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Modelling tourism expenditure according to the activities developed in the destination

Jinli Chen

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ABSTRACT

Tourism expenditure is a meaningful variable that can be used to measure international tourism. It is a widely investigated issue in the tourism sector and a significant number of related papers analyse this topic. In this paper, I want to address the micro-econometric analysis of the tourism expenditure according to the different type of activities carried out in the destination, specifically in different regions of Spain. I analyse the total expenditure per trip at a micro level, using data that includes information on economic factors, trip characteristics and socio-demographic variables. The empirical part of this study employs a survey from Egatur of 31,814 tourists and visitors who visited in Spain during September 2015 (Turespaña). For the OLS regression model, I tested thirty-three variables including explanatory variables as economic variables, socio-demographic attributes, trip characteristics and psychological variables. From the results, we can confirm that tourist coming from non-European countries has more impact on the expenditure. Tourist practising sports activities and cultural activities spent more than those who not. The results can be useful for future policy recommendations and management of the destination. Finally, I identify the segment of tourists that are most beneficial to promote according to the activities to be developed in the destination.

1. INTRODUCTION

For six decades, tourism has been one of the biggest contributions to the world economic development, it has experienced continue growth and diversification it is the most wide-ranging industry in the world. Tourism uses products from every sector, for example, cars, trains, buses and aeroplanes must be manufactured for transporting tourists, construction materials like cement, metals, bricks need to build hotels, hotel rooms necessitate furniture to decorate it, restaurants demand food and beverage to provide for the tourists. There is no other sector that we can compare with this type of connection and interaction with other industries, and that carry out so many different products and services to the tourists. Tourism is a large multidimensional industry that envelops nearly all the aspects of human society, it is the main economic industry of lodging, travel, retail and entertainment subsectors (Kandapully et al., 2001). It not only involves production and consumption of goods but also managing, marketing, controlling, investigating and planning. Tourism is concerned with services and activities, it is about the purchasing, selling, managing and advertising of them this extend from leasing hotel rooms, selling products of the souvenirs, managing an airline advertising to special events (Edgell, 1990). The demand is composed of tourists whilst activities and services constitute the supply. Both are components of the economy and could be defined as the tourism industry.

International tourism represents the 7% of world's exports, and it accounts for 10% of world's Gross Domestic Product. In many developing countries, it is the top export category. International tourists' arrivals reached 1,235 million in 2016. One in every ten jobs in the industry is related to tourism. It is expected to reach 1.8 billion international tourist arrivals worldwide in 2030. (UNWTO Tourism Highlights, 2017).

Furthermore, tourism is an activity that can displace the profits from the developed countries to the emerging markets. Thereby, we can observe that the principal issuing markets are richest countries with a high-income level. Countries with the higher growth in international tourists received during the last decades of the nineteenth century have a low average income than those issuing countries (García-Sánchez et al., 2013).

According to the annual publication by Turespaña information and statistics, provided by the FRONTUR and EGATUR surveys of the National Institute of Statistics (INE). Spain beat its record of international visitors with the arrival of 82 million tourists in 2017. As we are well known, tourism is a very significant activity for the economy of Spain. This amount makes Spain rank the third position, after France and the United States for international tourist arrivals. The second largest country regarding the international tourist receipts is Spain (UNWTO Tourism Highlights, 2017). These figures emphasise the need for research into tourism, is critical for all economic agents: government, households and companies. In this regard, in recent years, it is frequent to find countries, provinces, locals or destinations giving more importance to tourism, so that it becomes the principal economic activity. Therefore, tourism is viewed as a key variable in the analysis of the market, despite the fact, its assessment is becoming progressively more complex (Aguiló & Juaneda, 2000).

The rate of development in the tourism industry during the last decades changed the idea of leisure perceived in the mind of consumers (Brida & Scuderi, 2012). In addition to the continuous growth in this industry, current tourism analysis has gained scientific status and the interest of this research topic has become deeper in the academic community (Zhao & Ritchie, 2007). We can find evidence to support this in the enlargement number of papers, articles and projects regarding the analysis of the tourism. As Decrop and Snelders (2004) remark, the principal reason is that spending on holidays has become a basic element of many people's daily lives'. As it has become easier to travel. The center around which all these economies impact rotate is tourism expenditure (Cárdenas-García, 2012).

Tourism has the ability to produce substantial economic benefits: it is viewed as a tool for economic expansion, create employment and to generate income (Lee & Chang, 2008; Craggs & Schofield, 2009). Tourism expenditure is considered a key variable to economic approaches for studying tourist's behaviour, it has become crucial to the analysis of the tourism industry and encompasses different sectors such as accommodation, transport and restaurants (García-Sánchez et al., 2013). Expenditure

in a destination is taking into account the daily expenditure and the length of stay. Most of the current research analyses the total expenditure spent by tourist, only a small number of studies analyse the expenditure in relation with the activities developed by tourist at the destination (Pulido-Fernández et al., 2015). It is important to investigate the activities carried out by the tourist in some destinations in Spain because they contribute enormously to the economy in the country. However, it is interesting to analyse the different type of activities because they are expected to have different impacts on expenditure. Hence, the importance of each activity on the economy of the destination will be different. Depending on the level of expenditure, there would be activities more convenient to promote than others. For this reason, I would analyse and differentiate the different levels of expenditure according to the activities developed in the destination.

