ANALYZING SATISFACTION OF TOURISTS IN THE SPANISH MEDITERRANEAN ARC: A FIRST LOOK AT DATA AND SOME STATISTICAL TESTS

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1. Introduction

The tourism sector has become one of the main wealth generating activities in the world economy. At the beginning of the 21st century, this sector accounts yet for more than 10% of the world GDP (World Travel and Tourism Council). Moreover, the Mediterranean coast is one of the world´s leading markets for sun and sand tourism in recent times. Forecast studies carried out by WTO estimate that international tourist arrivals to the Mediterranean coast will amount to 270 millions in 2010 and to 346 millions in 2020 (in 2000 around 200 million foreign visitors per year). Inside this geographical area, Spain is the second country in the world in terms of tourism revenues (61.628 million of USD in 2008), just beside the USA. France has the third position with (55.600 million in the same year). As well Spain is occupying the third position in terms of total tourist arrivals, with around 52.200 million of foreign landings in 2009 (90 million if we count on national tourism). Tourism activities have become an important source of wealth for the national economy, providing more than 11 per cent of total GDP and employment compared to the slightly percentage in the EU aggregate (UNWTO, 2009). As one should expect, Southern EU countries, particularly those in the Mediterranean, show a similar development of their tourism sector in comparison.

As we have shown, tourism activities are increasingly important in driving Southern European countries and, of course, in Spain. Nowadays, tourism activities spill over all around the globe. Several products are yet well established and consolidated as sun and sand supply, but others are now configuring new growth experiences in cities (cultural, urban, gastronomic, etc.), country-side destinations (hunting, nature, birds sight, etc.),and other locations, increasingly attracting the attention of private and public agents as a source of welfare for their societies (Lim, 1997). Unlike most other products, a tourist destination is a mixture of products and experiences that combine to create a unique experience (Murphy, Pritchald, & Smith, 2000). Given the relevance of such product in generating wealth and welfare, competition is becoming increasingly strong in this sector of the economy. Destinations compete in terms of improving their supplies, providing better infrastructures for the visitors and

developing new sensations for the tourist. Therefore, at this point, information on main advantages characterizing our destination is a key point for both public and private agents belonging to the sector. Sustainability of the product, and on a wider basis for the entire supply, depends on a correct management of such destination´s assets.

Tourism is an activity comprising supply and demand characteristics as every market activity. Supply-side destination studies comprise the analysis of different aspects, such as the development of infrastructures, natural advantages, existence of different tourist products that even complement each other, then making the destination increasingly attractive for the visitor. Demand-side studies increasingly include the use of detailed data sets containing more and more characteristics linked to the tourist profile. Those can be quantitative ones, as their age, marital status, sex, etc., but qualitative ones are becoming the most important in this type of studies. These features of the visitor allow the researcher to observe important aspects of the individual that finally determine their holiday choices. This literature is precisely the one we are going to pursue in our research.

This Master Thesis then is directed to start a research line for the Spanish Mediterranean destinations following such demand-side approach. Given the ambitious character of the investigation, we will focus in this study on characterizing the main profiles of tourists visiting such sun and sand destinations, together with observing the existence of some differences between defined groups of tourists, according to their individual profiles and visiting destinations.

Recent contributions of the literature build on a new approach for assessing both the positive and negative features of a destination from a comprehensive approach (Alegre, 2003). All of them recommend developing qualitative measures of tourism locations by conducting surveys on tourist perceptions capturing their revealed satisfactions. Although tourist satisfaction is a personal judgment, it does provide crucial direct information about a destination's performance (Zairi, 1996; Kozak, 2004). More complex models have the

advantage of allowing a better understanding of tourist behavior since more variables and their interactions can be taken into account. However, for more effective marketing interventions it is important to assess whether the destinations also consider the tourist's personal characteristics (Woodside and Lysonski, 1989; Um and Crompton, 1990). In fact, despite the use of more comprehensive models, so far, they have left unspecified the main personal characteristics (socio-demographic and motivational) of the more potentially loyal and satisfied tourists, with these type of variables just recently being included in marketing and consumers studies of tourism destinations.

In our Thesis we are going to star by focusing on the psychological variables of tourists that affect their satisfaction when they are traveling around the Spanish Mediterranean coast. This study explores the relationship between the perceived overall satisfaction levels and the tourist profile features, together with destinations characteristics. So, our main objective will be to estimate strong and weak points identified by the tourist himself when doing tourist activities. This first approach to the topic, will lead us to analyze just overall satisfaction, because our database limitations. The EGATUR database we employ along the whole study, just includes one general question regarding tourists satisfaction level, the one is going to be used and compared with other tourist and destination characteristics. In future researches we will employ new emerging databases from IET as for example HABITUR, one data set that involves richer information on tourists´ pshycological attitudes regarding different attributes of the destinations visited. Unfortunately, in the moment of carrying out this investigation, we have not such data available. Estimation of the tourist satisfaction will then be our research line now and in the future, the one we are going to pursue in further works, which first step is the one we present as our Master Thesis.

So in the present study we are employing EGATUR as the only information source for the research, It will provide us with an initial identification of the most relevant variables related to the valuation of foreign tourist´s satisfaction for the Spanish Mediterranean destinations. Beginning with the analysis of the tourists profiles for this geographical area in the first section of the Thesis, we continue cross-tabulating the overall satisfaction with the tourist profiles in the second

one and then, through statistical tests, we will identify whether there are estimated differences between the segments of tourists identified. One of the strongest points of this study is a huge database that we dispose of. The study has been based on the Tourism Expenditure Survey, EGATUR onwards, surveyed by the Institute of Tourism Studies of Spain (IET). The data set includes 101.120 surveys on tourists visiting the Mediterranean coast of Spain through the years 2004 to 2008. We then exploit such rich data by employing a combination of software: Excel 2007 and STATA 10.1. The first one allows us to depurate the data set, while the second one is of great help in conducting the statistics of the study. So, Data analysis was performed in STATA, while Excel was used to store data and generate reports and tables.

The remainder of the study is organized as follows. The first part includes a wide description of the data set to be employed in the present Thesis. In the second part, the profile of the tourists who come to visit The Mediterranean coast including the Balearic Islands during the years 2004-2008 is estimated (origin, age, profession, the length of stay, accommodation type etc.). In the third part, the crosses-tabulation by contingency tables are carried out among overall satisfaction with the tourist profiles, and then, through statistical tests, we will identify whether there are significant statistical differences between the segments of tourists identified and their overall declared satisfaction, given the destination they visit or the differences between their own individual characteristics. Finally, the last part includes the conclusions of the investigation and point to the natural future research extensions of this Thesis.

2. The data set

As yet introduced in the above section, our database comes from a survey on sun and sand tourists conducted by the Spanish Institute of Tourism Studies or IET, which compiles information on socio-demographic profiles of visitors, including their length of stay, type of accommodation, county of residence and season of the visit, among others and as well is one of the strongest point of our study. IET is the statutory body in charge of researching the factors that impact on tourism and the development, and in charge of the preparation, compilation and assessment of statistics, information and data relating to tourism.

In addition to these functions, IET is concerned with producing and disseminating tourism knowledge and intelligence, and coordinating information on the tourism industry generated by the various administrative units subordinate to the Secretary of State (under the Ministry of Tourism) and the statutory independent body Instituto de Turismo de España (TURESPAÑA).

The IET research work focuses on the economic and socio-demographic aspects of tourism, for which purpose it relies on information produced by its three main statistical surveys: *Movimientos turísticos de los españoles* (Familitur, domestic and outbound tourism by Spanish residents), *Movimientos turísticos en fronteras* (Frontur, on inbound tourism) and *Encuesta de gasto turístico* (Egatur, on tourism expenditure), all three processes and the framework for implementation of the expediture survey being monthly. The statistical nature of the resulting data is coupled with a macroeconomic perspective allowing for the analysis and quantification of the economic impact of tourism, with results and data for all tourism activities and for all Spanish regions.

