crew, while the people who are attracted belong to the majority in the upper- and middle-income classes.

In the city of Lefkada, one of the most modern marinas in the Mediterranean, has been operating since 2002, with a capacity of 620 berths for boats with a maximum length of 45 meters and a draft of 3.6 meters. The infrastructure projects, the facilities, the hospitality and the services provided are at high levels, satisfying even the most demanding customers. The marina operates all year round, employs approximately 26 people, 17 of whom are its permanent staff (Dallos, 2018).

The total revenues of the marina, from a survey carried out, in the last five years show an upward trend and according to those in charge, an equally good tourist-income season is expected for the following years. The largest percentage of the marina's revenue, as expected, comes from berthing and the services provided to boats are around 77%. The remaining 33% of revenue comes almost equally from commercial exploitation activities and the provision of technical services. Specifically, 11% concerns the marina's income from commercial exploitation, i.e. income from the lease or management of the commercial stores, gas stations, restaurants and various other commercial businesses. The remaining 12% comes from technical services, i.e. it is the marina's income from the repairs of the boats in the repair area, the lifting and launching services as well as the income from mooring boats in the land area of the marina.

As part of the operation of the marina, as is logical, there are also the expected expenses. Two of the important categories of expenses with the largest percentage participation are those of the lease, i.e. the rent paid by the company with a percentage that reaches approximately 37% and the salary of the employees with a percentage that reaches 15%. In the table below, a report is made of all costs in percentages. It is worth noting that the category of services includes costs for services such as Water and Sewage, Telecommunications, Electricity, etc., while by the term maintenance we mean all costs incurred for the preventive maintenance of facilities, equipment, networks, contracts of contractors and external partners and various other maintenance costs. Finally, another notable percentage of expenses, amounting to approximately 14%, is that for the expenses of services to third parties. This category includes all expenses for the legal coverage of the business, cleaning crews as well as private security services (Dallos, 2018).

Table 1: Expenditure categories % of the total

Expenditure category %	2018
Rent (rent)	36.82
Payroll	14.68
Insurance	1.42
Services	6.86
Maintenance	9.22
Third party services	14.38
Marketing	1.59
Depreciation	12.24
Other	2.79

3. Methodology

It is accepted that tourism is an activity based on the demand and consumption of goods and services by visitors to a tourist destination. Therefore, the investigation of the economic effects of each tourist activity can be captured through the analysis of tourist consumption. For this reason, this study used as a research tool the structured questionnaire, which was compiled according to the consumer criteria of visitors who choose their holidays on a tourist boat. For this reason, information was sought on the consumer patterns and preferences of tourists who rent pleasure boats from experts working in tourist ports, such as the director of the Lefkada marina and those responsible for boat charters from private companies based in the marina (Dalos, 2018). Their knowledge is not limited only to their observation and experience regarding the consumption habits of tourists on pleasure boats but is also the product of a documented opinion since they undertake in many cases the catering of the boats before the start of their journey, according to the preferences of the boat's tenants. In addition to the content of the questionnaire, the charter agreement required for the charter of pleasure boats, Charter Party, the Pleasure Boat's Document [Regulation (EC) No 562/2006 ANNEX VI AR. 3.2.6 and 3.2.7], and the Price List of the company that manages a large number of marinas, for the charter of boats of all types and sizes, with a starting point Departure bases: Athens, Rhodes, Kos, Corfu, Lefkas, Skiathos, Paros, Mykonos, were taken into account.

Therefore, the questions are appropriately formulated to enable the most objective collection of quantitative and qualitative data by yacht charter industry experts, while at the same time giving the tourists who choose Yaching for their holidays the opportunity to express their opinion on the structure of the consumption of goods and services made during their holidays. The questions concerning quantitative data are specific and contain the monetary unit of measurement that represents the tourists' expenditure, so as to leave no doubt in their answers.

The sample of our research consisted of 278 questionnaires. The collection of the data took place between the beginning of March and the end of September 2018, a purely touristic period and especially for marine tourism, on the island of Lefkada. Mainly the questionnaires were given to the customers of the boats on Saturday, morning hours or Friday afternoon. The choice of these days was made mainly because these are the days when tourists hand over the boat to the owner or the rental office and the checkout is done to determine whether there is possible damage to the boat. Tourists received the relevant questionnaire, which of course they had to answer anonymously. Then they proceeded to fill it in and any question or question they had was clarified on the spot, to complete the survey. The sample is estimated to be satisfactory considering the difficulties in completing the questionnaires.