This paper focusses the investigation in the main factors driving tourists' expenditure and especially focuses on: how the type of activities carried out in the destinations can influence their total expenditure, since each type of activity is related to a different level of expenditure. To achieve this objective, I will test one hypothesis in this investigation: the total expenditure of the tourists is influenced by the activities carried out in the destination. I analyse the effect of the activities undertaken by the tourists in different destinations in Spain on the total tourism expenditure, using the OLS regression model. Results can be beneficial for improving the management of the destination, for tourism policy recommendations, for the promotion of activities and to try to identify the ideal tourist segment to promote to regarding the activities carried out in the destination. This research contributes to filling the gap in the literature on the determinants of tourism expenditure according to the activities undertaken in the destination, in this case, Spain. We will start describing the literature review. Then we will move on the methodology of the investigation. Next, we will interpret the results, and finally, we will highlight the most valuable results as the conclusion.

2. LITERATURE REVIEW

To comprehend tourism expenditure is quite important because it pushes to the economic activity of the destination. With the continued booming of the tourism industry, one of the most current research topics related to tourism is the expenditure in the destination. Kozak et al. (2008) mention that there is no consensus on how to determine the concept of "Tourist's expenditure" as the dependent variable. Different authors use a different type of dependent variables. Leeworthy et al. (2001); Mok and Iverson, (2000) and Mules, (1998) based their investigation on the average spent by tourists per travel. Other authors search to estimate the expenditure per person and per day, such as Aguiló and Juaneda, (2000) and Pol et al. (2006). As mention before, the present paper fits into the last type of expenditure, the total amount that visitors spend in the destination. Authors as Agarwal and Yochum, (1999) and Jang et al. (2004) also used this type of dependent variable.

The following paragraph presents several theoretical explanations of dependent variables. Total trip expenditure is the one most studied dependent variable, followed by expenditure per person and per day, total trip expenditure per day, pre-paid expenditure in the country of origin, and expenditure in the destination, etc. In all these approaches, expenditure has been explained by Frechtling (2006), from three types of research method: qualitative, quantitative and both combined. While qualitative methods usually use the opinion of experts through a Delphi method and quantitative approaches used regression or econometric models (Var & Lee, 1990). Aguiló and Juaneda (2000) use more than one dependent variable, and they separate the expenditures spent in the destination, and the expenditures that originate in the country of origin, they use more than one variable to facilitate the study of tourism demand for mass destinations like the Balearic Islands, which attract more tourist package visitors than non-package visitors.

About independent variables, they can be classified into four different categories. First, economic variables, these include financial and nonfinancial assets of the tourists. Some of them are income, price, financial difficulties, health status, duty-free import limits, loyalty cards, etc. Price and income are the two most used economic variables and positively correlate with tourism expenditure (Wang & Davidson, 2010). Economic theory demonstrates that when a person's income augments, his/her demand for spending on holidays will also increase. Overall, tourism demand is income elastic, while luxury goods, and business demand are much less income elastic than leisure tourism (Bull, 1995). Price is another relevant variable of tourism expenditure and with all other influence on demand unaltered, the demand will increase when prices decrease (Tribe, 2005). A curious finding is that visitors who were aware of the expensiveness of the tourism destination were disposed to spend more money than individuals who did not (Wang & Davidson, 2010). Alegre and Pou (2004) studied the impact of financial difficulties; results were negatively significant for those dummies about families with more members and problems or difficult economic conditions. However, people without specific difficulties presented a direct and significant relationship with the tourism expenditure (Brida & Scuderi, 2012).

Secondly, socio-demographic factors cannot completely explain tourism expenditure, such as age, gender, marital status, occupation, education level, nationality, ethnic background, number of household members, life cycle stages and so on. Age-related variables are used very often. In general, gender is not a significant variable that can affect the expenditure (Agarwal & Yochum, 2000; Jang et al., 2004; Wang & Davidson, 2010).

According to the review of Brida and Scuderi (2012), dummies for marital status was used often in research. However, results report a medium-low frequency of significance. Occupation and profession are not good frequently use, but estimated coefficients were significant. Nationality is an important independent variable for Serra et al. (2015). There is no evidence of common empirical findings regarding the effect on those socio-demographic variables. The investigation assessed were diverse and covered a wide area of research importance. The author Asgary et al. (1997) stated that if we add

socio-demographic factors to the dependent model and we also include other economic attributes, the dependent variable has much more power, and the model will increase essentially. Additionally, socio-demographic don't add excessive to the general understanding but is helpful to contribute contextual background (Wang & Davidson, 2010).

