

This is the accepted manuscript of the article:

Losada, N., Alén, E., Domínguez, T. y Nicolau, J.L. (2016), “Travel frequency of seniors tourists”, *Tourism Management*, 53, 88-95. <https://doi.org/10.1016/j.tourman.2015.09.013>

TRAVEL FREQUENCY OF SENIORS TOURISTS

Nieves Losada
Elisa Alén
Trinidad Domínguez
Universidad de Vigo

Juan Luis Nicolau
Universidad de Alicante

Abstract

The current demand in tourism is characterized more frequent trips throughout the year, but shorter than before.. Yet even though this trend will have an adverse affect on the hospitality industry, it will benefit the travel industry. Most of the current literature is based upon the premise that the variables determining travel participation are the same ones that influence travel frequency. However they need not be the same nor behave in the same manner in terms of participation and travel frequency. The aim of this study is to identify the variables that influence the travel frequency of Spanish seniors, one of the most important collectives for the tourism industry given its high travel frequency which depends on variables determining travel participation. Our results show that the variables *gender*, *self-perceived economic status* and *self-perceived time available* determine Spanish senior travel frequency.

Keywords: travel frequency, travel industry, Spanish seniors

1. INTRODUCTION

The trend in tourism over the recent years is characterized by more frequent trips, but shorter than before, throughout the year (Alegre and Pou, 2003; Barros and Machado, 2010; Ferrer-Rosell et al, 2014; Fleischer et al, 2011; Gokovali et al., 2007; OECD, 2014; Salmasi et al, 2012). The increase in travel for work and the emergence of low cost airlines have favored this trend (AAVV Barros and Machado, 2010; Castillo-Manzano et al, 2011). Martínez-García y Raya (2008) note that the tendency of tourists to shorten the average length of their stay entails a reduction in spending per tourist, but the resulting greater flow of visitors offsets this total expenditure. Fleischer et al. (2011) note that although the two great tourism industries, travel industry and hospitality industry, will be strongly affected by changes in travel habits, they will be affected in very distinct ways. While the increase in the frequency of travel will be highly beneficial for the travel industry, the increase in the volume of travelers with reduced average stays will adversely affect the hospitality industry. Additionally, a larger volume of individuals making short trips will require more hours of work per individual at the destination. This will thus force the hospitality industry to face increased operating costs.

Alegre et al. (2009) and Mateo (2012) indicate that the number of trips made in a given year over the last decades in Europe has increased. However, these authors note that the increase in the number of trips in Europe is not due to an increase in the percentage of people traveling, but rather an increase in travel frequency or a more intensive and positively demanding participation of households. In this sense, as Mateo (2012) indicates, the evolution of tourism demand in developed countries will critically depend on how important it is to the whole segment of the population that travels and the frequency with which it does so. Thus, one might consider that seniors, one of the most attractive market segments (Chen et al, 2013; Morgan et al., 2015; Schröder and Widmann., 2007; Wang et al, 2013), as well as the one that travels the most frequently (Fleischer and Pizam, 2002; Lohmann and Danielsson, 2001; Oppermann, 1995; Schröder and Widmann., 2007; Zimmer et al, 1995), will be of special interest to the travel industry. Over recent years there has been growing interest in the mobility patterns of this group as a result of the worldwide demographic aging process (Moniruzzaman et al., 2013).

However, despite its importance for the tourism industry, few studies have focused on analyzing the factors influencing intensity / travel frequency. Most studies assume that the variables influencing the decision to travel¹ are the same ones that determine travel frequency² (Alegre et al, 2009; Mateo, 2012). However, Graham (in Alegre et al., 2009) indicates that they need not be the same nor have the same effects

¹ Decision to travel refers to the decision of whether or not to travel. This variable can take the values Yes or No

² Travel frequency refers to number of trips made by tourists with a positive or effective travel demand. This variable can take any value beginning with 1

According to the latest report from the OECD, *Tourism, Trends and Policies*, Demographic change is one of the external factors that will shape tourist demand and develop the sector in the medium and long term. Senior tourism will become a growing niche in the market (OECD, 2014). The WTO estimates that by 2050 the population aged 60 and older will represent more than 2 billion international trips, a vastly greater number if we compare it to the resulting 593 million for the year 1999 (Patterson, 2006). Chen and Shoemaker (2014), Chu and Chu (2013), Cooper et al. (2007), Glover and Prideaux (2009), Kim and Jang (2015), Mahadevan (2014) and Ryan (1995) point to the aging baby boom generation, with a more leisurely and recreational travel lifestyle than any other generation has ever had and great purchasing power (Dann, 2007; Kazeminia et al, 2015; Kuo and Lu, 2013; Van den Berg et al, 2011), as one of the most important markets for the tourism industry.

In 2012, 62.1% of Spanish households with individuals between 51 and 65 years of age made trips. Individuals between 55-64 years of age were those who traveled the most (IET, 2012). Thus, Spanish seniors is bound to be a segment of great interest to the travel industry. Albeit that while the global population ages as a whole, the old continent will do so at a vertiginous rate. Spain will particularly be one of the oldest countries in Europe in the upcoming years; by 2050, one out of every two citizens in our country will be 50 or more years old (United Nations, 2013).

The aim of this study is to identify the variables that influence the travel frequency of Spaniards from the variables that determine participation, given the potential benefit to the tourism industry and the fact that seniors are the collective that displays the highest travel frequency.