Data entry, processing and statistical analysis were performed with the statistical program IBM SPSS 20 (Statistical Package for Social Sciences 20). The research data were approached from both descriptive statistics and inferential statistics. First it was checked with the Kolmogorov-Smirnov test whether the data come from the normal distribution. Then, in the context of descriptive statistics, frequency tables were used to organize, describe and summarize the numerical data, including the absolute frequencies and the valid relative frequencies (valid%) of the values of the variables as well as appropriate measures of position and dispersion (mean value and standard deviation).

As far as statistical inference is concerned, we are concerned with investigating the behavior of two variables at the same time, to establish and determine the magnitude of the relationship between them. Since the normality test revealed that the variables did not follow the normal distribution we used non-parametric criteria. To determine whether there are statistically significant differences between two different levels of an independent variable, the non-parametric Mann-Whitney (U) test was used, while if there were more than two levels of the independent variable to be compared, the non-parametric Kruskall

test was Wallis (H).
To test for independence between two qualitative variables, the x2 statistical criterion was applied in our analysis. The x2 test statistics are applied to examine whether two variables crossed in a two-entry matrix are independent or dependent, and whether the frequencies of the different categories may arise by chance or are systematic, respectively. In all tests performed in the research, the level of statistical significance (p) was set at 0.05. Values that were less than or equal to 0.05 were considered statistically significant (Norris, et al., 2017).
This section presents the main characteristics of visitors to Lefkada as far as marine tourism (yachting) is concerned. The countries from which the tourists come were grouped into seven categories. Table 2 presents the categories created in terms of the nationality of the tourists as well as the countries included in each category.

Table 2: Categories for nationality

Categories for Nationality	Countries it includes
England	England, Scotland, Ireland
France	France
Germany	Germany
Italy	Italy
Netherlands	Netherlands and Belgium
Other countries within the EU	Poland, Romania, Greece, Hungary, Spain, Bulgaria, Sweden, Austria, Denmark, Finland
Non-EU countries	USA, Canada, Australia, Russia, South Africa, Switzerland, Ukraine, Norway and Israel

Based on the categories created in terms of the visitors' country of origin, Table 3 presents the frequency distribution and the corresponding percentages of visitors to Lefkada in terms of their nationality.

Table 3: Frequency distribution

Nationality	Frequency	Relative frequency (%)
England	73	26..3
France	19	6.8
Germany	44	15.8
Italy	23	8.3
Netherlands	22	7.9
Other countries within the EU	48	17.3
Non-EU countries	49	17.6
Total	**278**	**100.0**

Therefore, according to the above table we notice that there is a significant concentration of visitors to Lefkada as far as yachting marine tourism is concerned from the countries of England (26.3%) and Germany (15.8%) for the summer of 2018. These results of course they are expected, because in recent years the Europeans, mainly the English and the Germans, show a particular preference for the Greek islands. What is worth noting, however, is the special percentage (17.6%) of countries outside the European Union, such as America, Canada, Australia, Russia, South Africa, Switzerland, Ukraine, Norway and Israel, which cover almost one fifth of all marine tourism on the island, nationalities which previously had much smaller percentages of visitors or even non-existent, such as Israel for example.
Regarding whether and to what extent those who choose sea tourism by boat for their summer holidays are members of the same family or simply a group of friends. According to

the results of the survey of the 278 participants, we found that the percentages are approximately the same, close to 50% with a slight advantage of people who do not belong to the same family i.e. 55.4%, compared to families which reach the percentage of 44.6%.
In Table 4 we observe the distribution of frequencies and relative frequencies of the respondents regarding the number of people on each boat. According to the results of the table, we find that 55.8% of the tourists who chose marine tourism (yachting) preferred to take group vacations, in groups ranging from four to seven people. Quite a high percentage, almost half, compared to the smaller groups of three people with a percentage of 31.3%, almost a third of the total. Only 12.9% of respondents chose to vacation in groups of more than eight people.