Thirdly, trip-related variables describes the principal characteristics of the tourists' trips, such as length of stay, party size, type of accommodation, repeat and first-time visitors, activities during the trip, means of transportation, purpose, payment method, reservation type and stopovers in the destination. Aguiló and Juaneda (2000) point out that the type of accommodation could explain the expenditure. Group size and the length of stay are positively correlated to the total expenditure (Downward and Lumsdon, 2003). Activities that are related to nature, outdoor, beaches and entertainment originate more profits than other activities (Jang et al., 2005). Other authors mention that the amount of expenditure was related to the tourist activities in the destination (Laesser & Crouch, 2006; Mehmetoglu, 2007; Pouta et al., 2006). Travel party size affects negatively to the expenditure per person (Taylor et al., 1993; Wang & Davidson, 2010) but positively to the total expenditure or total expenditure per day (Agarwal & Yochum, 1999; Dá vila et al., 1999; Lee, 2001). As children are not income-earners they lead to a reduction in the total expenditure (Agarwal & Yochum, 1999). However, the number of adults affects positively the travel party size in relation to the tourism expenditure (Wang et al., 2006). The findings from Jang et al. (2004) and Pouta et al. (2006) indicates that repeat tourists tend to spend less than first time tourists. According to Chhabra et al., (2002); Nicolau & Má s, (2005); Pouta et al., (2006) and Thrane, (2002) results on trip distance and expenditure are related, the further they travel, the higher their expenditure.

Finally, psychological variables, it is important to take into account these types of variables when the tourists decide on choosing and spending in the destination they include the characteristics of the consumers' behaviours of the reaction to products, including attitudes, interests, opinions, self-concepts, knowledge, lifestyles, experiences, excitement and perceptions. Such as trip motivation behaviours, follow tradition or try new things, general opinions and opinions about the trip. According to the review by Wang and Davidson (2010), modelling tourism expenditure should consider not only tangible and functional factors but also intangible and emotional factors. They classified those types of components as psychological variables and destination related factors.

Wang et al. (2006) reveal trip motivations are the most used psychological variable, while on rare occasions employ variables such as attitudes and perceptions. According to Serra et al. (2015), the recommendation of the destination affects positively to the tourist expenditure. Some studies found that people searching for excitement spend more than those searching for stability, and self-oriented tourists spend more on accommodation than family-oriented. Thrane (2002) found that the stronger the motive, the higher the expenditure. The tourists' opinion of travel can influence their expenditure. According to Aguiló and Juaneda (2000), for instance, tourists who have had bad experiences travelling spent 31.7% less than those who have a good experience.

Micro-econometric and macro-econometric studies can address different objectives'. According to Alegre and Pou (2004) micro-econometric studies have three advantages over macro-econometrics studies. First of all, the models don't differ far away from hypothetical economic consumer models. Secondly, they take into consideration the control of participation bias, which is presented when the study is based on collected information. Thirdly, they recognize the assorted variety and heterogeneity of behaviours that are disregarded in studies utilizing much aggregated information (Wang & Davidson, 2010). Households, individuals and companies are normally the unit of investigation in the micro-economic analysis of tourism. As the name reveals, micro-economic researchers use microdata, often recollected on individual decision making through surveys (Hill et al., 2001).

This section presented a literature review on micro-economic tourism demand. The study focused on modelling individual's expenditure. I identified different types of group variables that are normally used in tourism expenditure investigations: economic, social-demographic, trip-related and psychological variables.

3. METHODOLOGY

The empirical part of this paper has been conducted using the database "Tourism Expenditure Survey" by EGATUR (Encuesta del gasto turístico, Turespaña 2015). The Institute of Tourism in Spain is directly responsible for the operation of this survey analyses of the key aspects of tourists' behaviour. It provides monthly data since January 2001 and allows us to know the volume of total tourist expenditure made by foreign visitors who arrive in Spain for different reasons. The geographical scope of this survey is 23 on border crossings by road, 23 in the airports, 7 in the ports and 7 in the international train lines and the target population are tourist and visitors that are not resident in Spain who accesses the country by road, airport, port or train. The sample criteria were randomly stratified according to the country of residence, access roads and border crossing. The sample is grouped into 19 strata: five in the highway modality, nine by air, three in ports and two in trains. Also, minimum monthly fees are established by country of residence. The general annual sample size is almost 106,300 tourists, 80,000 are obtained at airports, 19,000 at borders located on roads 6,500 at ports and 800 at trains. The method of collection is carried out through personal interviews with handheld computers that enable the validation, registration, recording and telematics sending of information collected, to ensure the fastest and highest quality in the dissemination of the data obtained, a total of 23,141 answers are obtained in some questions there exist non-response, we use a confidence level of 90%. [p=q= 0.10]

This study focuses on foreign tourists' expenditure during September 2015 in Spain, the latest data available in Egatur. The aim of this paper is to determine if the different types of activities undertaken by tourists during their stay in Spain can influence their total expenditure.