This study is an empirical contribution to the field of senior travel frequency given the scarce number of studies on this issue. Additionally, most of the existing studies focus on identifying only the variables that determine senior participation in travel (Blazey, 1992; Chen and Wu, 2009; Faranda and Schmidt, 1999; Fleischer and Pizam, 2002; Huh, 2006; Jang and Ham, 2009; Nyaupane et al. 2008; Pettersson and Schmöcker, 2010; Romsa and Blenman, 1989; Sakai et al., 2000; Wang, 2005; Wu, 2003 and Zimmer et al. 1995), but not the variables affecting travel frequency.

2. PARTICIPATION IN TRAVEL

The three-dimensional hierarchical entertainment barriers of Crawford et al. (1991) constitute the starting point for leisure and tourism studies in terms of the barriers to participating in leisure activities or travel. They split leisure barriers into three categories; structural barriers related to the lack of necessary available resources to participate in leisure activities such as income, time, opportunities and those derived from the family life cycle; intrapersonal barriers, based on the psychological state of the individual or his personal situation, including factors such as stress, depression, anxiety, beliefs, attitude of family and friends and the perception of their own abilities; and interpersonal barriers resulting from the interaction with the intrapersonal dimension including those barriers related to the difficulty of

finding companions for leisure (Crawford and Godbey in Crawford et al., 1991). These three types of barriers follow a hierarchical structure according to their impact on the leisure behavior of individuals from the nearest (the intrapersonal dimension) to the farthest (the structural) where the first and foremost barriers must be overcome before reaching the farthest ones (Crawford et al., 1991).

One of the first authors to study barriers to senior leisure, McGuire (1984)³, identified the following as the main barriers to entertainment for this group: external resources (lack of information, too much planning, lack of money, lack of proper attire and lack of means of transport) ; time factors (the need to work, disruption of normal routine and excessive burdens); the lack of approval from family and friends; lack of skills (lack of know-how, lack of skills and lack of company); and physical well-being (lack of energy, health reasons, weather or excessive age or dependence).

Apart from the studies of McGuire (1984), other newer studies link senior travel participation to several socio-demographic variables (age, gender, and household and employment status) and self-perceived factors (health, economic status and time available). The main findings are reviewed below.

Socio-demographic Variables

Age. Lohmann and Danielsson (2001), Oppermann (1995), Schröder and Widmann (2007) and Zimmer et al. (1995) indicate that travel frequency increases as the individual ages but it begins to wane in the last stage of the life cycle, mainly for health reasons. Chen and Wu (2009) and Nyaupane et al. (2008) state that the tendency to travel increases from 60 years of age. While Zimmer et al. (1995) claim that it begins to decline after the age of 65. Pettersson and Schmöcker (2010), Wang (2005) and Wu (2003) indicate that as the individual ages the tendency to travel decreases. And finally, Jang and Ham (2009) found that the tendency to travel increases up to 74 years of age and thereafter declines. This shows that there is a nonlinear relationship between age and the likelihood to travel, as indicated by Alegre et al. (2009) and Nicolau and Más (2005). Therefore, we propose the following hypotheses:

H1. Age is positively related to travel frequency

H2. Age² is negatively related to travel frequency

Gender. Sakai *et al.* (2000) claim that the tendency to travel along the life cycle, particularly in adulthood, varies depending on gender. They claim that men tend to travel more after 45 years of age, while women do so after 55. Meng and Uysal (2008) and Sakai *et al.* (2000) attribute this trend to family expenses, which greatly determine participation in leisure and tourism by women, especially younger women who are the most affected by this type of interpersonal barriers. However, Pettersson and

³ The field of *senior* tourism has made broad use of the barriers identified and studied by McGuire in 1984.

Schmöcker (2010) obtained that the frequency of travel for seniors is higher for women. Therefore, we consider that:

H3. Gender determines travel frequency

Employment status. This population has traditionally been considered a particular relevant market segment given its high purchasing power and free time after reaching retirement (Chen and Wu, 2009; Fleischer and Pizam, 2002; Nyaupane et al., 2008). However, several authors (in Nyaupane et al., 2008) point out seniors' lack of money and time, among others, as their major impediments to travel. In this sense, Faranda and Schmidt (1999) argue that although retirees have more time off, retirement does not determine their tendency to travel. In fact, Blazey (1992) and Romsa and Blenman (1989) suggest that the travel trend remains almost constant before and after retirement. Chen and Wu (2009), for their part, indicate that seniors are more likely to travel. And finally, Nicolau and Más (2005) argue that individuals who are still active in the labor market have a higher propensity to travel because they have a greater purchasing power. Therefore, we formulated the following hypothesis:

H4. The employment status of the individual determines travel frequency

Household. One of the consequences of demographic change, with the increase in life expectancy of the population, is the change in the structure and constitution of the household. Willmott and Young (in UNWTO, 2010), Metz and Underwood (2005) and OECD (2014) claim that households in the most developed regions have gone from having a horizontal structure or "flat structure", with many members of the same generation along the family structure, to a vertical structure with four generations coexisting simultaneously. This fact, together with a number of other changes that affect the type of household, such as the increase in the number of divorces and longer periods of celibacy, among others, have contributed to a greater diversity in the current constitution of households (UNWTO, 2010; Ryan and Trauer, 2005). This change in constitution will have a significant impact on the tourism sector. In fact, having several generations living together simultaneously will favor increased intergenerational travel (OECD, 2014; UNWTO, 2010). Thus, it will also influence senior travel participation (Bernini and Cracolici, 2015). Huh (2006) notes that the likelihood to travel decreases as the size of the household increases. Jang and Ham (2009) obtained that the travel trend of younger seniors -the baby boomers- decreases with increasing household size. Furthermore, Nyaupane et al. (2008) suggest that household income, which determines travel participation, is influenced by family responsibilities. Huh (2006) and Jang and Ham (2009) argue that, as household income increases so does the likelihood of senior travel. Thus, one could say that travel participation for this group is firstly conditioned by household size and is secondly conditioned by discretionary income, i.e. the number of members that are economically dependent on the main breadwinner. Concerning the type of home, Jang and Ham (2009) and Nyaupane et al. (2008) assure that married seniors are more likely to travel than those who are single or widowed. Yet Nyaupane et al. (2008) suggest that this trend may respond to a higher level of household income

(and therefore greater spending capacity) rather than the marital status of senior. We therefore propose the following hypotheses:

H5. Household size influences travel frequency

H6. The number of financially dependent members in the household influences travel frequency

H7. Household type influences travel frequency

Self-perceived factors

In addition to socio-demographic variables, a series of subjective variables related to health, economic status and time available exert a moderating effect on senior tendency to travel.