Table 4: Distribution of frequencies and relative frequencies % by number of people

Number of people	Frequency (%)	Relative frequency (%)
<3	87	31.3
4-7	155	55.8
>8	36	12.9
Total	**278**	**100.0**

In the following Table 5 we observe the distribution of tourists in percentage figures regarding what percentage of the respondents in terms of nationalities were families or not. According to the results, the French are leading with a percentage of 63.2%, while the Dutch are also above 50% with a percentage of 54.5%. However, the very low percentage of German families who choose sea tourism (yachting) for their summer holidays is noteworthy, at only 34.1%, lower even than that of non-EU countries (40.8%).
In the same Table 5 we observe the percentage distribution of the respondents in terms of the number of people by nationality who were on board each vessel. According to the results of the survey, mainly the French with a percentage of 57.9% and then the Italians with a percentage of 43.5% chose groups of three people, compared to all other nationalities, who chose larger groups mainly of four up to seven people for this type of holiday. Characteristic is the high percentage of 72.7% that the Dutch show in groups of four to seven people compared to all other nationalities. Also noteworthy is the high percentage of non-EU countries of 24.5% compared to all other nationalities in groups of more than eight people. The French, the English and the Italians show a very low percentage in large groups of more than eight people.

Table 5: Distribution of frequencies and relative frequencies % of respondents' nationality

	by family			by number of persons			
Nationality	**Yes N (%)**	**No N (%)**	**Total N (%)**	**<3 N (%)**	**4-7 N (%)**	**>8 N (%)**	**Total N (%)**
England	36 (49.3)	37 (50.7)	73 (100.0)	28 (38.4)	40 (54.8)	5 (6.8)	73 (100.0)
France	12 (63.2)	7 (36.8)	19 (100.0)	11 (57.9)	8(42.1)	0 (0.0)	19 (100.0)
Germany	15 (34.1)	29 (65.9)	44 (100.0)	11 (25.0)	26 (59.1)	7 (15.9)	44 (100.0)
Italy	11 (47.8)	12 (52.2)	23 (100.0)	10 (43.5)	11 (47.8)	2 (8.7)	23 (100.1)
Netherlands	12 (54.5)	10 (45.5)	22 (100.0)	3 (13.6)	16 (72.7)	3 (13.6)	22 (100.0)
Other countries	18 (37.5)	30 (62.5)	48 (100.0)	15 (31.2)	26 (54.2)	7 (14.6)	48 (100.0)

within the EU							
Non-EU countries	20 (40.8)	29 (59.2)	49 (100.0)	9 (18.4)	28 (57.1)	12 (24.5)	49 (100.0)
Total	**124 (44.6)**	**154 (55.4)**	**278 (100.0)**	**87 (31.3)**	**155 (55.8)**	**36 (12.9)**	**278 (100.0)**

In Table 6, the categories of expenses of all passengers per vessel during their trip are reported in percentage figures. In the first three places are, as expected, food expenses with a percentage of 98.6%, fuel expenses with a percentage of 96.4% and of course the cost of charters, i.e. the money for renting the boat with a percentage of 95.7%. Also, almost half of the respondents spent money on entertainment (54.7%), here we are mainly talking about nightclubs and gifts. The very small percentage of 5.8%, i.e. only 16 groups out of a total of 278, who spent money on their visit to a museum is very normal because Lefkada, despite its rich cultural tradition, does not attract this type of tourism.

Table 6: Distribution of types of expenses and Average costs

frequencies and relative frequencies			**Average cost per expense category**			**Average cost per person in expenditure categories**		
Type of expenses	**n/N**	**%**	**Average**	**S.D.**	**Min-Max**	**AVERAGE**	**T.A**	**Min-Max**
Fare cost	266/278	95.7	4,185.94	2,562.12	630-14,350	935.86	517.09	200-3,400
Fuel	268/278	96.4	173.49	130, x6	10-1,200	46.15	79.24	3-1.200
Skipper	106/278	38.1	1,006.42	206.17	100-1,500	277.79	177.19	33-1,050
Diet	274/278	98.6	720.15	489.26	50-2,000	166.00	122.42	15-750
Clothing	116/278	41.7	215.36	282.37	10-2,000	47.13	45.79	3-286
Gifts	153/278	55.0	229.90	349.03	15-2,000	46.59	51.59	2-286
Transportation	203/278	73.0	184.62	265.94	10-2,000	39.33	48.03	2-400
Entertainment	152/278	54.7	412.53	444.18	15-2,000	92.37	88.28	7-500
Tickets to museums	16/278	5.8	49.25	30.65	10-100	17.65	16.37	3-60
Newspapers-Magazines	54/278	19.4	34.72	25.94	2-100	8.37	5.93	1-25
Accommodation	55/278	19.8	181.45	154.41	20-1,000	46.11	65.54	7-500
Marina fees	111/278	39.9	215, 1	142.20	20-650	49.15	57.89	5-500