As Brida and Scuderi (2012) mention in their comprehensive review of the econometric approaches for the analysis of tourism expenditure at the individual level, the most used methodology to analyse tourism expenditure equation is Ordinary Least squares (OLS). This methodology has been used by previously mentioned authors, as Wang and Davidson, (2010); Agarwal and Yochum, (1999); Aguiló Pérez and Juaneda Sampol, (2000); Laesser and Crouch, (2006). In line with the aforementioned researchers, this study also includes OLS regression analysis. Most of the authors use OLS models transforming expenditure through logarithms because it can provide more direct interpretation on elasticity and will help to solve problems related to the distribution of the variables. Only a small number of authors use pure tourism expenditure as the dependent variable (Brida and Scuderi, 2012).

After obtaining the data, we need to pick out the valid variables for this investigation. The original database has approximately three hundred variables. For testing I only chose thirty-three variables more related with the activities and added some socio-demographic factors as well. I selected those variables based on the review of the literature on explanatory models of tourism expenditure.

To perform the statistical analysis in this research, I used the program called SPSS. It is a software that analyses data and runs statistical tests. In order to examine the significance of the independent variables, I treated and transformed the dependent variable. Due to there has many zeros and atypical ones in the right part, data needs to be filtered. If we don't eliminate those observations with zeros, we cannot estimate the model correctly, and most of the result will show there is no significance between the tourism expenditure and the independent variables. The database includes excursionists and tourists who spend the night in the destination. For the analysis, we have been considered only tourists who make at least one overnight stay. Afterwards, I eliminate the 5% from the extreme values of the tail. Finally, we can observe there is no outlier, but the distribution is asymmetric. To solve this problem, we applied the Napierian logarithm to the dependent variable. If tourists spend their trip in more than one stage, we only consider the main one, because we want to analyse the activities carried out by tourists only in the main stage.

To summarise, the data used in this research consist of foreign tourist expenditure in the main stage in the destinations of Spain, including the spending incurred before and after the trip.

Variables and the regression model

In this paper, as we mention before the dependent variable used is the total expenditure of the trip, including the expenses incurred in the country of origin and Spain. Independent variables include different dummy variables related to the activities that are carried out in the destination. We use income as the economic factor. Socio-demographic variables are included: gender, age, occupation, level of

education, professional situation and country of residence. We also control the trip characteristics such as the main reason for the trip, type of accommodation, length of stay, previous visits to the destination, type of meals in the accommodation and so on.

The specified regression model would be:

$$Y_i = \beta_0 + \sum_{j=1}^k \beta_j X_{ji} + \sum_{d=1}^l \alpha_d Z_{di} + \varepsilon_i$$

Where Y_i is the Napierian logarithm of the total expenditure of the trip, β_0 is the constant term, β_j is the coefficient of the quantitative variables, α_d is the coefficient of the dummy variables, X_j are the quantitative variables, Z_d are the dummy variables, and ε_i is the error term. Most of the explanatory variables are sets of dummies. The study defines the following independent variables used in the model: economic, socio-demographic, trip characteristics and psychological factor.

Table 1. Used variables in the different categories of independent variables

Economic variables	Income level
Socio-demographic factors	Gender and age, highest level of studies completed, current situation regarding economic activity, current professional situation or previous work and country of residence.
Trip related variables	First time visitor, sport activities, golf, sky or snow, boating, other water sports, hunting, trekking, adventure sport, other sports, attendance at sport events, realization of cultural activities such as cultural visits, realization of cultural activities such as assistance to cultural shows, realization of cultural activities such as other cultural activities, utilization of spa services or thalassotherapy, visit to theme parks, visit casinos or games rooms, gastronomic activities (haute cuisine, visit wineries, etc.), fun activities (nightclubs, bars), visit to the relatives, tourist package, number of overnight stays, type of accommodation, type of meals in the accommodation, autonomous community of destination and province of main destination.
Psychological variables	Main reason

Table 1 presents the thirty-three variables used as explanatory variables in the expenditure model. In this study I used only income as economic variables and the main reason as psychological variables.

The aim of the investigation focused on the activities carried out in one of the destinations in Spain. That's why we use more variables on trip-related characteristics. As all microeconomic models, we also add socio-demographic factors, we know they cannot explain the entire tourism expenditure, but they improve the explanatory power of the model. We consider several activities as a dummy variable and the model is estimated by OLS.

4. RESULTS

In this section, will present the interpretation of the main results of this research. First, we start describing the sample of descriptive statistics to introduce the dependent variable and identify the percentage of different independent variables. Second, we present the main significant variables and activities in the tourism expenditure model. Finally, we interpret the results. These results will have allowed us to decide which activities could be developed more in-depth and identify the segment of tourist that is more interesting to promote.