Health. Blazey (1992) relates self-perceived health of seniors to their employment status and indicates that individuals who are retired are more conditioned by health-related problems than those who are still active in the labor market. Fleischer and Pizam (2002) and Wang (2005) show that senior's likelihood to travel increases as their self-perceived health increases. Zimmer et al. (1995) claim that the probability of travel falls for those whose self-perceived health is worse. Thus, we propose that:

H8. Self-perceived health influences travel frequency

Economic status. Rent is one of the most influential variables in the consumption of travel. From the point of view of demand, tourism is considered a normal good with positive demand-income elasticity. Thus a rent increase represents an increase in travel demand (Alegre et al, 2009; Nicolau and Más, 2005). Blazey (1992) assures that seniors who are still active in the labor market have more economic barriers for travel. Although retirement annuities are usually lower than labor income, seniors who are still active in the labor market have more family responsibilities and expenses related to home than those who have already retired. Ryan (1995) indicates that three important events are usually coincidental just before retirement when the purchasing power of seniors is at its optimum: their children emancipate, they continue to obtain income from work and their home-related expenses are almost satisfied. The study conducted by Wu (2003) shows that the likelihood of senior travel increases as their self-perceived economic status increases.

Available time. Blazey (1992) indicates that seniors who are still active in the labor market are more conditioned by barriers like time. In line with the above, Nyaupane et al. (2008) point out that lack of time represents one of the most important barriers for younger seniors.

In line with this, Cooper et al. (2007) suggest that the propensity to travel is closely related to the internal age of the individual. This refers to the life cycle stage reached by the individual which is controlled by time available and self-perceived economic status. However, these two factors are, influenced by others

like household structure, the chronological age or the status of the individual in the labor market. If, as Cooper et al. (2007) say, the internal age of the individual is controlled by economic status and time available and these variables are subjective in nature, we may make the following assumptions:

H9. Self-perceived economic status influences travel frequency

H10. Self-perceived time available influences travel frequency

3. METHODOLOGY

For this research, we chose to carry out a quantitative analysis using a telephone survey as the data-collection method. The questionnaire we used is based on the theory previously discussed. It consists of questions on socio-demographic variables (age, gender, employment status and household constitution) and self-perceived factors (health, economic status and time available) based on the work of Blazey (1992), Chen and Wu, (2009), Faranda and Schmidt (1999), Fleischer and Pizam (2002), Huh (2006), Jang and Ham (2009), Nyaupane et al. (2008), Pettersson and Schmöcker (2010), Romsa and Blenman (1989), Sakai et al. (2000), Wang (2005), Wu (2003) and Zimmer et al. (1995).

We used a telephone interview to talk with seniors over 55 living in Spain to collect data. The cut age was based on two reasons. The first was that this is the average age used in studies that focus on seniors and tourism reviewed in the theoretical framework of this study. The second was that, as Plog (2005), Prideaux et al. (2001) and Ramos (2005) argued, the baby boom generation, people of around 55 years of age nowadays in Spain, will generally be the one to introduce profound changes in the markets and, according to Cooper et al. (2007), particularly in the tourism market.

In Spain, over 55s accounted for 27.6% of the population in 2010, that is to say 12,990,731 people (INE, 2010) and, 44.19% of these people made at least one trip with an overnight stay destination during that year (IET, 2010).

In order to obtain the data to verify the research hypotheses, we chose a two-stage probability sampling. In a first step, we divided the target population into subpopulations -conglomerates- depending on the geographical area of residence, specifically by provinces. From the number of 55+ by province and total travelers over 55 years by region, we calculated the number of travelers by province. Subsequently, we proceeded to calculating a sample size by province proportional to the number of travelers. The interview lasted about 10 minutes. Data were obtained over a period of 3 months between March and May 2012. Finally, a total of 358 valid questionnaires were obtained for all Spanish provinces (50 in total). This is the sample used for the statistical analysis.

Data analysis technique

A count model was used to analyze senior trip frequency and the dimensions that have an impact on it. We specifically used the NegBin model based on the Negative Binomial distribution. Accordingly, the probability of an individual t choosing a number y_t of holiday trips is given by the expression:

$$P(y_t) = \frac{\Gamma(\alpha^{-1} + y_t)}{\Gamma(\alpha^{-1})\Gamma(y_t + 1)} \left(\frac{\alpha^{-1}}{\alpha^{-1} + e^{\sum_{k=1}^K \beta_k x_{tk}}} \right)^{\alpha^{-1}} \left(\frac{e^{\sum_{k=1}^K \beta_k x_{tk}}}{\alpha^{-1} + e^{\sum_{k=1}^K \beta_k x_{tk}}} \right)^{y_t} \quad \forall y_t = \{0, 1, 2, \dots\}$$