In the same Table 6, the Average amount of money spent per expense category has been calculated. That is, according to the total number of people per boat, on Average what money was spent in each category. Also, the last column of the table shows the smallest and largest amount of money spent on each expense category. If we exclude the first category, i.e. the money spent on renting the boat, which was expected to have the highest Average (AVERAGE=€4,185.94), it is worth noting that the next two categories are the skippers with an amount of 1,006.42 euros and maintenance expenses with 720.15 euros. Also expected were the results of the last two places where the printed press is located with an amount of 34.72 euros, reasonable due to the information mainly via the internet and the costs for tickets to museums at only 49.25 euros. Regarding the total expenses of the teams per boat, the Average money spent is 5,974.44 euros.

In Table 6, considering the number of people on each boat, the Average amount of money spent by each person was calculated for the same categories of expenses as in the previous table. The first place, with 935.86 euros, is occupied by the expenses for renting the boat, followed by the expenses for the skipper, i.e. the person who controls the boat, at 277.79 euros and the expenses spent on their food, here expenses are included for supermarkets or restaurants, at 166.00 euros. Finally, it is worth noting that on Average each person for a week of boat holidays, including all expenses, spends 1,365.40 euros, an amount that can be reduced to a significant extent by the ability one has in boat management, in this in this case, the costs for the skipper and the type of boat that will be rented are deducted.

4. Results

This section lists the results of the statistical checks carried out regarding the characteristics of visitors to Lefkada. First, it was checked whether the money spent by the research participants in the different categories of expenses and in total differ according to whether the trip was made by members of the same family or simply by a group of friends (Table 7).

The test for statistically significant differences between the two independent samples was performed with the non-parametric Mann-Whitney U test, since the normality test showed that our data did not follow a normal distribution. From the table above, we can see that the tourists who visited Lefkada with a group of friends spent more money overall, but more specifically on fuel, food, clothing, gifts, transportation, entertainment and accommodation compared to those who made the trip with their family.

Then, considering the number of people on each boat, it was checked whether the expenses of the respondents per person differ according to whether the trip was made by members of the same family or simply by a group of friends. We find that the Average cost per person for a skipper differs to a statistically significant degree as to whether the trip was made by a family or a group of friends (p-value=0.006). As shown in Table 7, the tourists who made the trip with their family seem to have spent more money per person for the skipper (Average=323.67) compared to those who made the trip with a group of friends (Average=251.08). The results are similar as far as the Average cost of using the marina for the family is concerned (p-value<0.001). As can be seen from the table, tourists who visited Lefkada with their family spent per person more money on the use of the marina (Average=59.39) than those who visited the island with a group of friends (M. O=37.54). Regarding the money spent by tourists on gifts (p-value=0.028) and on entertainment (p-value=0.001) a statistically significant difference was found as to whether they traveled with friends or with their family. Specifically, it can be seen from the table that tourists who visited Lefkada with friends spent per person more money on gifts and entertainment than tourists who traveled with their family.

Table 7: Significance test of expenditure differentiation according to whether the trip involves a family or a different group hiring the Yacht