Table 2. Total expenditure of the trip

Percentiles										
10%	20%	25%	30%	40%	50%	60%	70%	75%	80%	90%
590	800	900	1000	1200	1500	1850	2200	2500	2700	3600
Mean										1837.69
Median										1500
Mode										1000
Std. Deviation										1247.59
Skewness										1.23
Kurtosis										1.18
Minimum										302
Maximum										6245
Range										5943
Number of observations										23141

Table 2 presents the descriptive statistics of the total expenditure, as we can observe, we have 23141 valid observations from the survey of Egatur. The total average expenditure is 1837, 68 €; it can be considered a very high amount of expenditure. About the measure of the shape, our coefficient of skewness is positive, the median is smaller than the mean, and our distribution is right-skewed. We also have a positive kurtosis (1.183). Thus, we would have a thin and short tail compared to a normal distribution.

Table 3. Sample descriptive statistics

	%		%		%
<i>Economic</i>		Finland	1.0	Camping/Caravan	5.7
Income		Sweden	2.1	Specialized (camps)	0.1
High	4.5	Russia	1.8	Means of collective transport	1.6
Medium/High	26.0	Rest of Europe	4.4	Tourist complex	0
Medium	67.2	Latin America	5.4	Other Collective Accommodation	2.0
Medium/Low	1.9	Canada	1.7	Property Housing	5.1
Low	0.4	Japan	1.3	House rented to individuals	6.6
<i>Socio-demographic</i>		U. S	4.0	Housing rented by agency	3.0
Gender and age		Rest of the world	6.9	Rented rooms in family houses	1.0
Female 15 a 24	4.7	<i>Trip related</i>		Housing of relatives or friends (free)	18.3
Male 15 a 24	4.0	First time	23.8	Timeshare	0.3
Female 25 a 44	18.5	Sport activities		Other	5.8
Male 25 a 44	29.2	Free	11.2	Autonomous community of main destination	
Female 45 a 64	12.4	With payments	3.0	Andalusia	13.4
Male 45 a 64	20.7	Golf	0.8	Aragon	2.3
Female 65 or more	3.2	Sky or snow	0.0	Principality of Asturias	2.2
Male 65 or more	7.1	Boating	1.0	Balearic Islands	13.8
Highest level of studies completed		Other water sports	4.0	Canary Islands	7.5
Primary or less	2.8	Hunting	0.1	Cantabria	2.7
Secondary (Bachelor)	26.3	Trekking	5.2	Castile and León	1.1
Higher studies	70.9	Adventure sport	1.5	Castile La Mancha	2.9
Economic activity situation		Other sports	7.7	Catalonia	18.5
Occupied, working	75.8	Sport events	4.1	Valencian Community	11.5
Student (first job)	8.5	Cultural visits	62.7	Extremadura	0.9
Pensioner, retired person	12.3	Cultural shows	16.8	Galicia	5.1
Housework	1.9	Other cultural activities	27.1	Community of Madrid	9.2
Unemployed	1.2	Spa services	4.3	Region of Murcia	2.1
Other (financier, military service, etc.)	0.3	Theme parks	9.4	Navarre	1.7
Professional situation		Casinos or games rooms	1.5	Basque Country	4.1
Employee, senior position	14.8	Gastronomic activities	14.4	The Rioja	1.0
Entrepreneur, self-employed	17.4	Fun activities, night clubs	22.2		Mean
Employee, middle position	63.0	Visit to the relatives	17.7	Overnight stays	11.57
Employee without qualification	4.8	Tourist package	18.2	<i>Psychological</i>	
Country of residence		Type of meals in the accommodation		Main reason	
Belgium	4.5	All included	14.5	Attendance at fairs. congresses	1.3
Denmark	1.3	Full board	3.0	Seasonal work (seasonal)	0.5

Germany	11.0	Half board	10.0	Other reasons for work and business	9.7
France	10.9	Bed and breakfast	34.0	Studies	2.9
United Kingdom	16.3	Only accommodation	38.6	Visit family or friends	10.6
Greece	0.6	Type of accommodation		Voluntary health treatment	0
Ireland	2.7	Hotel *****	1.9	Religious grounds	0.4
Italy	8.9	Hotel ****	19.2	Shopping, personal services	0.1
Luxembourg	0.7	Hotel ***	15.0	Leisure: cultural tourism	12.0
Holland	5.1	Hotel ** or *	3.0	Leisure: Sports practices	0.8
Norway	1.6	Guest houses	5.8	Leisure: Field and Beach	37.4
Austria	1.6	Another similar to hotel	0.8	Leisure: Other type of leisure	21.0
Portugal	2.7	Tourist apartments, apart-hotel	4.3	Others	3.2
Switzerland	3.4	Rural houses	0.5		

Table 3 provides the main descriptive statistics about the variables used in this paper. About the economic variable we can highlight two groups of income levels: tourist with medium and medium/high-income earners. The difference is remarkable, 41.2% comparing the medium and medium/high categories. Male from 25 to 44 years old is the most common profile in this research, followed by males from 45 to 64 and females from 25 to 44. Higher educated tourist represents the 70.9% of the sample, about the economic activity occupied and retired persons are the ones who have travelled the most in September 2015. 63% of the tourists are middle class employees followed by 17.4% of entrepreneurs or self-employees and 14.8% of employees with a senior position.