In addition, IET uses and regularly disseminates statistics from external sources, such as data on international arrivals via low-cost carriers and employment in tourism-related activities, which disseminates information on a regular basis. IET publishes other relevant statistical information of interest produced by other bodies. IET is the body directly in charge of the survey, and it conducts field work and data processing and use. The survey is also used by

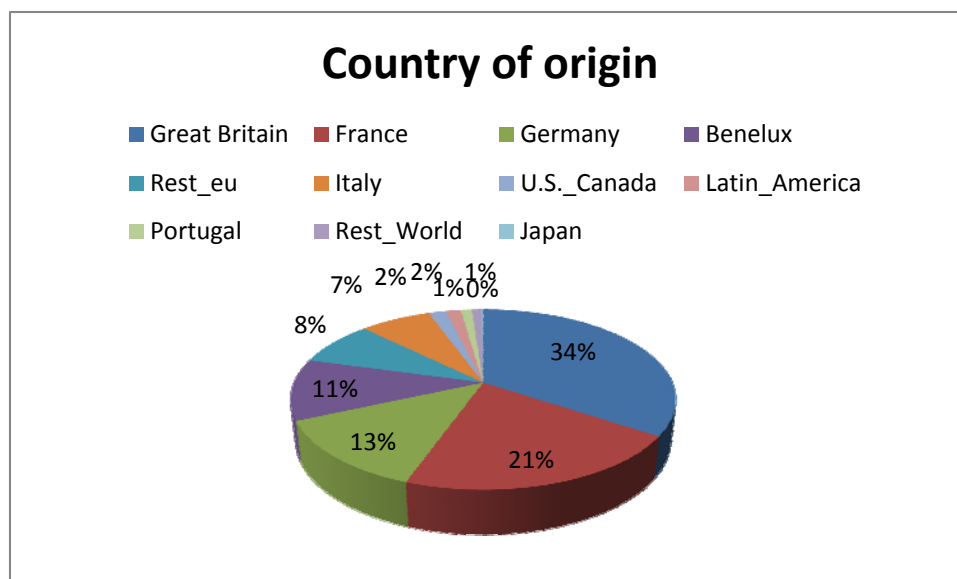INE and the Bank of Spain for estimating the travel and tourism heading in the balance of payments.

Several filters were applied to the data set. The sample that was finally used comprised a total of 101.120 observations, it means foreign tourists visiting the Spanish Mediterranean coast (including Catalonia, Valencia, Murcia region, Andalusia and Balearic Islands) and participating in leisure holidays during the years 2004-2008.

3. Description of the profile of the tourist

In this first part, the profile of the tourist who visits the Mediterranean during the years 2004-2008 is analyzed. We are going to make an analysis of the tourists` socio-demographic characteristics and certain features of the trip. Likewise they were asked about their age, gender, nationality, group type (family, schools, business), education, occupation and income etc. Tourists are an integral part of the service process, which is one of the characteristics that distinguish services from products. Their involvement can be active or passive, but their presence influences what is delivered (Baker and Crompton; 2000). So it is necessary to analyze the available information on the evolution of the profile of foreign tourists and their habits in terms of tourism expenditure to be able to prioritize those strategies of the product, transport, channels marketing and promotional tools to segment and attract profiles of tourists from major multiplier effects for Spanish destinations (Exceltur, 2008). Database provided by the IET, gives us number of overnight stays at intervals from one to thirty nights. The mean length of stay, which often more typically represents the time spent in Spain, was 8,58 nights per visitor.

GRAPH 1

Country of origin

Legend: Great Britain, France, Germany, Benelux, Rest_eu, Italy, U.S._Canada, Latin_America, Portugal, Rest_World, Japan

Values shown: 34%, 21%, 13%, 11%, 8%, 7%, 2%, 2%, 1%, 1%, 0%, 1%

SOURCE: HAVE BEEN ELABORATED BY THE OFFER BASING ON THE DATA PROVIDED BY EGATUR[1]

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[1] All sources as graphs and tables have been elaborated by the offer of this Master Thesis basing on the data provided by EGATUR

International tourists from the United Kingdom (34,35%), France (21,11%) and Germany (12,85%) made up the largest share of international entertainment-based tourists. These three nationalities account for 68% of the tourism to Spain. Increasing share of the visitors also have the Benelux countries (11%), followed by Italy (7,12%). The rest represent lower percentages. The total number of visitors from Europe is about 95,6%, the remaining 4,4% come from outside Europe.

Spain is one of the countries which reach most of the visitors. In more detail, it is observed that the Mediterranean is today the leading worldwide sun and sand destination, with 36% of tourists arriving in Europe, representing some 170 million people in 2007 and 40% of incomes generated by tourism, approximately 150,000 million U.S. $ in the same year. And with respect to the foreign tourists who visit Spain, Great Britain has a certain importance.

GRAPH 2
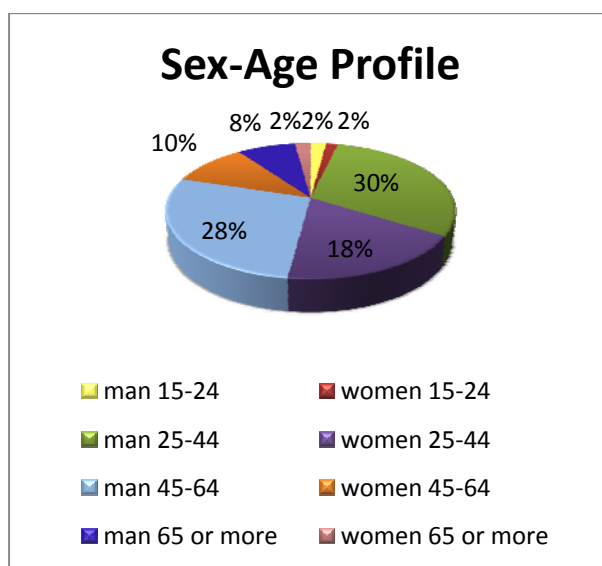
There are clear differences in male and female enrolment. Amongst the total international visitors there are more males (68%) than females (32%). Among male tourists, those aged 25-44 years (30,59%) account for the largest share. This is followed by the 45-64 (28,05%) age group. The 18,24% of the female sample is between the ages of 25-44 and then comes the ages of 45-64 with a 10,20%.