Expense categories	Total Family Expenses				Family Expenses per person			
	Yes Average (S.D.)	No Average (S.D.)	Mann-Whitney	p-value	Yes Average (S.D.)	No Average (S.D.)	Mann-Whitney	p-value
Fare cost	3,905.47 (2396.50)	4,406.17 (2,672.35)	7,765.50	0.127	985.31 (531.14)	897.03 (504.17)	7,757.50	0.124
Fuel	144.62 (110.53)	196.54 (140.41)	5,980.00	**<0.001**	40.34 (37.94)	50.79 (100.65)	7912.00	0.130
Skipper	976.67 (242.08)	1,023.73 (181.81)	1,043.50	0.052	323.67 (183.07)	251.08 (169.36)	887.00	**0.006**
Diet	625.14 (435.45)	798.70 (517.99)	7,531.50	**0.007**	162.57 (126.70)	168.83 (119.12)	8,819.50	0.461
Clothing	168.44 (244.88)	277.30 (317.34)	1,171.50	**0.007**	41.34 (43.68)	54.78 (47.80)	1,368.00	0.115
Gifts	153.30 (258.99)	292.81 (399.07)	1,972.00	**0.001**	38.97 (47.61)	52.86 (54.13)	2,301.00	**0.028**
Transportation	183.80 (311.22)	185.39 (216.86)	4,310.00	**0.045**	38.91 (53.51)	39.72 (42.53)	4,906.00	0.567
Entertainment	211.67 (162.99)	533.05 (511.82)	1,441.00	**<0.001**	61.15 (50.34)	111.10 (100.32)	1,865.50	**0.001**
Tickets to museums	56.18 (32.99)	34.00 (19.49)	16.50	0.208	16.70 (13.39)	19.75 (23.43)	26.00	0.865
Newspapers-Magazines	28.84 (15.71)	43.27 (34.72)	294.50	0.306	7.79 (4.80)	9.22 (7.32)	346.50	0.923
Accommodation	164.40 (185.72)	195.67 (124.06)	256.00	**0.043**	52.44 (94.45)	40.83 (23.51)	330.00	0.445
Marina fees	237.46 (152.01)	191.25 (127.21)	1,277.00	0.128	59.39 (66.68)	37.54 (43.75)	864.00	**<0.001**
Total Expenses	5,332.18 (3211.60)	6,491.58 (3,575.91)	7,618.00	**0.004**	1,377.64 (786.91)	1,355.56 (791.92)	9,471.50	0.909

Table 8: Significance test of differences in expenditure per person by nationality 80

Expense categories	Nationality	
	Kruskal-Wallis H	**p-value**
Fare cost	22,271	**0.001**
Fuel	6,144	0.407
Skipper	2,664	0.850
Diet	27,365	**<0.001**
Clothing	7,004	0.320
Gifts	1,429	0.964
Transportation	11,832	0.066
Entertainment	37,322	**<0.001**
Tickets to museums	7,969	0.158
Newspapers-Magazines	17,331	**0.008**
Accommodation	2,139	0.906
Marina fees	16,561	**0.011**
Total Expenses per person	33,606	**<0.001**

It was then checked whether the tourists' expenses per person differ to a statistically significant degree in terms of their nationality. To test for statistically significant differences in outcomes between more than two independent samples, the non-parametric Kruskall Wallis test was used, since the normality test indicated that the variables did not follow a normal distribution. From Table 8 we find a statistically significant difference in terms of the nationality of the respondents as regards the costs of charter, food, printed entertainment, marina costs as well as the total costs of tourists. These relationships are presented in detail in the tables below.

Table 9: Significance test of differences in charter costs per person by nationality

	Fare cost by person			Food costs per person			Entertainment costs per person			Print expenditure per person			Marina costs per person			Total expenditure per person		
Nationality	**N**	**Average**	**S.D.**	**N**	**Average**	**S.D.**	**N**	**Average**	**S.D.**	**N**	**Average**	**S.D.**	**N**	**Average**	**S.D.**	**N**	**Average**	**S.D.**
England	72	1,023.54	524.81	73	208.74	133.16	41	152.68	122.79	19	11.98	6.28	30	73.71	95.67	73	1566,02	771,91
France	18	1051.47	651.70	18	133.68	90.74	10	50.67	39.81	7	6.36	3.65	7	64.00	62.10	19	1520,80	1015,03
Germany	42	864.06	388.48	44	182.31	113.19	27	100.89	74.14	8	5.31	2.93	13	28.50	16.98	44	1347,12	585,18
Italy	20	664.81	287.72	21	94.24	63.99	10	27.17	30.82	2	3.54	0.29	9	28.35	14.85	23	825,55	422,90
Netherlands	21	832.40	322.77	22	173.60	148.50	13	87.09	43.98	2	3.30	0.63	9	47.41	33.41	22	1164,38	618,05
Other countries within the EU	46	784.30	486.03	47	141.38	124.60	29	58.71	42.74	5	10.33	8.63	14	31.52	20.48	48	1154,14	773,30
Non-EU Countries	47	1,131.31	626.41	49	150.49	107.17	22	65.62	59.22	11	6.56	4.61	29	44.94	30.78	49	1573,31	920,30

From Table 9, as far as the charter costs per person in terms of nationality are concerned, we find that the participants from countries outside the EU (Average=1131.31), from France (Average=1051.47) and from England (Average=1023.54) spent more money on renting the boat than the other nationalities. It is important to note that non-EU visitors per person spent the most money on boat hire even though they had the highest percentage in large groups of more than eight people.