According to the sample, the most common profile of foreign travellers visiting Spain is from United Kingdom (16.3%), Germany (11%), France (10.9%), Italy (8.9%) and rest of the world (6.9%). Only 23.8% of tourist are first-time visitors in that destination. There is 11.2% of tourists that practice sports activities only 3% of them would like to pay for the activity. About sports activities, trekking, other water sports and adventure sports are the most practiced by tourists. The preferred cultural activity is the cultural visits (62.7%) followed by other cultural activities (27.1%) and cultural shows (16.8%). Visiting theme parks is more frequent (9.4%) than using spa services and thalassotherapy (4.3%). Casinos or games rooms are only visited by 1.5% of tourists. However, fun activities, night clubs and bars (22.2%); gastronomic activities like haute cuisine or visiting wineries (14.4%) and visiting relatives (17.7%) are preferable. As is common in Spain, bed and breakfast (34%) and only accommodation (38.6%) accounts for more than the half of the sample. The type of accommodation used by the majority of the foreign tourist is the four stars hotels (19.2%), the housing of relatives or friends for free (18.3%) and three stars hotels (15%). Catalonia (18.5%), Balearic Islands (13.8%), Andalusia (13.4%), Valencia Community (11.5%) and Community of Madrid (9.2%) are the top 5 autonomous community of the main destination. The average length of stay for tourists in Spain is one week and a half (11.57 nights). The main reason

for travel is leisure: field and beach (37.4%) follow by other types of leisure (21%) and cultural tourism (12%), those three categories together comprise three-quarters of the sample.

Table 4. Results of the OLS model

	B	Sig.
Main reason		0.000
Attendance at fairs, congresses	-0.294	0.000
Seasonal work (seasonal)	-0.540	0.000
Other reasons for work and business	-0.190	0.000
Leisure: Cultural tourism	0.072	0.022
Leisure: Sports practices	-0.134	0.033
Leisure: Field and Beach	0.135	0.000
Other	-	-
How many times		0.000
One	0.076	0.005
Two	-0.048	0.030
Six	-0.057	0.034
Eight	-0.079	0.038
Nine	-0.223	0.000
Ten or more	-	-
How many times a year		0.000
Weekly, on weekends	-0.737	0.000
Weekly, during the week	-0.724	0.000
Once per month	-0.397	0.000
Once per quarter	-0.305	0.000
Once per semester	-0.111	0.000
Once a year	-0.035	0.021
Less frequent	-	-
Type of sports activities: Golf	0.302	0.005
Type of sports activities: Boating	0.196	0.000
Type of sports activities: Other water sports	0.085	0.005
Type of sports activities: Adventure sport	0.172	0.000
Realization of cultural activities such as cultural visits	0.121	0.000
Realization of cultural activities such as assistance to cultural shows	0.091	0.000
Realization of cultural activities such as other cultural activities	0.121	0.000
Visit to theme parks	0.099	0.000
Tourist Package	0.450	0.000
Gender and age		0.000
Female from 15 a 24	-0.208	0.000
Male from 15 a 24	-0.383	0.000
Female from 25 a 44	-0.071	0.012
Male from 25 a 44	-0.103	0.000
Male from 65 or more	-	-
Highest level of studies completed		0.000
Primary or less	-0.123	0.001
Secondary (Bachelor)	-0.060	0.000
Higher Studies	-	-
Current situation regarding economic activity		0.000
Occupied, working	0.142	0.001
Pensioner, retired person	0.102	0.036
Unemployed (looking for job)	-	-
Current professional situation or previous work		0.000
Entrepreneur, self-employed	0.253	0.000
Employee, senior position	0.296	0.000
Employee, middle position	0.119	0.000
Employee without qualification	-	-
Income level		0.000
High	0.410	0.000
Medium / High	0.336	0.001
Low	-	-

Type of accommodation		0.000
Hotel *****	0.640	0.000
Hotel ****	0.402	0.000
Hotel ***	0.384	0.000
Hotel ** or *	0.237	0.000
Guest houses	0.215	0.000
Another similar to hotel	0.490	0.000
Tourist apartments, apart-hotel	0.486	0.000
Rural houses	0.471	0.000
Camping/Caravan	0.103	0.001
Specialized (camps)	-0.827	0.000
Means of collective transport	0.819	0.000
Other Collective Accommodation	0.312	0.000
Property Housing	0.307	0.000
House rented to individuals	0.583	0.000
Housing rented by agency	0.788	0.000
Timeshare	0.326	0.000
Other	-	-
Country of residence		0.000
Belgium	-0.389	0.000
Germany	-0.420	0.000
France	-0.554	0.000
United Kingdom	-0.423	0.000
Greece	-0.415	0.000
Ireland	-0.464	0.000
Italy	-0.395	0.000
Luxembourg	-0.310	0.000
Holland	-0.430	0.000
Austria	-0.451	0.000
Portugal	-0.729	0.000
Switzerland	-0.380	0.000
Finland	-0.274	0.000
Sweden	-0.149	0.000
Russia	-0.150	0.000
Rest of Europe	-0.295	0.000
Latin America	0.209	0.000
Canada	0.157	0.000
Japan	0.268	0.000
U. S	0.122	0.000
Rest of the world	-	-
Province of main destination		0.000
Alava	-0.526	0.000
Badajoz	-0.593	0.000
Barcelona	-0.374	0.000
Caceres	-0.201	0.010
Girona	-0.110	0.029
Guipuzcoa	-0.205	0.000
Huelva	-0.351	0.000
Lleida	-0.277	0.004
Madrid	-0.119	0.006
Navarra	-0.125	0.023
Palencia	-0.643	0.000
Las Palmas	0.178	0.000
Salamanca	-0.232	0.000
Cantabria	-0.106	0.035
Sevilla	-0.212	0.000
Valencia	-0.930	0.045
Valladolid	-0.166	0.046
Vizcaya	-0.120	0.024
Zaragoza	-	-
Number of overnight stays	0.019	0.000