where Γ represents the Gamma function, x_{tk} the characteristic k of individual t and β_k the parameter which indicates the effect of x_{tk} on $P(y_t)$. The parameter α covers the dispersion of the observations, so that $E(y_t) = e^{\sum_{k=1}^K \beta_k x_{tk}} = \lambda_t$ and $V(y_t) = e^{\sum_{k=1}^K \beta_k x_{tk}} + \alpha \cdot e^{2 \sum_{k=1}^K \beta_k x_{tk}} = \lambda_t + \alpha \cdot \lambda_t^2$. The validity of this distributional approach is confirmed by testing the null hypothesis $\alpha=0$ as it means that the NegBin model is better -because it captures the heterogeneity in the sample- than the Poisson model (Gurmu and Trivedi, 1996). It should also be noted that this model avoids the bias problems of the regression analysis (trip frequency is a discrete variable but the dependent variable in a regression analysis is continuous) (Hellerstein and Mendelsohn, 1993) and the inefficiency problems of the Multinomial Logit Model (Cameron and Trivedi, 1998) when analysing the number of trips made by a tourist.

Let us note that adapting the NegBin model to this context implies an additional modification, given that a zero value of the dependent variable has a qualitative meaning different to that of other values. Any value above zero indicates the number of trips an individual has decided to make, while a value of zero represents the qualitative decision not to make any trip during the study period. Therefore, the focus should be the observations whose dependent variable is not zero. This truncates the distribution of the variable (Greene, 2012). Accordingly, the NegBin model is applied to the sample truncated at zero. Following Cameron and Trivedi (1998), the expression which represents the probability of an individual t choosing a number y_t of days more than zero is as follows:

$$P(y_t | y_t > 0) = \frac{\Gamma(\alpha^{-1} + y_t)}{\Gamma(\alpha^{-1})\Gamma(y_t + 1)} \left(\frac{\alpha^{-1}}{\alpha^{-1} + e^{\sum_{k=1}^K \beta_k x_{tk}}} \right)^{\alpha^{-1}} \left(\frac{e^{\sum_{k=1}^K \beta_k x_{tk}}}{\alpha^{-1} + e^{\sum_{k=1}^K \beta_k x_{tk}}} \right)^{y_t} \left(\frac{1}{1 - (1 + \alpha \cdot e^{\sum_{k=1}^K \beta_k x_{tk}})^{\alpha^{-1}}} \right)$$

$\forall y_t = \{1, 2, \dots\}$.

where β_k is the parameter indicating the effect of x_{tk} on $P(y_t | y_t > 0)$.

4. RESULTS AND DISCUSSION

The average age of the respondents was 67.2, of which 56.7% mainly corresponded to women. Most of the respondents were retired (63.1%), although a significant percentage of these people were still active (21.8%).

As shown in Table 1, most households were composed of two members (2.2). However, most of the respondents were economically independent, and 0.3 was the average number of economically dependent members.

As for the self-perceived factors, health and self-perceived time were the best self-perceived factors with a 4.14 and 3.87 average, respectively; while available income obtained a lower valuation, 3.04 on average.

< Table 1 near hear >

< Table 2 near hear >

The variables that determine Spanish senior travel frequency, according to the results of the analysis reported in Table 2 are: gender "woman", self-perceived economic status (positively-related) and the self-perceived time available (negatively related).

With respect to age, H1 and H2, no relationship was found between each one of them and senior travel frequency, so both hypotheses are rejected. So even though age determines senior travel participation (Chen and Wu, 2009; Nyaupane et al. 2008; Zimmer et al., 1995; Pettersson and Schmöcker 2010; Wang, 2005 and Wu, 2003), a nonlinear relationship was observed between age and the likelihood to travel (Jang and Ham, 2009; Alegre et al, 2009; Nicolau and Más, 2005). Thus travel frequency is not conditioned by the individual's age, contrary to what was argued by Lohmann and Danielsson (2001), Oppermann (1995), Schröder and Widmann (2007) and Zimmer et al. (1995).

The relationship between gender and travel frequency was found to be statistically significant, so H3 is accepted. The results obtained show that Spanish female seniors travel more frequently than male seniors do. This falls in line with the results obtained by Pettersson and Schmöcker (2010).

With regard to the H4, no significant relationship was found between the employment status of the individual and travel frequency, so this hypothesis was rejected. According to Blazey (1992), Faranda and Schmidt (1999) and Romsa and Blenman (1989) this variable affects senior travel participation but it does not influence travel frequency. This lack of relationship between senior employment status and travel frequency allows us to corroborate one of the gerontological theories most widely used to explain senior travel behavior, Atchley's (1989) "Continuity theory". The basic premise of this theory is that adults maintain the same activities, behaviors and social relations of the past over the last stage of their lives (Atchley in Agahi et al. 2006). Chen and Shoemaker (2014), Nimrod and Rotem (2012) and

Zimmer et al. (1995), among others, argue that leisure in adulthood is characterized by a high level of continuity, and although individuals have more free time and fewer dependents once they reach retirement, their participation in leisure and tourism is often the same as it was before they retired.

Concerning household, H5, H6 and H7 were found to have no statistically significant relationship with travel frequency so all of these hypotheses have been rejected. However, even though senior participation in trips seems to be related to household size, number of economically dependent members and type of household, as established by Huh (2006), Jang and Ham (2009) and Nyaupane et al. (2008), the effects of these three variables on frequency of travel for seniors, a priori, are not relevant. This is consistent with the findings of Pettersson and Schmöcker (2010). Yet the impact of these variables on travel frequency could be offset by economic status and self-perceived time available, which are significant variables in the analysis. Let us not forget that these two subjective variables, which determine senior travel participation, are largely conditioned by household constitution, as discussed by Cooper et al. (2007).