Company

■ alone ■ couple ■ family ■ friends

10%   15%
23%
52%

Group

■ 1 ■ 2 ■ 3 ■ 4 ■ 5 ■ >5

10%   3% 2%
       15%
9%
61%
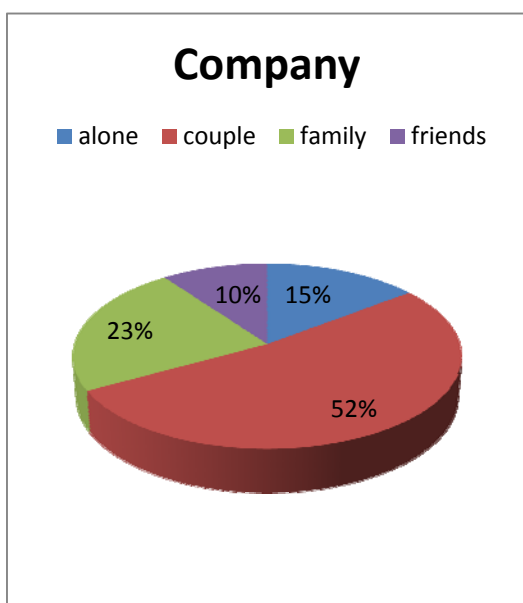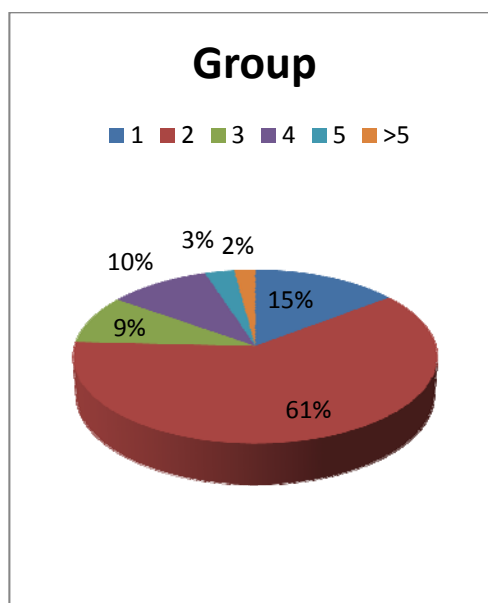
The greatest share of the tourists most commonly travel with their couples; 52,39% and 14,60% of the sample prefer traveling alone, (this is already a total of nearly 66% of the sample to travel in groups of two or without company). 22,98% of the tourists travel with their families and though with a very far percentage then follows tourists traveling with their friends with a 10,03%. These patterns were also reflected in the group size profile, with international tourists mostly travelling in groups of two people (61,13%), alone (14,61%) or more likely mediates up large groups of four or three (19%). The mean size of the group traveling is 2,4 people.

Catalonia and Andalusia are visited by at least two quarter of all travelers to the Mediterranean. 44,79% of all travelers visit Catalonia. While this is nearly double the number visiting Andalusia (21,70%), it reflects the pattern of international flights servicing Spain, most of which use Barcelona as a gateway. Valencia attracts 17,69% of all travelers, 14,74% visit Balearic Islands and 2,19% visit Murcia, as it is shown in the Graph 5.

GRAPH 5   GRAPH 6

Destination

2%

15%

18%

44%

21%

■ Catalonia ■ Andalusia ■ Valencia
■ Balearic ■ Murcia

Accommodation

■ Hotel
■ Proprietery or family
■ Rent, camping and other

16%

49%

35%
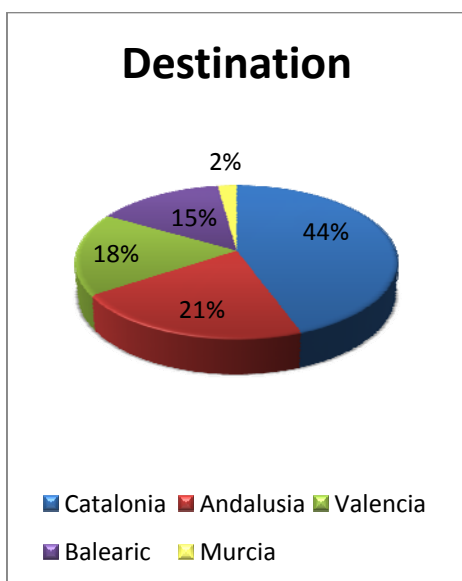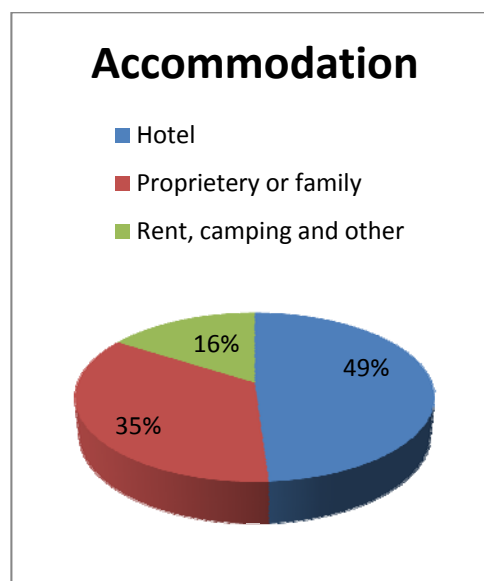
Tourists who visit the Mediterranean predominantly come to hotels (48,94%). The remaining 50% is divided by 35,08% proprietary or visiting relatives, and the rest 15,98% split between rental houses, camping and others to complete 100%. In 2009 continues the weight loss of hotel accommodation against non-hotel establishments. Thus, the importance of the first mentioned has been lowered by nearly three percentage points compared with the previous year, decreasing from 36.5 million tourists in 2008 to about 32 million in 2009 (IET, Balance del turismo año 2009).

The means of transport to travel to Spain is closely related to the distance to the destination. Thus, it is not surprising that travelling by air services, such as regular flight or charter (71,77%) is the most frequently used option for international visitors, followed by their own car (26,67%). Even not 2% do so in rented vehicles and other kinds of transport. The smallest insignificant number, just 0,01%, use the bus. If the data are analyzed by country of origin, it is seen how this behavior is similar for practically all countries, because, in at least seven out of ten arrivals, flying is the most used travel to Spain. Only from France and Portugal, bordering countries, the car is used more than the aeroplane (IET, Balance del turismo año 2009).[2]

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[2] Detailed information is shown in the Annex in the Graph 13

GRAPH 7   GRAPH 8

First visit

Previous visit
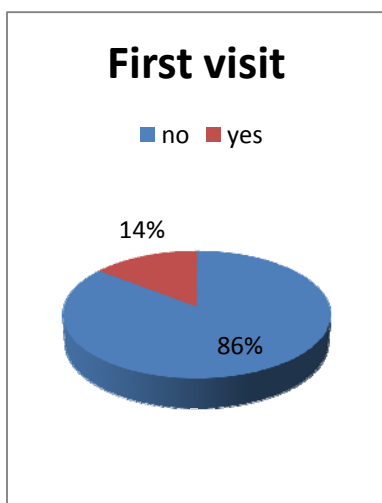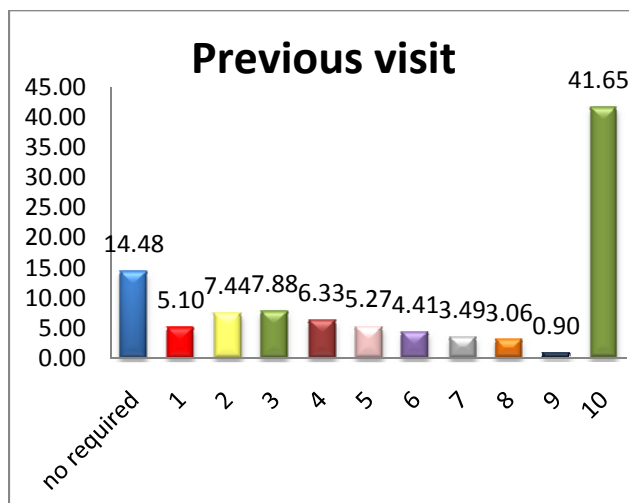
As to the question asked whether it is the first time they visit the Mediterranean, it should be noted that 85,52% have already visited Spain before, while the remaining 14,48% join it for the 1st time.

Another feature of the tourist profile is the high degree of loyalty of those who visit these areas. As for loyalty, measured as the number of times that a tourist has been to Spain before, a very high percentage, 41,65%, have been to Spain 10 times or more than 10, followed by those who have visited the country at least three times in recent years (7,88%).