Note: R Squared = 0.438 (Adjusted R Squared = 0.434)

From the table 4, we present the major results of the OLS regression model. I analysed the activities and other variables undertaken by foreign tourist during their stay in the provinces studies in September 2015. Due to the limited space, all variables and categories presented in this table are the significant ones. The reference category for the activities variables are the tourists who have not participate in that activity. For the rest of variables, I set as a reference category the last category.

People with seasonal work as the main reason for travelling spent 54% less than other reasons that are not on the list. Nevertheless, the reasons of leisure of cultural tourism, field and beaches spent 7.2% and 13.5% more than tourists with other reasons. The next variable is the number of times tourists have been in the destination, we can observe in the table that tourists spent more when they are first time visitors in the destination and the amount is decreasing when they have been more times to the same destination. Alegre and Cladera (2010) also found that first time visitors spent more than repeat tourists in Mallorca. As is obvious, when you travel more frequent you save money and will spend less, this is reflected in the variable of how often you travel, weekly or on weekend travellers spent 73.7% less than the less frequent ones. The amount of expenditure is increasing when you travel less frequently.

I have included in the regression activities like golf, boating, other water sports, adventure sports, the realization of cultural activities such as cultural visits, cultural shows, cultural activities and visit to the theme park are positively related with the tourism expenditure. Golf players spent 30.2% more, followed by boating tourists 19.6% and adventure sports lovers 17.2%. Realization of cultural activities such as assistance to cultural shows and to theme parks are the activities where there is less difference between those tourists who practice this activity and those who do not.

We have included five socio-demographic variables. Firstly, about gender and age variable, the reference category is male tourists from 65 or more years old, on average they spend more than any other age group. In particular, young males from 15 to 24 years old spent 38.3% less than those in the reference category males. Another point to mention is that expenditure for the group of females from 25 to 44 is more similar to the reference category, only 7.1% less. Secondly, higher educated tourists spent more than others with a low level of education. This is understandable because higher educated people can opt for a better-paid job. Thirdly, the economic situation, working tourist spent 14.2% more than our reference category, unemployed or tourists looking for a job. Pensioners or retired people also spent more than unemployed people. Fourthly, in the variable current professional situation we set as reference category employees without qualification, the evidence is clear, all the rest of categories spent more than the reference group. Particularly, entrepreneur or self-employed tourist and employees with senior position spent 25.3% and 29.6% more than the employees without qualification. Finally, income level is related to all variables mention before. It is reasonable if you earn more money you have the capability to spend more. For instance, high-income earners spent 41.0% more than the low-income earners. As evidenced before, more educated people tend to have higher earnings, and this normally happens to people with a higher position or when they are entrepreneurs or self-employed.

Type of accommodation has an important effect on total expenditure because accommodation cost is a significant part of the total expenditure. In general terms, hotels are more expensive than other types of accommodation such as apartments, guest houses, property Housing, camps and so on. Our reference category is the other type of accommodation, comparing the different categories, we can observe that means of collective transport (cruise ships) and housing rented by the agency has the biggest difference compared with our reference category. A tourist staying on a cruise ship spent 81.9% more in total expenditure than a tourist staying in other types of accommodation. In contrast, a tourist who stay in specialized accommodation such as camps spent less (82.7%) than our reference category.

According to our results, residents from Portugal spent 72.9% less than the tourists from the rest of the world. Followed by France (55.4%) and Ireland (46.4%). However, Japan (26.8%), Latin America (20.9%), Canada (15.7%) and U. S (12.2%) tourists have higher expenditure than the rest of the world countries. In general, residents from European countries spend less than tourists from other countries of the world.

Las Palmas is the only province that tourists spent more compared to our reference category, Zaragoza. The rest of significant provinces of the main destination has lower total expenditure than Zaragoza. The province with the biggest difference is Valencia. Therefore, a tourist who travels to Valencia spent 93.0% less than a tourist who visits Zaragoza. This may be due to Zaragoza being an interior province that attracts tourism focused on its culture and heritage. Instead, Valencia is the opposite of Zaragoza. It is a coastal province that concentrates on sun and beach tourism. According to the results of Pulido-Fernández et al. (2015), cultural activities undertaken in the destination can generate more expenditure than other activities in general.