No relationship was found between the first of the self-perceived factors, health, and senior travel frequency. Thus, H8 is rejected. As Kazeminia et al. claim (2015) in a recent study, this lack of relationship may be due to the fact that the health of seniors behaves more like a travel limiter –seniors with poorer self-reported health substitute long journeys with shorter journeys – than a travel inhibitor, as opposed to the assertions Fleischer and Pizam (2002), Wang (2005) and Zimmer et al. (1995). In addition, Pettersson and Schmöcker (2010) point out that household is a variable that indirectly mediates between perceived health and senior travel frequency. These authors suggest that living with a spouse or other members favors the realization of travel by seniors with mobility problems who would otherwise never travel (alone). Thus, travel barriers may be negotiable in the sense that they can be overcome, as may be seen in the hierarchical model of leisure barriers developed by Crawford et al. (1991).

A statistically significant and positive relationship was found between self-perceived economic status and Spanish senior travel frequency, so H9 is accepted. Thus, increasing self-perceived income not only increases the senior travel participation, according to the findings of Wu (2003), but it also increases travel frequency.

Finally, we accepted the last hypothesis, H10, given that the results revealed a relationship between self-perceived time available and travel frequency. However, this relationship is negative, so increasing the time available decreases senior travel frequency. According to Cooper et al. (2007), this could be explained by the subjective nature of this variable which could be influenced by other variables such as age. In this sense, as the age of the individual increases so does the self perceived time available for travel -mainly due to the absence of workloads and family burdens- but travel frequency is reduced, primarily for age-associated health reasons. This is consistent with the theories of Lohmann and

Danielsson (2001), Oppermann (1995), Schröder and Widmann (2007) and Zimmer et al. (1995). Conversely, Blazey (1992) and Nyaupane et al. (2008) claim that self-perceived time available is one of the main barriers for travel among younger seniors. Yet, according our results, these seniors are precisely the ones who currently travel the most frequently.

5. CONCLUSIONS

Seniors are becoming increasingly important to the tourism industry and particularly to the travel industry given that they are one of the collectives with the highest travel frequency. This paper analyzes the determinants of senior travel frequency through the variables that regulate their participation in travel. However, the variables that determine senior travel are not the ones that influence travel frequency nor do they behave in the same manner. This is consistent with the work of Graham (in Alegre et al., 2009) who specifically found that adult women tended to travel more frequently than men did and that this relates positively to self-perceived economic status while it relates negatively to self-perceived time available. This confirms heterogeneity regarding the behavior of seniors in their role as consumers of goods and tourism services, as mentioned by Javalgi et al. (1992), Ryan and Trauer (2005), Schröder and Widmann (2007), Van den Berg et al. (2011) and Wu (2003).

Our results imply a number of issues for the sector. First, in terms of gender, the travel industry must specifically adapt to adult women given that the travel frequency of this group is significantly higher than that of adult men. Nonetheless, this collective is generally of great importance to the tourism industry given the feminization that characterizes aging and the up-scale trend to travel among the new generations of adult women as compared to previous generations. Moreover, the female population will be one of the main beneficiaries of the increased life expectancy of the population and they will significantly outperform men in terms of older age groups (Patterson, 2006; Richter, 2005). Moreover, generations of women who are reaching maturity have much better training and a greater economic independence as a result of their growing incorporation into the labor market over recent decades, and their increased involvement in leisure activities and tourism is far beyond that of previous generations (Oh et al., 2002; Patterson, 2006; Ryan and Trauer, 2005). Ryan and Trauer (2005) points out that there is a growing trend of adult women who are increasingly traveling alone and the tourism sector must adapt to the needs of this growing segment. In line with this, Patterson (2006) and Ryan and Trauer (2005) indicate that the tourism industry should pay more attention to safety matters, among others, as the group of mainly women seniors are one of the most demanding in this respect.

In terms of self-perceived economic status, the travel industry should promote inexpensive trips among seniors in order to increase the travel volume of this group throughout the year. Nyaupane et al. (2008) suggest that public or private investment can contribute by subsidizing senior travel through the so-called Social Tourism. This would make it easier for individuals with modest incomes to access leisure

and tourism to individuals and it would increase their chances of travelling. It would also increase the flow of travelers throughout the year and generate significant economic benefits for the travel industry. In Spain, these types of trips subsidized by the public sector have specifically targeted a segment of the senior population through the IMSERSO programs. In addition, programs like this have served to deseasonalize demand and generate significant profits for the tourism industry and have become an important source of revenue for the state, according to the study conducted by Price Waterhouse, Social World, Aeca, Zontur, Anet, Emer-GfK, Imserso (1997). However, it may be time to re-model these types of trips because, as discussed by Chen and Shoemaker (2014), they may not be of interest to younger seniors in their current form.

Finally, in terms of the self-perceived time available, it would be worthwhile for the tourism industry, particularly operators who organize package tours to seniors, to offer shorter or more flexible trips so that seniors with less time can travel more often, as proposed by Fleischer et al proposed. (2011).

Therefore, low cost airlines –which, as mentioned in the beginning of this study, are the ones that have helped increase travel frequency over the recent years - should be adapted to a senior collective corresponding mainly to women who are price-sensitive and have little time available to travel. Patterson (2006) highlights that adult women prefer to travel on shorter trips more affordable trips that are compatible with family responsibilities. This author also points out that one of the reasons for this preference, among others, is the current easy access to air travel.

Limitations and future lines of research

The first limitation of this study is related to Spain's current economic situation and particularly its battered labor market. Following Alegre et al. (2013), the high unemployment rate in our country throughout recent years has become an explanatory variable for the participation and travel expenditures of Spaniards. Households with an unemployed member and/or employment uncertainty have significantly reduced their participation and spending in tourism across the period of the economic cycle under study, 2006-2010. Pensioners in Spain have currently become the mainstay of families affected by unemployment (Laparra and Perez, 2012) and this itself may account for the existence of "hidden" market segments.