The annual frequency of such travel is not very high. The majority, 29,75% engaged in this type of travel to Spain for less than once a year, followed by those who do it once per year 23,44%. One per semester has the important share as well, with a 18,15%.[3]

According to the results, 49,49% of respondents have superior (higher) education, compared to 41,37% with secondary school education and, though with a very far percentage, then follows tourists who have primary education or lower (9,13%). [4]

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[3] Detailed information shown in the Annex in the Graph 14
[4] Detailed information shown in the Annex in the Graph 15

Profession

- ■ bussinessman
- ■ wage earner - manager
- ■ wage earner- average charge
- ■ wage earner - no qualified

5%   17%

11%

67%

Salary

- ■ high ■ med/high ■ medium
- ■ med/low ■ low

3% 0% 6%

23%

68%
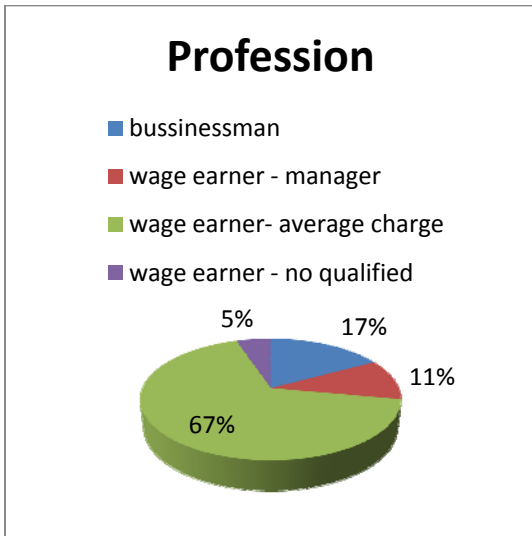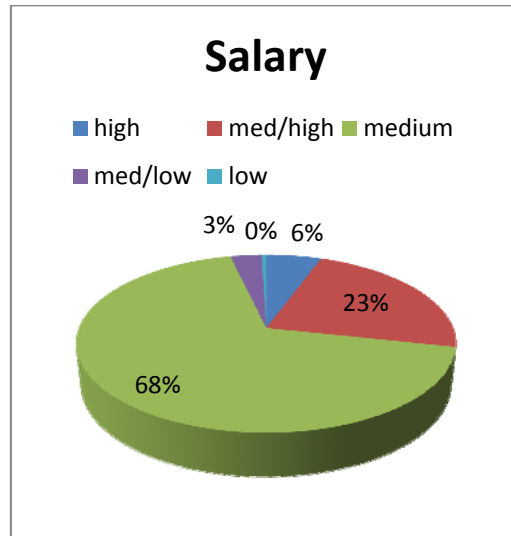
The biggest share of tourists are employees of media positions (67%), followed by businessmen (17%). 11% are managers and least significant are unskilled workers who do 5%. According to this information it can be seen that wage earners (82,97%) greatly outnumber businessmen 17,03%. From the sample, 68% admit having an average income, 22,80% medium/high, 5,59% higher and the rest medium/low and low (0,44%).

GRAPH 11

Year

15%

23% 19%

23% 20%

■ 2004 ■ 2005 ■ 2006 ■ 2007 ■ 2008
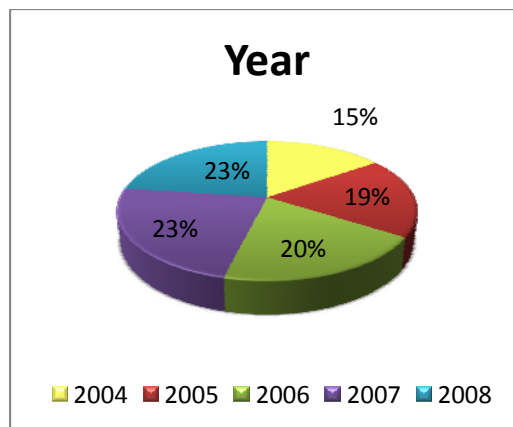
The graph shows the number of tourists in thousands visiting Spain between 2004 and 2008. There are several features in the graph. First of all, the total number of tourists increased rapidly between 2004 and 2007. In 2004 there was a total of 15.464 tourists, compared with 23.549 in 2007. In the

following year, 2008, the number of visitors started to fall down slightly and reached 23.105 visitors.

GRAPH 12
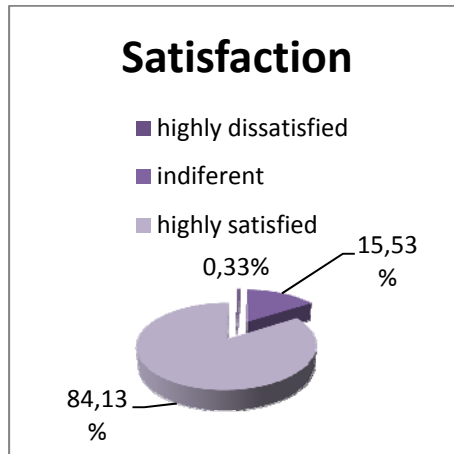
A number of studies have used a summative overall measure of satisfaction (e.g. Bloemer & Ruyter, 1998; Bolton & Lemon, 1999; Fornell et al., 1996). Satisfaction is a psychological state that can only be derived from interaction with the destination. (Baker and Crompton;2000). Similar sentiments were expressed by Fornell and Manfredo (1996), while Oliver observes, "the consumer´s psychology mediates the impact of performance observations on satisfaction judgements".

In this study, a single overall measure of satisfaction was used for its ease of use and empirical support. The most common way of obtaining this kind of information is to use an ordinal scale as a means of rating satisfaction levels. In our case, the respondents were asked to rate their satisfaction with the overall traveling experience on a 10-point Likert scale with 1 being highly dissatisfied and 10 being highly satisfied. As we can observe, tourists are highly satisfied in the significant majority of cases (84,13%). In relation to overall satisfaction, which the international tourists are expressing, it was noted that mean satisfaction was situated by 8,4 points over 10.

A first look at our results reveals that foreign tourists arriving to Spanish Mediterranean coast come mainly from the United Kingdom (34,35%). Among male tourists, those aged 25-44 years (30,59%) account for the largest share. The greatest share of the tourists most commonly travel with their couples 52,39%. These patterns were also reflected in the group size profile, with tourists mostly travelling in groups of two people (61,13%). Tourists have superior education and they are employees of media positions with an average income. Most of the travelers visit Catalonia (44,79%). Travelling by air services, such as regular flight or charter (71,77%), is the most frequently used option. International visitors predominantly choose hotels (48,94%) as their type of accommodation. Another feature of the tourist profile is the high degree of loyalty of those who visit these areas. It should be noted that 85,52% have already visited Spain before, and a very high percentage, 41,65%, have been to Spain ten times or more than ten. The annual frequency of such travel is not very high, it means less than once a year. The majority of the travelers are highly satisfied with their trip.

4. Analysis of the overall satisfaction by segments of demand and characteristics of the destination

The literature about the satisfaction states that it is possible that the answers given by the tourists concerning the destination may be influenced by the consumers' characteristics (Pizam and Ellis, 1999; Yu and Golden, 2006). This matter can be especially important when different destinations are compared, because for example, a higher proportion of tourists of a certain nationality in a specific destination can cause the average opinion of a destination to be bias. In their conclusions, Dwyer et al. (2004) point to the need to obtain measurements of competitiveness that incorporate the tourists' point of view. Following Kozak and Rimmington (1999), in this study, tourist assessments were considered to be a valid instrument for measuring competitiveness. These assessments not only include an overall assessment of the holiday, but their opinion of the destinations' different attributes or characteristics. Information can also be compiled about the tourists' socio-demographic characteristics and their motivations. Firstly, overall satisfaction with a holiday is only partly the result of a destination's good performance or a positive assessment of its different attributes. Ryan and Cessford (2003) emphasize that overall satisfaction can be high even if different aspects of the service do not come up to the tourist's expectations. Secondly, given tourists' strong personal involvement in the holiday experience, the satisfaction ratings tend to present a certain asymmetry. This asymmetry can occur to a lesser extent when the destination' specific attributes are assessed. However, in the survey that was conducted by Alegre and Garau (2009), this asymmetry occurred for most of the attributes and so it cannot be guaranteed that this effect was not also transferred to the weighted indices. On other occasions, the variables are difficult to measure due to the strong personal involvement that the consumption of tourist products entails.

