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Travel frequency of seniors tourists

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HIGHLIGHTS

- The variables that determine senior travel are not the ones that influence travel frequency.
- Women have significantly higher travel frequency than men.
- No significant relationship was found between the employment status of the individual and travel frequency.
- The health of seniors behaves more like a travel limiter than a travel inhibitor.

ARTICLE INFO

ABSTRACT

Current demand for tourism is characterized by more frequent, shorter trips throughout the year. Such trends may have adverse effects on the hospitality industry but benefit the travel industry. Most current literature assumes that the variables that determine travel participation are identical to those that influence travel frequency, though there is no evidence to support this assumption. Therefore, the current study seeks to identify variables that influence travel frequency among Spanish senior tourists, who represent a key target market for the tourism industry. The results specify that gender, self-perceived economic status, and self-perceived time available variables strongly determine Spanish seniors' travel frequency.

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1. Introduction

Modern tourism is largely characterized by more frequent but shorter trips, spread throughout the year (Alegre & Pou, 2003; Barros & Machado, 2010; Ferrer-Rosell, Martínez-García, & Coenders, 2014; Fleischer, Peleg, & Rivlin, 2011; Gokovali, Bahar, & Kozak, 2007; OECD, 2014; Salmasi, Celidoni, & Procidano, 2012), as encouraged by increased travel for work and the emergence of low cost airlines (Barros & Machado, 2010; Castillo-Manzano, López-Valpuesta, & González-Laxe, 2011). Martínez-García and Raya (2008) note that tourists tend to shorten the average length of their stay, which reduces spending per tourist, though the greater flow of visitors offsets this expenditure loss. Fleischer et al. (2011) also explain that the two great tourism industries, travel and hospitality, will be strongly affected by changes in travel habits, though in very distinct ways. That is, increased travel frequency should benefit the travel industry, but an increase in the volume of travelers who stay for shorter periods likely will adversely affect the hospitality industry. Because the larger volume of travelers, making short trips, require more hours of work per customer at their destination, the hospitality industry also might confront increased operating costs.

Alegre, Mateo, and Pou (2009) and Mateo Erroz (2012) indicate that the number of trips in any given year has increased in recent decades in Europe, but not due to an increase in the percentage of people traveling. Rather they cite increased travel frequency and more intensive demand among existing customers. As Mateo Erroz (2012) explains, the evolution of tourism demand in developed countries thus will depend critically on their importance to the segment of the population that travels and the frequency with which they do so. For example, senior consumers—one of the most attractive market segments (Chen, Liu, & Chang, 2013; Morgan, Pritchard, & Sedgley, 2015; Schröder & Widmann, 2007; Wang, Ma, Hsu, Jao, & Lin, 2013), who travel very frequently (Fleischer & Pizam, 2002; Lohmann & Danielsson, 2001; Oppermann, 1995; Schröder & Widmann, 2007; Zimmer, Brayley, & Searle, 1995)—may be of special interest to the travel industry. Recent research

also has exhibited growing interest in the mobility patterns of this group of consumers, reflecting the worldwide demographic aging trends (Moniruzzaman, Páez, Habib, & Morency, 2013). Despite the importance of senior travelers for the tourism industry though, few studies analyze factors that might influence the intensity or frequency of their travel. Instead, many studies assume that the influences on decision to travel are the same as those that determine travel frequency (Alegre et al., 2009; Mateo Erroz, 2012). However, they are not the same by definition,[1] nor are they required to have the same effects.