On the other hand, as Wooldridge (2006) indicates, the predictive ability of cross-sectional studies such as this one is very limited; though, as the same author notes, cross-sectional data are the most widely used in economics and other social sciences. In order to overcome this limitation we propose to conduct a longitudinal study. Other authors in the field of senior tourism behavior (Chen and Shoemaker, 2014; Huh, 2006; Wang, 2005) have recommended this type of approach given its ability to capture behavior-related changes across time at the very moment they happen.

Moreover, if we take into account that seniors living in areas with greater access to transportation have the chance to travel more frequently, as Bernini and Cracolici (2015) indicate, we should determine

whether seniors with greater access to air transport - and particularly to low cost airlines - travel more frequently than those whose place of residence hinders their access to this means of transport. Doing this would enable us to confirm whether the rise of low-cost airlines has contributed to increasing senior travel frequency.

Finally, it follows to determine the correlation between senior travel frequency and certain features associated to it, such as length or expense, as well as the main motivation for travelling. Dellaert et al. (1998) note that the variables related to the characteristics of the trip are interdependent, as long as we are not dealing with decisions taken independently from each other. In terms of travel motivation and its connection to senior travel frequency, the aim of this study was to find out whether work-related trips generate a higher travel frequency among seniors, particularly among those who are still active in the labor market. This type of trip (offered in low season) is characterized by a deseasonalized demand (Mochón, 2008) which is less elastic than the demand for leisure travel (OECD, 2014). This type of trip is therefore particularly relevant for the travel industry if we take into account the high percentage of seniors travelling for this reason as compared to the rest, according to Blazey (1992) and Collins and Tisdell (2002).

REFERENCES

- Agahi, N., Ahacic, K. and Parker, M.G. (2006). "Continuity of Leisure Participation From Middle Age to Old Age", *Journal of Gerontology: Social Sciences*, 61 (6), 340-346.
- Alegre, J. and Pou, L. L. (2003). "La estancia media de los turistas en Islas Baleares: determinantes microeconómicos e implicaciones sobre la evolución del gasto agregado", XII Simposio Internacional de Turismo y Ocio, ESADE, Barcelona.
- Alegre, J., Mateo, S. and Pou, L. L. (2009). "Participation in tourism consumption and the intensity of participation: an analysis of their socio-demographic and economic determinants", *Tourism Economics*, 15 (3), 531-546.
- Alegre, J., Mateo, S. and Pou, L. L. (2013). "Tourism participation and expenditure by Spanish households: The effects of economic crisis and unemployment" *Tourism Management*, 39, 37-49.
- Atchley, R.C. (1989). "A Continuity theory of normal aging", *The Gerontologist*, 29 (2), 183-190.
- Barros, C. P. and Machado, L. P. (2010). "The length of stay in tourism", *Annals of Tourism Research*, 37 (3), 692-706.
- Bernini, C. and Cracolici, M. F. (2015). "Demographic change, tourism expenditure and life cycle behaviour", *Tourism Management*, 47, 191-205.
- Blazey, M. A. (1992). "Travel and retirement status" *Annals of Tourism Research*, 19, 771-783.
- Cameron, A.C. and Trivedi, P.K. (1998) "Regression Analysis of Count Data", New York: Cambridge University Press.
- Castillo-Manzano, J., López-Valpuesta, L. and González-Laxe, F. (2011). "The effects of the LCC boom on the urban tourism fabric: the viewpoint of tourism managers" *Tourism Management*, 32 (1085-1095).
- Chen, C. and Wu, C. (2009). "How motivations, constraints, and demographic factors predict seniors' overseas travel propensity" *Asia Pacific Management Review*, 14(3), 301-312.

- Chen, K. H., Liu, H. H. and Chang, F. H. (2013). "Essential customer service factors and the segmentation of older visitors within wellness tourism based on hot springs hotels" *International Journal of Hospitality Management*, 35, 122-132.
- Chen, S. C. and Shoemaker, S. (2014). "Age and cohort effects: The American senior tourism market" *Annals of Tourism Research*, 48, 58-75.
- Chu, A.Z. and Chu, R.J. (2013). "Service willingness and senior tourists: knowledge about aging, attitudes toward the elderly, and work values" *The Service Industries Journal*, 33(12), 1148-1164.
- Collins, D. and Tisdell, C. (2002). "Age-related lifecycles: purpose variations" *Annals of Tourism Research*, 29(3), 801-818.
- Cooper, C., Fletcher, J., Fyall, A., Gilbert, D. and Wanhill, S. (2007). *El Turismo: teoría y práctica*. Madrid: Síntesis.
- Crawford, D., Jackson, E. and Goodbey, G. (1991). "A hierarchical model of leisure constraints" *Leisure Sciences*, 13, 309-320.
- Dann, S. (2007). "Branded generations: baby boomers moving into the seniors market" *Journal of Product & Brand Management*, 16(6), 429-431.
- Dellaert, B. G. C., Ettema, D. F. and Lindh, C. (1998). "Multi-faceted tourist travel decisions: a constraint-based conceptual framework to describe tourists' sequential choices of travel components" *Tourism Management*, 19(4), 313-320.
- Faranda, W. T. and Schmidt, S. L. (1999). "Segmentation and the senior traveler: Implications for today's and tomorrow's aging consumer" *Journal of Travel & Tourism Marketing*, 8(2), 3-27.
- Ferrer-Rosell, B., Martínez-García, E. and Coenders, G. (2014). "Package and no-frills air carriers as moderators of length of stay", *Tourism Management*, 42, 114-122.
- Fleischer, A. and Pizam, A. (2002). "Tourism Constraints among Israeli Seniors" *Annals of Tourism Research*, 29 (1), 106-123.
- Fleischer, A., Peleg, G. and Rivlin, J. (2011). "The impact of changes in household vacation expenditures on the travel and hospitality industries", *Tourism Management*, 32, 815-821.
- Glover, P. and Prideaux, B. (2009). "Implications of population ageing for the development of tourism products and destinations" *Journal of Vacation Marketing*, 15 (1), 25-37.
- Gokovali, U., Bahar, O. and Kozak, M. (2007). "Determinants of length of stay: a practical use of survival analysis", *Tourism Management*, 28, 736-746.
- Gurmu, S. and Trivedi, P.K. (1996) "Excess Zeros in Count Models for Recreational Trips", *Journal of Business and Economic Statistics*, 14, 469-477.
- Hellerstein, D. and Mendelsohn, R. (1993). "A Theoretical Foundation for Count Data Models", *American Journal of Agricultural Economics*, 75, 3, 604-611.
- Huh, C. (2006). *A study of changes in patterns of travel behavior over time: a cohort analysis approach*. PhD. Michigan State University. United States.
- IET (2010), Instituto de Estudios Turísticos. Encuesta de los Movimientos Turísticos de los Españoles (Familitur). Available in: <http://www.iet.tourspain.es/es-ES/estadisticas/familitur/Anuales/Informe%20anual%20de%20Familitur.%20A%C3%B1o%202010.pdf>
- IET (2012), Instituto de Estudios Turísticos. Encuesta de los Movimientos Turísticos de los Españoles (Familitur). Available in: <http://www.iet.tourspain.es/es-ES/estadisticas/familitur/Anuales/Informe%20anual%20de%20Familitur.%20A%C3%B1o%202012.pdf>