Regarding the money spent per person by tourists on their food, a statistically significant difference was found in terms of nationality (p-value<0.001). As can be seen from Table 9, tourists from England (Average=208.74), Germany (Average=182.31) and the Netherlands (Average=173.60) spent much more money on their food in relation to other nationalities. Italians are the ones who spent the least amount of money (Average=94.24) on their food, i.e. expenses they incurred in supermarkets and restaurants.

A statistically significant difference was also found in the entertainment expenses of visitors to Lefkada per person in terms of nationality. In more detail, as we can see from Table 9, tourists from England (Average=152.68) and Germany (Average=100.89) spent the most money on entertainment compared to the other nationalities. And on entertainment expenses, that is, on night clubs and shops, the Italians are the ones who spent the least money (Average=27.17). Regarding the money spent by tourists for their information in printed media, a statistically significant difference was found in terms of nationality. From Table 9 we find that the English (Average=11.98) and tourists from other EU countries (AVERAGE=10.33) preferred their information from printed media and spent per person more money than with tourists from other nationalities.

Table 10 presents the results from the test for the existence of a statistically significant difference in the cost of the marina per person in terms of nationality. Specifically, we find that the English (Average=73.71) and the French (Average=64.00) spent much more money for the use of the marina than the other nationalities (p-value=0.011). The least money for the use of the marina was spent per person by Italians (Average=28.35) and Germans (Average=28.50). Finally, as regards the total expenses per person, a statistically significant difference was found in terms of the nationality of the respondents (p-value<0.001). More specifically, as shown in Table 9, the most money was spent by tourists from non-EU countries (Average=1573.31), followed by people from England (Average=1566.02) and France (Average=1520.80). The least money in total per person seems to have been spent by Italians (Average=825.55).

Table 10: Correlation results of family and number of people using skipper and the number of people with the use of the marina

	Skipper Hiring				Use of the marina			
	Yes N (%)	**No N (%)**	**Yes Average (S.D.)**	**No Average (S.D.)**	**Yes Average (S.D.)**	**No Average (S.D.)**	**Total N (%)**	**x^2 (p-value)**
Family								
Yes	39 (31.5)	85 (68.5)	124 (100.0)	**4.231**	59 (47,6)	65 (52,4)	124 (100,0)	**5,465**
No	67 (43.5)	87 (56.5)	154 (100.0)	**(0.047)**	52 (33,8)	102 (66,2)	154 (100,0)	**(0,026)**
Number of people								
<3	46 (52.9)	41 (47.1)	87 (100.0)	**17.444**	33 (37,9)	54 (62,1)	87 (100,0)	**12,549**
4 to 7	55 (35.5)	100 (64.5)	155 (100.0)	**(<0.001)**	54 (34,8)	101 (65,2)	155 (100,0)	**(0,002)**
>8	5 (13.9)	31 (86.1)	36 (100.0)		24 (66,7)	12 (33,3)	36 (100,0)	
Total	**106 (38.1)**	**172 (61.9)**	**278 (100.0)**		**111 (39,9)**	**167 (60,1)**	**278 (100,0)**	

As we can see from the table above, a statistically significant difference was found between the use of skipper and family (p-value=0.047), with tourists who traveled with friends using a skipper on the boat to a greater extent than those who traveled with their family. Specifically, it appears that 43.5% of tourists who traveled with friends used a skipper, while 31.5% of tourists who traveled with their family used a skipper. Also, from the same table we find that the use or not of a skipper differs to a statistically significant degree in terms of the number of people (p-value<0.001). It appears that in the groups with a maximum of three people 52.9% used a skipper on the trip, while in the groups with more than eight people only 13.9% stated that they used a skipper on the boat.

Regarding the use or not of a skipper on the trip and nationality, a statistically significant relationship was found (p-value=0.009). Specifically, it can be seen from Table 10 that among the French, the largest percentage (57.9%) used a skipper on the trip. It is also very characteristic that most of the Dutch and Italians (86.4% and 82.6% respectively) did not use a skipper on the boat.