The need to deepen the study of tourist satisfaction suggests the hypothesis of work on whether there are significant differences in the profiles and reviews these tourists make. We will try to find out if the rating varies depending on the characteristics of the tourist profile studied. The aim of this part of the study is to statistically specify the veracity of this hypothesis, providing new evidence for

the realization of strategies that improve the satisfaction of tourists visiting these destinations.

We are going to use three types of statistics tests:

➢ Pearson Chi-squared test

➢ Likelihood-ratio

➢ V test of Cramer

All of these tests are going to be employed, through the use of contingency tables, for testing the hypothesis of mean equality for the segments or groups to be compared (destinations, tourist´s profiles, levels of expenditure, etc.). The Pearson's chi-square test is used in our case as a test of independence, which assesses whether paired observations on two selected variables, expressed in a contingency table, are independent of each other, the null hypothesis being "the existence of statistical independence between variables". The null hypothesis proposes the existence of homogeneity, no significant differences with respect to a particular variable to study (in our case it will be the satisfaction), among groups or segments defined by a control variable. For the test of independence, a chi-square probability of less than or equal to 0.05 (or the chi-square statistic being at or larger than the 0.05 critical point) is commonly interpreted by applied workers as justification for rejecting the null hypothesis that the row variable is unrelated (that is, only randomly related) to the column variable. The alternative hypothesis corresponds to the variables having an association or relationship where the structure of this relationship is not specified. The likelihood ratio, which combines information from sensitivity and specificity, gives an indication of how much the odds of disease change based on a positive or a negative result.

Cramer's V is a way of calculating correlation in tables which have more than 2x2 rows and columns. We decided to include Cramer´s V test, because Chi-square just says that there is a significant relationship between variables, but it does not say just how significant and important this is. Cramer's V is a post-test to give this additional information. It is used as post-test to determine

strengths of association after chi-square has determined significance. Cramer's V varies between 0 and 1. Close to 0 it shows little association between variables. Close to 1, it indicates a strong association.

In some cases we use for comparison the standard deviation, because it shows how much variation there is from the "average" (mean or expected/budgeted value). A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data is spread out over a large range of values. The reported margin of error is typically about twice the standard deviation–the radius of a 95% confidence interval.

Thus, the relevant control variables in the segmentation of tourists that show a rejection of the null hypothesis of equality in the overall assessment by the same are:

- Destination visited
- Place of residence
- Sex-Age
- Accommodation
- Loyalty (that includes the variables "First visit" and "Previous visits")

Here are the main results from the exploitation of the database used in this Master Thesis.

4.1 Tourist´s assessment according to the destination visited

The results of the contingency table are shown in Table 1 which shows the frequency distribution of the satisfaction ratings for each destination. In the above table we include the entire scale of assessments of destinations made by tourists, those ranging between 1 as the lowest value until 10 for the higher one. At first sight it seems that Valencian region is the destination which receives the best calification, while the lowest values correspond to those who visit Andalusia.

TABLE 1: TOURIST SATISFACTION AND DESTINATION

general assesment of the trip	destination and	bal	cat	rm	val	Total
1	0.00	0.01	0.01	0.05	0.01	0.01
2	0.04	0.02	0.06	0.18	0.05	0.05
3	0.10	0.06	0.10	0.18	0.12	0.10
4	0.11	0.18	0.17	0.32	0.24	0.17
5	0.76	0.81	0.73	1.23	0.76	0.77
6	3.86	2.54	1.76	3.01	1.93	2.38
7	15.66	13.88	12.06	10.31	8.19	12.38
8	39.16	33.48	46.05	28.50	26.60	38.95
9	26.91	27.33	26.45	20.98	17.82	25.05
10	13.40	21.67	12.61	35.25	44.26	20.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

$$\text{Pearson chi2(36) } = \text{ 9.9e+03} \quad Pr = 0.000$$
$$\text{likelihood-ratio chi2(36) } = \text{ 8.9e+03} \quad Pr = 0.000$$
$$\text{Cramér's V } = \text{ 0.1562}$$

Given the great number values included in the surveys, we decided to codify our calification values in three segments, say negative or highly dissatisfied (include values from 1 to 4), normal or intermediate (include values from 5 to 7) and positive or highly satisfied assessment for the rest of values. Even if we lose some information, it will allow us to improve the robustness of our results, particularly for the Cramers´ test that gives us additional information about the importance of the (independence) relationship between variables. Then, in Table 2 we show new contingency table for the cross-table of satisfaction assessments and destination that was visited by tourists. After the codification Cramer´s V test has lower value that shows little association between variables. In this case, the first variable is the satisfaction and control variable is the destination visited. We reject the hypothesis 0, because the columns are not independent, they are not distributed in the same way. The alternative hypothesis corresponds to the variables having an association or relationship.

TABLE 2: TOURIST SATISFACTION AND DESTINATION AFTER CODIFICATION

satisfaction	destination and	bal	cat	rm	val	Total
negative	0.25	0.28	0.34	0.73	0.43	0.33
normal	20.28	17.24	14.55	14.55	10.88	15.53
positive	79.47	82.48	85.11	84.72	88.69	84.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

$$\text{Pearson chi2(8) } = \text{ 748.2552} \quad Pr = 0.000$$
$$\text{likelihood-ratio chi2(8) } = \text{ 746.9067} \quad Pr = 0.000$$
$$\text{Cramér's V } = \text{ 0.0608}$$

TABLE 3: TOURIST SATISFACTION AND DESTINATION

Destination	Observations	Mean	Standard Deviation	Min	Max
Andalusia	21704	8,26875	1,081982	1	10
Balearic	14741	8,48016	1,132337	1	10
Catalonia	44793	8,3230	1,00027	1	10
Valencia	17689	**8,90039**	1,208211	1	10
Murcia	2193	**8,67852**	1,295761	1	10
Total	101120			1	10

According to the mean, the most satisfied tourists seem those that visited Valencia and then Murcia. But in this type of studies the mean is not the most important, but it is standard deviation, which is the lowest in the case of Catalonia where the data points tend to be very close to the mean.

4.2 Tourist´s assessment according to his origin

Among tests made, we will reject the hypothesis 0, because tourists valuate in a different way depending on their country of origin. The results of the contingency table are shown in Table 4 which shows the frequency distribution of the satisfaction ratings for each country of origin.

As for the origin of the tourist, the contrast results indicate that the tourists that best value the areas visited are particularly those residing in Latin America, Great Britain, Japan and U.S. and Canada. Tourists from France appreciate some aspects to a lesser extent. In this sense, it seems that the valuation is significantly a better destination for tourists from Great Britain, who also show a very high fidelity to it, while in the case of France they do not. Even if Japan has the lowest share, just 153 visitors, we can observe than none of them was dissatisfied with his visit (in the Table 5 we can observe that the minimum is on valuation 5 in the Likert scale). As well the new markets in Latin America, U.S and Canada could be studied to attract more visitors.