Finally, the last significant variable is the overnight stays. As the majority of the investigations on tourism expenditure, length of stay is always positive. If we increase one overnight stay, our total expenditure will increase in 1.9% (dependent variable is in a logarithmic term). It can be considered as a low impact on expenditure.

5. CONCLUSION

The results presented in this paper illustrate the significant variables in relation to the total expenditure. The empirical part of this study uses OLS regression model on data from Egatur, September 2015. Furthermore, this model allows us to test the significant differences in the expenditure level. As we exposed in the literature review, tourism expenditure is related to economic variables such as income level; socio-demographic factors such as gender, age, occupation and educational level; trip

characteristics for instance activities during the stay, type of accommodation, repeat and first-time visitors; and psychological aspects such as motivation of the trip. Nonetheless, only a few investigations related tourism expenditure with the activities carry out in the destination; our study will help to fill this gap. This paper contributes to understanding which activities and factors can explain the tourism expenditure in the Spanish provinces. The hypotheses proposed at the beginning of this study have been confirmed. Sports activities are positively contributing to increasing the total expenditure of the trip. In fact, it has been studied that tourists participating in cultural activities, visits or shows have higher expenditure level than other tourist engaging gastronomic activities (Pulido-Fernández et al., 2015). This result is important for strengthening the importance of the complementary products offered to tourists in a destination, and it has implications for future tourism development in Spain. Jang et al. (2004) note that tourism expenditure patterns are essential for travel coordinators and destination promoters.

The significant sports activities that increase the expenditure are playing golf, boating or sailing, other water sports and adventure sports. Conversely, the realization of cultural activities such as cultural visits, assistance to cultural shows and other cultural activities have impacts on tourism expenditure, but smaller than sports activities. Economic attributes, socio-demographic factors and trip characteristics are relevant variables driving expenditure. Income as economic variable affects highly to the total expenditure, the tourists with a high-income level spend on average 41% more than those declaring low. Males from 25 to 44 years old are the group who spent less in comparison to female and other age groups. For instance, tourists with some higher studies such as university degree may report high wage. But actually, their salary isn't high since they may feel this is the social standard and they are embarrassed about declaring a low level of income when they have confirmed having a degree (García-Sánchez et al., 2013).

Tourist package plays a considerable role in defining the total expenditure in this study, tourists who hire a tourist package spent almost 50% more than those who not. Another important variable related to the trip characteristics is the type of accommodation. Tourists who choose to stay in cruises spend around 82% more than tourists staying in another type of accommodation. According to the Cruise Tourism conducted by the Chamber of Commerce, Industry and Navigation of Valencia (2009), the cruise market is fundamentally aimed at adults over 25 years old, and the average age is 49 years old. They earn an income of more than 30,000€ per year. In general, cruise passengers spend around € 1,500 per week. More than the half of the cruise tourists (57%) are university graduates. Cruise tourism generates a very significant expenditure. Although, tourists staying in housings rented by the agency has also presented a high expenditure compared to other types of accommodation.

About the country of residence, we need to mention that European countries on average had much lower expenditure than the rest of the world. However, countries such as Latin America, Canada, Japan, and the U.S has a positive expenditure compared with the rest of the world. As we explain in the section

of literature review, the authors: Chhabra et al., (2002); Nicolau & Mas, (2005); Pouta et al., (2006) and Thrane, (2002) find that the longer their travel, their expenditure will increase.

With results obtained, we can conclude that tourist interested in cultural activities and sports activities has the higher expenditure. The tourist segment that is interesting to promote for the different provinces of Spain are the middle age females and retired people or pensioners which can participate in sports activities and cultural visits. Especially activities such as golf, boating, other water sports, adventure sports and cultural visits, shows or activities, those activities as elements of the diversification of the tourist product. As we already know, Spain is a developed destination mostly concentrated in sun and beach tourism. Activities related with water could be a complement of sun and beach destinations (Mediterranean coastal) and cultural activities or shows for hinterland provinces or destinations.

Although this paper focusses the investigation on the activities undertaken by tourists and their impact on the total expenditure in some destinations of Spain, even though we use socio-demographic variables, trip-related characteristics and economic attributes, it is clear that there exist other variables that can influence on the tourism expenditure. Considering the limitation of our tourism expenditure model did not take into account all the variables that can characterise the tourists and define their travel behaviours such as the party size, means of transportation, composition of the travel group and price might lead to other expenditure models with greater accuracy. Additionally, for future researchers we suggest using a larger data sample during a longer period of the year or for some years. In this manner, it would be possible to compare the different levels of total expenditure and analyse the factors that can affect the expenditure in other months of the year.

Finally, identifying those type of activities can contribute to the destination management to promote Balearic Islands, Girona, Huelva, Valencia and so on. In this regard, we hope this investigation could serve as a new line for other authors to further research on this topic.

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