In the tables below, it was checked whether the use of the marina varies according to the characteristics of the tourists. Table 10 shows the distribution and correlation of the use or not of the marina with whether the trip was made by family or friends and with the total number of people. From the table we find a statistically significant relationship between the use of the marina and the family (p-value=0.026), with families using the marina to a greater extent than groups of friends. Specifically, it appears that 47.6% of tourists who traveled with family used the marina, while 33.8% of tourists who traveled with friends used the marina. Also, from the same table we find that the use of the marina varies to a statistically significant degree in terms of the number of people (p-value=0.002). It appears that tourists who traveled with groups of more than eight people stated that they used the marina to a greater extent (66.7%) compared to groups of four to seven people and groups of less than three people.

Table 11: Control of significance of differences of the categories of expenses per person in terms of skipper use and regarding the use of the marina

Expense categories	Skipper Hiring				Use of marina			
	Yes Average (S.D.)	No Average (S.D.)	Mann-Whitney	p-value	Yes Average (S.D.)	No Average (S.D.)	Mann-Whitney	p-value
Fare cost	1147.87 (635.84)	797.59 (362.39)	5492.50	**<0.001**	1056.16 (563.19)	853.62 (467.31)	6437.50	**0.001**
Fuel	54.66 (44.47)	40.93 (94.22)	5144.50	**<0.001**	285.40 (193.10)	272.79 (167.32)	1303.50	0.792
Diet	201.21 (140.59)	144.46 (104.57)	6477.00	**<0.001**	35.25 (33.85)	53.51 (98.17)	5225.50	**<0.001**
Clothing	69.68 (59.59)	36.58 (33.15)	840.00	**<0.001**	104.26 (61.38)	207.41 (135.22)	4477.50	**<0.001**
Gifts	61.98 (63.40)	35.23 (37.24)	1889.00	**<0.001**	28.99 (21.42)	63.50 (55.06)	844.00	**<0.001**
Transportation	48.00 (54.12)	34.76 (44.02)	3814.00	**0.034**	21.81 (24.56)	62.58 (57.89)	1044.50	**< 0.001**
Entertainment	104.87 (88.03)	81.12 (87.53)	2224.00	**0.015**	35.81 (45.82)	41.91 (49.62)	3784.50	**0.003**
Tickets to museums	35.33 (27.30)	13.57 (10.70)	9.00	**0.156**	47.17 (31.66)	105.89 (95.13)	1175.00	**<0.001**
Newspapers-Magazines	9.91 (5.20)	7.73 (6.17)	211.00	**0.077**	11.01 (8.52)	32.27 (20.85)	10.50	0.053
Accommodation	44.76 (24.19)	47.01 (82.84)	285.00	**0.179**	7.84 (5.21)	9.21 (6.97)	329.00	0.755
Marina fees	51.47 (84.48)	47.74 (33.36)	1117.50	**0.044**	32.02 (17.35)	56.23 (83.76)	254.00	0.051
Total Expenses / person	1862.28 (901.48)	1059.19 (510.26)	3545.00	**<0.001**	1401.21 (791.43)	1341.60 (787.76)	8739.00	0.420

In Table 11 it was checked whether the expenses of the research participants differ to a statistically significant degree in terms of the use of a skipper, i.e. in terms of whether they used another person to steer the boat on their trip. As can be seen from the table, those who used a skipper on the trip also spent more money on fares, fuel, food, clothing, gifts, transportation, entertainment, marina use and total expenses than those who did not. skipper on their journey.
In Table 11 it was checked whether the expenses of the tourists who visited Lefkada differ to a statistically significant degree as to whether they used the marina. As can be seen from the table, those who used the marina on their trip to Lefkada spent more money on fares (Average =1056.16) than those who did not use the marina (Average=853.62) (p-value=0.001). Conversely, tourists who used the marina spent less money on fuel, food, clothing, gifts, transportation, and entertainment than tourists who did not use the marina. Finally, from the same table it was found at the limits of statistical significance that visitors who used the marina of Lefkada spent less money on their accommodation (p-value=0.051) and on museum tickets (p-value=0.053) than those who did not use the marina.
Table 12 shows the distribution and correlation of the nationality of the tourists with the use or not of the marina during their vacation in Lefkada. We notice from the table that most visitors from Germany (70.5%) and visitors from the rest of the EU countries (70.8%) did not use the marina, while on the contrary, among tourists from non-EU countries, the largest percentage did (59.2%) used the marina. Of course, as we can see from the table, this relationship is indicative and not statistically significant (p-value=0.062).