TABLE 4: TOURIST SATISFACTION AND HIS ORIGIN

```
satisfacti                          c_ori
        on    benelux    france   germany  great bri     italy         Total
  negative       0.31      0.49      0.28      0.30      0.28          0.33
    normal      14.41     16.88     17.14     14.99     14.27         15.53
  positive      85.28     82.63     82.57     84.71     85.45         84.13

     Total     100.00    100.00    100.00    100.00    100.00        100.00


satisfacti                          c_ori
        on     japan   latin_ame  portugal   rest_eu  rest_worl        Total
  negative       0.00      0.26      0.00      0.28      0.70          0.33
    normal      10.46      6.98     21.19     16.90     10.96         15.53
  positive      89.54     92.76     78.81     82.81     88.35         84.13

     Total     100.00    100.00    100.00    100.00    100.00        100.00


satisfacti     c_ori
        on   u.s_canad      Total
  negative       0.17      0.33
    normal      10.67     15.53
  positive      89.16     84.13

     Total     100.00    100.00

        Pearson chi2( 20) = 287.5868    Pr = 0.000
likelihood-ratio chi2( 20) = 309.3150    Pr = 0.000
             Cramér's V =      0.0377
```

TABLE 5: TOURIST SATISFACTION AND HIS ORIGIN

C_origen	Observations	Mean	Standard Deviation	Min	Max
Great Britain	34.733	8,624	1,175	1	10
France	21.348	8,180	1,006	1	10
Germany	12.998	8,444	1,127	1	10
Benelux	11.121	8,328	.9848664	2	10
Rest_eu	8.152	8,420	1,108	1	10
Italy	7.197	8,434	1,046	1	10
U.S._Canada	1.772	8,594	.9824149	3	10
Latin_America	1.519	**8,806**	.9917634	3	10
Portugal	1.123	8,385	1,133	5	10
Rest_World	1.004	8,495	1,084	3	10
Japan	153	8,614	1,040	5	10

4.3 Tourist´s assessment according to the sex-age

TABLE 6: TOURIST SATISFACTION AND SEX-AGE

satisfaction	man 15_24	man 25_44	sex_age man 45_64	man > 65	women 15_	Total
negative	0.38	0.29	0.37	0.43	0.38	0.33
normal	19.14	15.30	17.19	13.55	17.34	15.53
positive	80.48	84.41	82.44	86.02	82.28	84.14
Total	100.00	100.00	100.00	100.00	100.00	100.00

satisfaction	women 25_	sex_age women 45_	women > 6	Total
negative	0.29	0.31	0.56	0.33
normal	15.10	13.71	12.06	15.53
positive	84.61	85.98	87.38	84.14
Total	100.00	100.00	100.00	100.00

```
          Pearson chi2( 14) = 166.9916   Pr = 0.000
likelihood-ratio chi2( 14) = 166.6223   Pr = 0.000
                Cramér's V =     0.0287
```

According to the contrast, the most satisfied are women who are 65 years old or more, but standard deviation is not so close to the result, shown in Table 7. The less satisfied are men of the 15-24 age group, but their general share in a whole sample is not so significant (just 2%).

TABLE 7: SATISFACTION AND SEX-AGE

Sex-Age	Observations	Mean	Standard Deviation	Min	Max
man 15-24	2.085	8,274	1,106	2	10
women 15-24	1.586	8,477	1,166	2	10
man 25-44	30.587	8,397	1,060	1	10
women 25-44	18.443	8,550	1,131	1	10
man 45-64	28.049	8,349	1,097	1	10
women 45-64	10.314	8,609	1,146	1	10
man 65 or more	7.898	8,443	1,098	2	10
women 65 or more	2.155	8,752	1,228	1	10
Total	101117				

4.4 Accommodation and Satisfaction

TABLE 8: TOURIST SATISFACTION AND ACCOMMODATION

satisfaction	accommodation			Total
	hotel	propriete	rent, cam	
negative	0.33	0.27	0.49	0.33
normal	17.35	13.78	13.81	15.53
positive	82.32	85.95	85.70	84.13
Total	100.00	100.00	100.00	100.00

```
        Pearson chi2(4) =  260.6469   Pr = 0.000
likelihood-ratio chi2(4) =  259.5839   Pr = 0.000
              Cramér's V =    0.0359
```

Here we did not find appealing differences in the overall satisfaction, the tourists feel most comfortable in their own house (or their family´s house). It is surprising that they are more satisfied with rent, camping and others than with hotel hospitality.

4.5 Salary and satisfaction

TABLE 9: TOURIST SATISFACTION AND SALARY

satisfaction	salary					Total
	high	low	med/high	med/low	medium	
negative	0.42	1.12	0.43	0.59	0.28	0.33
normal	13.07	18.34	17.52	19.52	14.86	15.53
positive	86.51	80.54	82.05	79.89	84.86	84.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

```
        Pearson chi2(8) =  192.8170   Pr = 0.000
likelihood-ratio chi2(8) =  184.9428   Pr = 0.000
              Cramér's V =    0.0309
```

4.6 Loyality and satisfaction

The study of the influential factors of destination loyalty is not new to tourism research. The overall satisfaction that tourists experience for a particular destination is also regarded as a predictor of the tourist's intention to prefer the same destination again (Oh, 1999; Kozak and Rimmington, 2000; Bowen, 2001; Bigné and Andreu, 2004; Alexandros and Shabbar, 2005; Bigné et al., 2005). Other studies propose more comprehensive frameworks. Bigné et al. (2001) model return intentions to Spanish destinations through destination image, perceived quality and satisfaction as explanatory variables. Yoon and Uysal (2005) use tourist satisfaction as a moderator construct between motivations and tourist loyalty. Recently, Um et al. (2006) propose a model based on revisiting intentions that establishes satisfaction as both a predictor of revisiting intentions and as a moderator variable between this construct and perceived attractiveness, perceived quality of service and perceived value for money.

The control variable "First Visit" is the first one that shows the chi-square statistic larger than 0,05 critical point, that is commonly interpreted by applied workers as justification that the satisfaction is only randomly related to the first visit. It means that these two variables, expressed in a contingency Table 10, are independent of each other. Cramer´s is used as post-test to determine strengths of association. Close to 0 it shows little association between variables, so the result 0,0041 mean almost no association. For this reason we made another table (Table 11) where we can observe detailed information about the distribution of the satisfaction. Among the tests results changed and show no association between variables, so we will reject the null hypothesis.

TABLE 10: TOURIST SATISFACTION AND FIRST VISIT

satisfaction	first_visit no	yes	Total
negative	0.33	0.38	0.33
normal	15.49	15.77	15.53
positive	84.18	83.85	84.13
Total	100.00	100.00	100.00

```
        Pearson chi2(2) =    1.6722   Pr = 0.433
likelihood-ratio chi2(2) =    1.6413   Pr = 0.440
              Cramér's V =    0.0041
```

TABLE 11: TOURIST SATISFACTION AND FIRST VISIT

general assesment of the trip	first_visit no	yes	Total
1	0.01	0.02	0.01
2	0.05	0.08	0.05
3	0.10	0.08	0.10
4	0.17	0.20	0.17
5	0.75	0.84	0.77
6	2.41	2.23	2.38
7	12.33	12.70	12.38
8	38.83	39.70	38.95
9	24.79	26.57	25.05
10	20.56	17.58	20.13
Total	100.00	100.00	100.00

Pearson chi2(9) = 83.0513   Pr = 0.000
likelihood-ratio chi2(9) = 84.4956   Pr = 0.000
Cramér's V = 0.0287

Some studies show that the revisit intention is explained by the number of previous visits (Mazurki, 1989; Court and Lupton, 1997; Petrick et al., 2001). In addition, research on destination loyalty shows that one of the most decisive factors in a further visit to a destination by tourists is their satisfaction with previous stays there (Alegre & Cladera, 2006; Appiah-Adu, Fyall, & Singh, 2000; Baker & Crompton, 2000; Bigne, Sánchez, & Sánchez, 2001; Caneed, 2003; Kozak & Rimmington, 2000; Kozak, 2001, 2003; Yoon & Uysal, 2005).