- INE (2010). INEbase. Demografía y población. Padrón. Población por municipios. Available in: <http://www.ine.es/jaxi/menu.do?type=pcaxis&file=pcaxis&path=%2Ft20%2Fe245%2Fp04%2F%2Fa2010>
- Jang, S. (Shawn) and Ham, S. (2009). “A double-hurdle analysis of travel expenditure: *baby boomers seniors* versus older *seniors*” *Tourism Management*, 30, 372-380.
- Javalgi, R. G., Thomas, E. G. and Rao, S. R. (1992). “Consumer behavior in the U.S. pleasure travel marketplace: An analysis of senior and non-senior travelers”. *Journal of Travel Research*, 31 (2), 14-9.
- Kazemina, A., Del Chiappa, G. and Jafari, J. (2015). “Seniors' travel constraints and their coping strategies” *Journal of Travel Research*, 54 (1), 80-93.
- Kim, D. and Jang, S. (2015). “Cognitive decline and emotional regulation on senior consumers”, *International Journal of Hospitality Management*, 44, 111-119.
- Kim, H., Woo, E. and Uysal, M. (2015). “Tourism experience and quality of life among elderly tourists” *Tourism Management*, 46, 465-476.
- Kuo, H. I. and Lu, C. L. (2013). “Expenditure-based segmentation: application of quantile regression to analyse the travel expenditures of baby boomer households” *Tourism Economics*, 19(6), 1429-1441.
- Laparra, M. and Pérez, B. [coord.] (2012). “Crisis y fractura social en Europa: Causas y efectos en España”, *Colección Estudios Sociales*, 35. Obra Social “La Caixa”.
- Lohmann, M. and Danielsson, J. (2001). “Predicting travel patterns of *senior* citizens: How the past may provide a key to the future” *Journal of Vacation Marketing*, 7(4), 357-366.
- Mahadevan, R. (2014). “Understanding Senior Self-Drive Tourism in Australia Using a Contingency Behavior Model” *Journal of Travel Research*, 53(2), 252-259.
- Martínez-García, E. and Raya, J. M. (2008). “Length of stay for low-cost tourism”, *Tourism Management*, 29, 1064-1075.
- Mateo Erroz, S. (2012). Análisis microeconómico de las decisiones de participación y gasto turístico de los hogares. PhD. Universitat de les Illes Balears.
- McGuire, F. A. (1984). “A factor analytic study of leisure constraints in advanced adulthood” *Leisure Sciences*, 6(3), 313-326.
- Meng, F. and Uysal, M. (2008). “Effects of gender differences on perceptions of destination attributes, motivations and travel values: an examination of a nature-based resort destination”, *Journal of Sustainable Tourism*, 16(4), 445-466.
- Metz, D. and Underwood, M. (2005). *Older, richer, fitter: identifying the customer needs of Britain's ageing population*. London: Age Concern England.
- Mochón, F. (2008). *Economía y turismo*. Madrid: McGraw-Hill.
- Moniruzzaman, M., Páez, A., Habib, K. M. N. and Morency, C. (2013). “Mode use and trip length of seniors in Montreal”, *Journal of Transport Geography*, 30, 89-99.
- Morgan, N., Pritchard, A. and Sedgley, D. (2015). “Social tourism and well-being in later life”, *Annals of Tourism Research*, 52, 1-15
- Nicolau, J. L. and Más, F. J. (2005). “Stochastic modeling: a three-stage tourist choice process”, *Annals of Tourism Research*, 23 (1), 49-69.
- Nimrod, G. and Rotem, A. (2012). An exploration of the innovation theory of successful ageing among older tourists. *Ageing & Society*, 32(3), 379-404.
- Nyaupane, G. P., McCabe, J. T. and Andereck, K. L. (2008). “Seniors' travel constraints: stepwise logistic regression analysis” *Tourism Analysis*, 13(4), 341-354.
- OECD (2014). Tourism, trends and policies. OECD Publishing. Available in: http://www.oecd-ilibrary.org/industry-and-services/oecd-tourism-trends-and-policies-2014_tour-2014-en