Table 12: Results of association of nationality with the use of the marina

	Use of the marina			x^2 (p-value)
Nationality	**Yes N (%)**	**No N (%)**	**Total N (%)**	
England	30 (41.1)	43 (58.9)	73 (100.0)	
France	7 (36.8)	12 (63.2)	19 (100.0)	12.002 (0.062)
Germany	13 (29.5)	31 (70.5)	44 (100.0)	
Italy	9 (39.1)	14 (60.9)	23 (100.0)	
Netherlands	9 (40.9)	13 (59.1)	22 (100.0)	
Other countries within the EU	14 (29.2)	34 (70.8)	48 (100.0)	
Non-EU countries	29 (59.2)	20 (40.8)	49 (100.0)	
Total	111 (39.9)	167 (60.1)	278 (100.0)	

5. Conclusions

According to the results of the statistical analysis we can extract some very important information not only about the nationalities of the tourists visiting the island, but mainly about how they themselves choose to distribute their expenses during their vacation, which is particularly interesting.
Mainly the English, the French, and the Germans are the three main nationalities within the EU that are very active in marine tourism on the island of Lefkada and spend more money during their summer vacations, unlike the Italians, who are they choose Lefkada as their destination, but they are more frugal when it comes to their spending. The main categories of expenses are usually food expenses, this category includes both restaurant expenses and supermarket expenses, as well as entertainment expenses in cafes and clubs on the island. Both categories are an important source of income for the local entrepreneurs of the island. It is also observed that a larger part of the total expenditure on food, entertainment and fuel

regardless of nationality is made by the crews made up of groups of friends who charter the boat and not so much if they are family members.
Also, from our research another conclusion we can draw, and it concerns the revenue of the Lefkada marina, which is a purely private business, is that mainly the English but also the French choose to spend more money on the services offered by the marina against other nationalities. But the safety and services of the marina regardless of nationality are half chosen by yacht crews that are made up of families versus crews that are made up of a group of friends.
Finally, one more category of expenditure, and indeed a particularly important one, is the skipper, that is, the captain of the boat. Crews who do not have the ability to skipper the boat, i.e. have a crew member who has the necessary knowledge to skipper the boat, to charter a boat for their summer vacation, are required to hire a professional skipper. In the majority and according to our research, the crews made up of friends are the ones who resort to hiring a skipper, who of course offers full security during the trip. However, the use of the skipper naturally constitutes a significant additional expense and increases the cost of the trip in almost all categories of expenses, but despite all this, families are burdened proportionally more due to the smaller number of people. A general conclusion is that average daily expenditure varies depending on the typology of rented boats (Alcover, et al., 2011).
According to what has been mentioned, but also with more general studies that have been carried out in the field of marine tourism, there are significant margins for the development of the sector within the context of the Greek economy (SETE, 2015), (Maritime Chamber of Greece, 2012). However, the benefits from the development of yachting as well as from the creation of new marinas work multiplicatively in the economy both at the local level, where the marinas are located, and at the national level. According to studies by the Maritime Chamber of Greece, for every 100 berthing positions, approximately 5 direct jobs and another 100 indirect jobs are created both within the marina and in the wider area (Maritime Chamber of Greece, 2012). These are small and medium-sized enterprises that operate in these areas for the servicing of vessels, their maintenance, fuel and catering supplies, as well as maritime agents and crews (Diakomihalis 2011). In addition to this, of course, additional jobs are created in the rest of the local tourist and non-tourist businesses from the increase in tourism, because as we observed from our research, the boat crews spend a lot of money on food and entertainment in the areas they visit (Diakomihalis, 2007a).
The International Council of the Union of the Maritime Industry (ICUMIA) estimates that for every one euro of docking in a marina, approximately 5 to 10 euros are spent, always depending on the size of the vessel, on the daily needs of passengers and crew in food, entertainment, focus but also for the vessel's needs for maintenance and supplies, a result which our research also accepts (Diakomihalis, (2012).
The general conclusion from the research concerns the identification of specific benefits for the local society and economy from the development of marine tourism and specifically Yachting. According to the results, it is understood which sectors of the economy benefit the most, which businesses base their operations on this specific tourism product, what are the consumption habits of tourists depending on their nationality, as well as the difference in total and per category consumption depending on whether the relationship between the charterers of your boat is friendly or family. Entrepreneurs in the sector, owners of pleasure boats, marina managers, and charter managers, can design their business policy considering the findings of the research, as can local bodies responsible for the tourism and economic policy of tourist destinations that rely to a lesser or greater extent on the activity of Yachting.

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