This Master Thesis supports conclusions of these studies, as we can check in the Table 12. Tourist satisfaction and repetition showing that the most satisfied are tourists that visited the Spanish Mediterranean coast ten times or more than ten times. It proves a really high degree of tourist loyalty to these destinations. In this case we reject the null hypothesis, because there are significant differences with respect to the satisfaction.

TABLE 12: TOURIST SATISFACTION AND REPETITION

satisfaction	previous_visit					Total
	1	10	2	3	4	
negative	0.45	0.35	0.36	0.33	0.38	0.33
normal	14.65	13.78	15.99	14.45	15.88	15.53
positive	84.90	85.87	83.65	85.23	83.75	84.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

satisfaction	previous_visit					Total
	5	6	7	8	9	
negative	0.23	0.20	0.20	0.23	0.00	0.33
normal	15.00	17.35	25.63	24.01	27.15	15.53
positive	84.77	82.45	74.17	75.76	72.85	84.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

satisfaction	previous_visit no requir	Total
negative	0.38	0.33
normal	15.77	15.53
positive	83.85	84.13
Total	100.00	100.00

Pearson chi2(20) = 671.7572   Pr = 0.000
likelihood-ratio chi2(20) = 608.4092   Pr = 0.000
Cramér's V =   0.0576

5. Conclusions

The tourism sector has become one of the main wealth generating activities in the world economy. Moreover, the Mediterranean coast is one of the world´s leading markets for sun and sand tourism in recent times. Inside this geographical area, Spain is the second country in the world in terms of tourism revenues, as well as occupying the third position in terms of total tourist arrivals. Tourism activities have become an important source of wealth and employment for the national economy. In this context, several tourist products are yet well established and consolidated, as sun and sand, but others are now configuring new growth experiences in cities (cultural, urban, gastronomic, etc.), country-side destinations (hunting, nature, birds sight, etc.),and other locations. Unlike most other products, a tourist destination is a mixture of products and experiences that combine to create a unique experience, but competition is becoming increasingly strong in this sector of the economy. Destinations compete in terms of improving their supplies, providing better infrastructures for the visitors and developing new sensations for the tourist. Therefore, at this point, information on main advantages characterizing our destination is a key point for both public and private agents belonging to the sector. Sustainability of the product, and on a wider basis for the entire supply, depends on a correct management of such destination´s assets.

This Master Thesis then has been directed to start a research line for the Spanish Mediterranean destinations. Given the ambitious character of the investigation, we had focused on characterizing the main profiles of tourists visiting such sun and sand destinations, together with identifying the existence of some differences between defined groups of tourists, according to their individual profiles and visiting destinations. This study has been applied to a specific type of tourism, sun and sand tourism, but its main conclusions could be valid for other types of destinations. The aim of the study was then to statistically specify the veracity of the null hypothesis, providing new evidence for the realization of strategies that improve the satisfaction of tourists visiting these destinations.

For this reason, in the analysis of data we have checked whether the characteristics of the tourists could influence the overall assessment and also whether the characteristics of the tourists were homogeneous in relation to the satisfaction. This verification was carried out with Pearson Chi -square test, Likelihood-ratio test and Cramer´s V test in. The conclusion reached has been that the satisfaction level is clearly influenced by the characteristics of the tourist, as well as for those of the destinations. As relevant control variables in the segmentation of tourists those showing interesting results were: the destination visited the place of residence of the tourist, their sex and age, accommodation reached and tourist loyalty. All of these control variables, but with less significance in the case of the "first visit", lead to a rejection of the null hypothesis of independence in the satisfaction revealed by the tourists according to the segments defined by the control variable. So, as a general conclusion we can state that valuation of the destination and related services by the visitors are clearly influenced by the own characteristics of such visitors as well as for the particular tourist characteristics or profile.

The control variable "First Visit" and satisfaction seem to be nearly independent each other, meaning that the satisfaction is less related to the knowledge of the destination. Nonetheless, this result seems to be highly associated to the codification of both contingency variables we have followed, so the robustness is not so clear yet. "Tourist satisfaction" and "repetition" shed some light on the previous result, because it have shown that the most satisfied are tourists that visited the Spanish Mediterranean coast ten times or more than ten times. It proves a really high degree of tourist loyalty to these destinations. In this case we reject the null hypothesis, because there are significant differences with respect to the satisfaction.

For the destination visited, Valencian region is the destination which receives the best calification, while the lowest values correspond to those who visit Andalusia. Regarding the origin of the tourist, our results indicate that the tourists that best value the areas visited are particularly those residing in Latin America, Great Britain, Japan and U.S. and Canada. Accordingly, the most satisfied are women who are 65 years old or more, and the most satisfied

according to the type of accommodation chosen, were those tourists being proprietary of their houses, surely because they do feel most comfortable there.

One of the basic functions of this study has been the compilation and distribution of all information deemed to be essential for decision-taking and strategy definition by the agents of the sector. This analysis has then provided a useful, first-step, background in the planning of future tourist marketing strategies for Spanish destination, which could be generalized for other tourist destinations. The work has also found clear limitations, arisen from data shortcomings and the need of implementing further econometric models to improve our knowledge of satisfaction side of tourists. But this new work will leads us towards new horizons to be developed in the near future, after completing the present postgraduate studies in UPCT.

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7. Annex

TABLE 13: COUNTRY OF ORIGIN OF THE TOURISTS

C_ori	Frequency	Percent	Cum
Great Britain	34.733	34,35	34,35
France	21.348	21,11	55,46
Germany	12.998	12,85	68,31
Benelux	11.121	11,00	79,31
Rest_eu	8.152	8,06	87,37
Italy	7.197	7,12	94,49
U.S._Canada	1.772	1,75	96,24
Latin_America	1.519	1,50	97,75
Portugal	1.123	1,11	98,86
Rest_World	1.004	0,99	99,85
Japan	153	0,15	100,00
Total	**101120**	**100,00**	

GRAPH 13

GRAPH 14

Frequency

Category	Value
weekly,weekend	0.19
weekly,...	0.16
once per month	2.63
once per semester	18.15
once per trimester	11.19
once per year	23.44
less freq	29.75
no required	14.48