According to a recent OECD (2014) report, demographic changes constitute key external factors that will shape tourist demand over the medium and long terms. Senior tourism is likely to become a growing niche (OECD, 2014), especially because by 2050, the population aged 60 years and older will take more than 2 billion international trips, far more than the 593 million they took in 1999 (Patterson, 2006). Various authors, including Chen and Shoemaker (2014), Chu and Chu (2013), Cooper, Fletcher, Fyall, Gilbert, and Wanhill (2007), Glover and Prideaux (2009), Kim and Jang (2015), Mahadevan (2014), and Ryan (1995), emphasize the influence of the aging baby boom generation, which exhibits more leisurely and recreational travel lifestyle choices than any other generation has, along with substantial purchasing power (Dann, 2007; Kazeminia, Del Chiappa, & Jafari, 2015; Kuo & Lu, 2013; Van Den Berg, Arentze, & Timmermans, 2011). Although the global population is aging in general, different nations reveal varying intensities of this trend. For example, Spain soon will be one of the oldest countries in Europe; by 2050, one out of every two citizens will be at least 50 years of age (United Nations, 2013). Furthermore, in 2012, 62.1% of Spanish households that contained members between 51 and 65 years of age made trips. The people between 55 and 64 years of age were the ones who traveled the most (IET, 2012). Thus, Spanish seniors represent a segment of great interest to the travel industry.

This study in turn seeks to identify the variables that influence the travel frequency demonstrated by Spanish seniors, distinct from the variables that determine their travel participation. It is thus an empirical contribution to travel research focused on senior tourists. Relatively few studies address these issues, and those that do focus mainly on identifying variables that determine senior participation in travel (Blazey, 1992; Chen & Wu, 2009; Faranda & Schmidt, 1999; Fleischer & Pizam, 2002; Huh, 2006; Jang & Ham, 2009; Nyaupane, McCabe, & Andereck, 2008; Pettersson & Schmöcker, 2010; Romsa & Blenman, 1989; Sakai, Brown, & Mak, 2000; Wang, 2005; Wu, 2003; Zimmer et al., 1995). The current study extends that focus by investigating the variables that affect their travel frequency.

2. Travel participation

Crawford, Jackson, and Goodbey (1991) propose that three barriers prevent people from engaging in leisure activities or travel: structural barriers related to the lack of necessary resources to participate in leisure activities, such as money, time, opportunities, or family life cycles; intrapersonal barriers, reflecting the psychological state of the individual or personal situation, such as stress, depression, anxiety, beliefs, attitudes of family and friends, and perceptions of own abilities; and interpersonal barriers that result from interactions with the intrapersonal dimension, including barriers related to the difficulty of finding companions (Crawford et al., 1991). The three types of barriers follow a hierarchical

structure, according to their impact on people's leisure behavior, from nearest (intrapersonal) to farthest (structural), so the first and foremost barriers must be overcome before the farthest ones can be addressed (Crawford et al., 1991).

As an early and influential contributor to senior leisure research, McGuire (1984) identified specific barriers to leisure for seniors: external resources (lack of information, too much planning, lack of money, lack of proper attire, lack of means of transport); time factors (need to work, disruption of normal routine, excessive burdens); lack of approval from family and friends; lack of skills (know-how, company); and physical well-being (lack of energy, health reasons, weather, excessive age, dependence). In turn, more recent studies have linked senior travel participation to several socio-demographic variables (age, gender, household and employment status) and self-perceived factors (health, economic status, time available), as detailed next.

2.1. Socio-demographic variables

2.1.1. Age
Lohmann and Danielsson (2001), Oppermann (1995), Schröder and Widmann (2007), and Zimmer et al. (1995) indicate that travel participation increases as a person ages but then begins to wane in the last stage of the life cycle, mainly for health reasons. Chen and Wu (2009) and Nyaupane et al. (2008) find a greater tendency to travel after 60 years, though Zimmer et al. (1995) suggest this tendency begins to decline after the age of 65 years. Pettersson and Schmöcker (2010), Wang (2005), and Wu (2003) argue that as a person ages, the tendency to travel decreases, but Jang and Ham (2009) find that the tendency to travel increases up to 74 years of age and only declines thereafter. Therefore, a nonlinear relationship likely exists between age and travel likelihood (see also Alegre et al., 2009; Nicolau & Más, 2005). If these effects apply similarly to travel frequency, the resulting hypotheses state:

H1. Age relates positively to travel frequency.