- Oh, H., Parks, S. C. and DeMicco, F. J. (2002). "Age- and gender-based segmentation: a structural understanding" *International Journal of Hospitality & Tourism Administration*, 3(1), 1-20.
- Oppermann, M. (1995). "Travel life cycle" *Annals of Tourism Research*, 22(3), 535-552.
- Patterson, I. (2006). *Growing older. Tourism and leisure behaviour of older adults*. Cambridge: Cabi.
- Pettersson, P. and Schmöcker, J. D. (2010). "Active ageing in developing countries?: trip generation and tour complexity of older people in Metro Manila", *Journal of Transport Geography*, 18, 613-623.
- Plog, S. C. (2005). Targeting segments: more important than ever in the travel industry. In W. F. Theobald (Ed.), *Global Tourism* (3^a ed.), pp. 271-293. Boston: Butterworth-Heinemann.
- PriceWaterhouse, Mundo Social, Aeca, Zontur, Anet, Emer-Gfk, Imsero (1997). *Incidencia socioeconómica de los programas de vacaciones para mayores y termalismo social del IMSERSO*. Instituto de Migraciones y Servicios Sociales, Madrid.
- Prideaux, B., Wei, S. and Ruys, H. (2001). "The senior drive tour market in Australia" *Journal of Vacation Marketing*, 7(3), 209-219.
- Ramos, I. (2005). *El estilo de vida de las personas mayores y la comunicación publicitaria. Un análisis empírico*. PhD. Universidad de Alicante. España.
- Richter, L. K. (2005). Exploring the political role of gender in tourism research. In W. F. Theobald (Ed.), *Global Tourism* (3^a ed.), pp. 426-439. Boston: Butterworth-Heinemann.
- Romsa, G. and Blenman, M. (1989). "Vacation Patterns of the Elderly German" *Annals of Tourism Research*, 16(2), 178-188.
- Ryan, C. (1995). "Learning about tourists from conversations: the over-55s in Majorca" *Tourism Management*, 16(3), 207-215.
- Ryan, C. and Trauer, B. (2005). Aging populations: trends and the emergence of the nomad tourist. In W. F. Theobald (Ed.), *Global Tourism* (3^a ed.), pp. 510-528. Boston: Butterworth-Heinemann.
- Sakai, M., Brown, J. and Mak, J. (2000). "Population aging and Japanese international travel in the 21st century" *Journal of Travel Research*, 38, 212-220.
- Salmasi, L., Celidoni, M. and Procidano, I. (2012). "Length of stay: Price and income semi-elasticities at different destinations in Italy", *International Journal of Tourism Research*, 14, 515-530.
- Schröder, A. and Widmann, T. (2007). Demographic Change and its impact on the travel industry: Oldies-nothing but goldies? In R. Conrady y M. Buck (Eds.), *Trends and issues in Global Tourism*, (pp. 3-17). Berlín: Springer.
- United Nations (2013). World Population Ageing, Population Division. Available in: <http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeingReport2013.pdf>
- UNWTO (2010). *Demographic Change and Tourism*. Madrid.
- Van Den Berg, P., Arentze, T. and Timmermans, H. (2011). "Estimating social travel demand of senior citizens in the Netherlands" *Journal of Transport Geography*, 19, 323-331.
- Wang, K. C., Ma, A. P., Hsu, M. T., Jao, P. C. and Lin, C. W. (2013). "Seniors' perceptions of service features on outbound group package tours" *Journal of Business Research*, 66, 1021-1027.
- Wang, Y. (2005). *An exploratory study of travel constructs in mature tourism*. PhD. Clemson University. South Carolina. United States.
- Wooldridge, J. M. (2006). *Introducción a la econometría: un enfoque moderno* (2^a ed.). Madrid: Thomson Learning.
- Wu, C. M. E. (2003). *An exploratory study of Taiwanese seniors' travel motivations and travel behavior*. PhD. Kansas State University. United States.

Zimmer, Z., Brayley, R. E. and Searle, M. S. (1995). "Whether to go and where to go: identification of important influences on seniors' decisions to travel" *Journal of Travel Research*, 33(3), 3-10.

APPENDIX: DESCRIPTIVE STATISTICS

Table a. Descriptive statistics of ordinal variables

	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	55	93	67.20	8.382	0.578	0.129	-0.257	0.257
Age^2	3,025	8,649	4,585.3	1,169.82	0.837	0.129	0.271	0.257
Household size	1	8	2,20	1,015	1,854	,129	6,144	,257
Number of dependent family members	0	4	0.34	0.739	2.795	0.129	8.929	0.257
Self-perceived health	1	5	4.14	0.720	-0.849	0.129	1.737	0.257
Self-perceived economic status	1	5	3.04	0.672	0.003	0.129	1.385	0.257
Self-perceived time	1	5	3.87	0.980	-0.704	0.129	0.008	0.257
Number of trips made over the past year	1	30	2.59	2.622	4.613	0.129	36.228	0.257
Valid N (listwise)	358							

Table b. Descriptive statistics of categorical variables

		Frequency	Percentage
Gender	Man	155	43.3
	Woman	203	56.7
Type of household/home	Unipersonal	67	18.7
	Nuclear family without children	183	51.1
	Nuclear family with children/Others	77	21.5
	Single-parent family/Others	31	8.7
Employment status	Retired	226	63.1
	Unemployed	13	3.6
	Inactive/homemaker	41	11.5
	Working	78	21.8
Valid N (listwise)	358		