GRAPH 14

Education

- primary 9%
- secondary 41%
- superior 50%

GRAPH 15

Ocupation

- ocupated 85%
- retired 14%
- no_job 1%

GRAPH 16

Use of Internet

- yes 59%
- no 41%

35
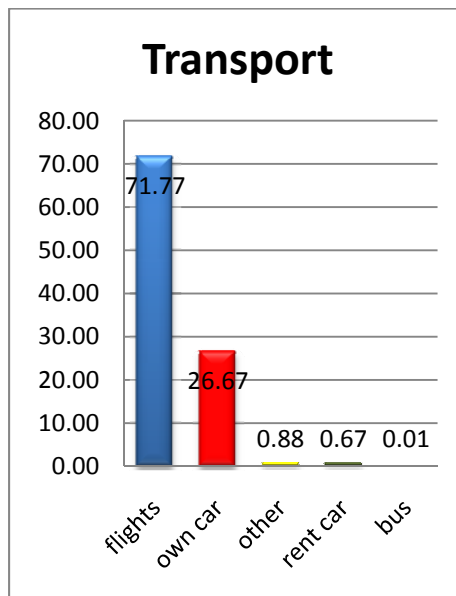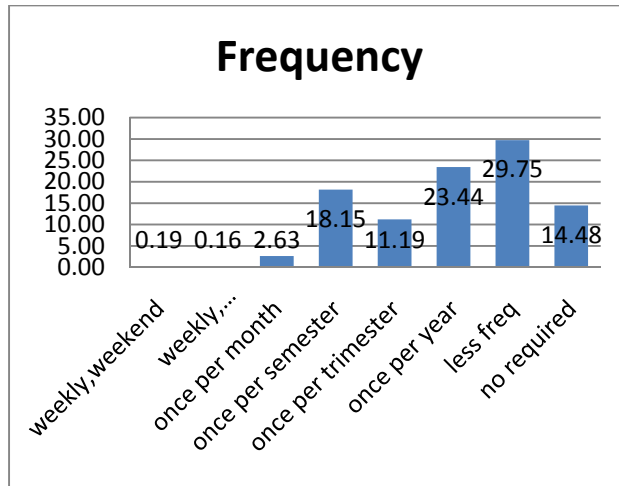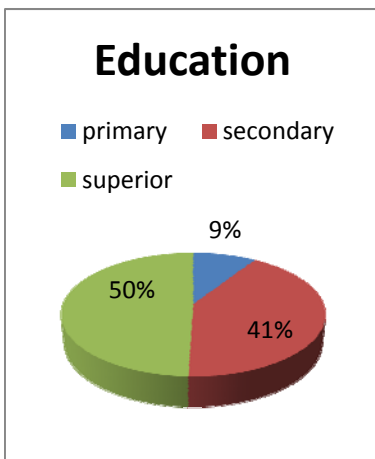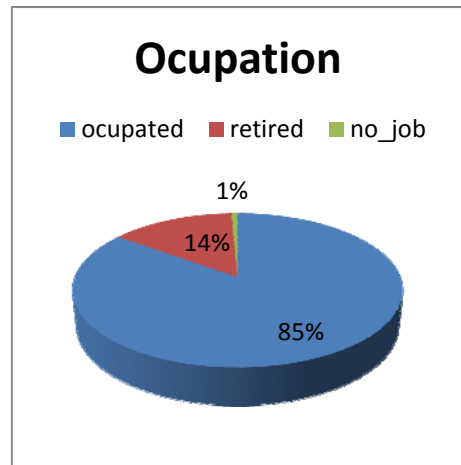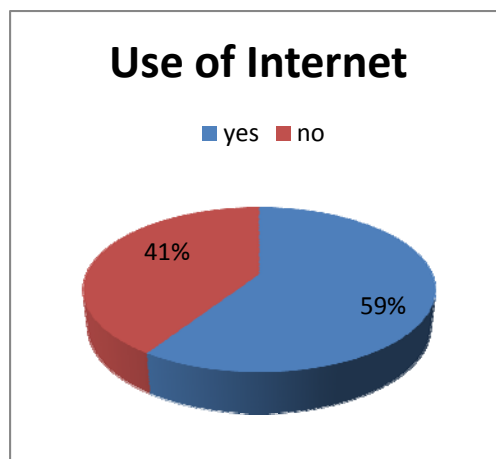
TABLE 14: SATISFACTION AND DETAILED PREVIOUS VISIT

assesment of the trip	previous_visit 1	10	2	3	4	Total
1	0.00	0.02	0.00	0.00	0.00	0.01
2	0.04	0.04	0.09	0.05	0.05	0.05
3	0.08	0.12	0.09	0.09	0.14	0.10
4	0.33	0.17	0.17	0.19	0.19	0.17
5	0.58	0.82	0.78	0.58	0.64	0.77
6	1.92	2.04	2.22	2.02	2.33	2.38
7	12.15	10.92	12.98	11.85	12.91	12.38
8	42.38	38.85	39.69	39.55	37.97	38.95
9	27.33	25.31	26.71	25.73	25.11	25.05
10	15.19	21.70	17.26	19.94	20.67	20.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

general assesment of the trip	previous_visit 5	6	7	8	9	Total
1	0.02	0.00	0.00	0.00	0.00	0.01
2	0.04	0.02	0.03	0.06	0.00	0.05
3	0.06	0.09	0.06	0.06	0.00	0.10
4	0.11	0.09	0.11	0.10	0.00	0.17
5	0.41	0.92	0.96	0.81	0.88	0.77
6	2.03	2.76	6.15	4.78	5.63	2.38
7	12.56	13.67	18.52	18.42	20.64	12.38
8	37.80	37.12	36.19	38.53	35.43	38.95
9	25.60	21.45	18.61	18.78	16.45	25.05
10	21.37	23.88	19.37	18.46	20.97	20.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

general assesment of the trip	previous_visit no requir	Total
1	0.02	0.01
2	0.08	0.05
3	0.08	0.10
4	0.20	0.17
5	0.84	0.77
6	2.23	2.38
7	12.70	12.38
8	39.70	38.95
9	26.57	25.05
10	17.58	20.13
Total	100.00	100.00

```
       Pearson chi2(90) =   1.2e+03   Pr = 0.000
likelihood-ratio chi2(90) =   1.1e+03   Pr = 0.000
              Cramér's V =     0.0366
```

TABLE 15: FIRST VISIT

First visit	Observations	Mean	Standard Deviation	Min	Max
no	86479	8,44979	1,109021	1	10
yes	14641	8,40264	1,089614	1	10

TABLE 16: DESTINATION AND COUNTRY OF ORIGIN

destination	benelux	france	c_ori germany	great bri	italy	Total
and	23.33	12.71	22.80	23.71	18.42	21.46
bal	3.37	1.96	33.30	22.52	6.82	14.58
cat	59.43	74.32	29.38	21.18	63.89	44.30
rm	0.61	0.65	0.73	4.87	0.50	2.17
val	13.26	10.36	13.79	27.72	10.37	17.49
Total	100.00	100.00	100.00	100.00	100.00	100.00

destination	japan	latin_ame	c_ori portugal	rest_eu	rest_worl	Total
and	17.65	17.05	45.06	29.93	24.90	21.46
bal	0.00	6.78	11.04	11.13	4.38	14.58
cat	77.78	66.29	34.28	40.43	59.56	44.30
rm	1.31	0.53	1.87	1.45	1.00	2.17
val	3.27	9.35	7.75	17.06	10.16	17.49
Total	100.00	100.00	100.00	100.00	100.00	100.00

destination	c_ori u.s_canad	Total
and	21.95	21.46
bal	7.22	14.58
cat	64.45	44.30
rm	0.23	2.17
val	6.15	17.49
Total	100.00	100.00

```
        Pearson chi2(40) =   2.6e+04   Pr = 0.000
likelihood-ratio chi2(40) =   2.7e+04   Pr = 0.000
              Cramér's V =      0.2540
```

TABLE 17: SATISFACTION AND COUNTRY OF ORIGIN

```
-> c_ori = benelux

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │     11121    8.327668    .9848664          2         10
```

```
-> c_ori = france

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │     21348     8.17997    1.005875          1         10
```

```
-> c_ori = germany

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │     12998    8.444222    1.127177          1         10
```

```
-> c_ori = great britain

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │     34733    8.624334    1.175348          1         10
```

```
-> c_ori = italy

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      7197     8.43407    1.045914          1         10
```

```
-> c_ori = japan

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │       153    8.614379     1.03951          5         10
```

```
-> c_ori = latin_america

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      1519    8.806452    .9917634          3         10
```

```
-> c_ori = portugal

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      1123    8.384684     1.13281          5         10
```

```
-> c_ori = rest_eu

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      8152    8.419774    1.108268          1         10
```

```
-> c_ori = rest_world

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      1004     8.49502    1.084181          3         10
```

```
-> c_ori = u.s_canada

    Variable │       Obs        Mean    Std. Dev.        Min        Max
─────────────┼─────────────────────────────────────────────────────────
        p290 │      1772    8.594244    .9824149          3         10
```