H2. Age^2 relates negatively to travel frequency.

2.1.2. Gender
Sakai et al. (2000) claim that the tendency to travel, particularly in adulthood, varies by gender: Men tend to travel more after 45 years of age, whereas women do so after 55 years. Meng and Uysal (2008) and Sakai et al. (2000) attribute these trends to family expenses, which greatly determine participation in leisure and tourism by women, especially younger women, who are the most affected by such interpersonal barriers. However, Pettersson and Schmöcker (2010) indicate that travel participation is greater among female seniors. Therefore, the current study predicts broadly:

H3. Gender determines travel frequency.

2.1.3. Employment status
The senior population has long been considered a relevant market segment, because of its purchasing power and leisure time, following retirement (Chen & Wu, 2009; Fleischer & Pizam, 2002; Nyaupane et al., 2008). However, several authors also note seniors' lack of money and time as potential impediments to travel. Faranda and Schmidt (1999) argue that though retirees have more time off, retirement does not determine their tendency to travel, and Blazey (1992) and Romsa and Blenman (1989) also suggest that travel trends remain nearly constant before and after retirement. Chen and Wu (2009) indicate that seniors are more likely to travel, but Nicolau and Más (2005) take a different perspective and argue that people still active in the labor market have a higher propensity to travel, because they have greater purchasing power. Therefore,

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[1] In particular, the decision to travel is a binary, yes or no variable. Travel frequency instead refers to the number of trips made, which can have a positive effect on travel demand. This variable can take any value, beginning with 1.

H4. The employment status of the tourist determines travel frequency.

2.1.4. Household

As a consequence of demographic changes, including increasing life expectancy, the structure and constitution of households change too. Multiple sources (Metz & Underwood, 2005; OECD, 2014; UNWTO, 2010) indicate that households in the most developed regions have gone from a horizontal or flat structure, with many members of the same generation defining the family structure, to a vertical structure, in which four generations coexist simultaneously. This and other changes that affect the type of household (e.g., more divorces, longer periods of celibacy) in turn have contributed to greater diversity in the current constitution of households (Ryan & Trauer, 2005; UNWTO, 2010), which is likely to have significant impacts on the tourism sector. For example, when several generations live together simultaneously, it may favor increased intergenerational travel (OECD, 2014; UNWTO, 2010), which would influence senior travel participation (Bernini & Cracolici, 2015). Huh (2006) notes that travel likelihood decreases with the size of the household, and Jang and Ham (2009) find similar findings among baby boomers. Nyaupane et al. (2008) also suggests that household income, which determines travel participation, depends on family responsibilities. According to Huh (2006) and Jang and Ham (2009), as household income increases, so does the likelihood of senior travel. Thus, travel participation may be conditioned first by household size, and then by discretionary income, which depends on the number of household members economically dependent on the main breadwinner. Finally, Jang and Ham (2009) and Nyaupane et al. (2008) posit that married seniors are more likely to travel than those who are single or widowed, though Nyaupane et al. (2008) propose that this trend may reflect a higher level of household income (and greater spending capacity) rather than marital status. We therefore offer broad hypotheses:

H5. Household size influences travel frequency.

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

H7. Household type (i.e., marital status) influences travel frequency.

2.2. Self-perceived factors

2.2.1. Health

Blazey (1992) relates the self-perceived health of seniors to their employment status and indicates that retired people are more conditioned by health-related problems than those who remain active in the labor market. Fleischer and Pizam (2002) and Wang (2005) show that seniors' travel likelihood increases with their self-perceived health, while Zimmer et al. (1995) note that the probability of travel falls for those whose self-perceived health is worse. Thus,

H8. Self-perceived health influences travel frequency.

2.2.2. Economic status

Rent strongly influences the consumption of travel. From a demand point of view, tourism is a normal good, with positive demand–income elasticity, so a rent increase should invoke an increase in travel demand (Alegre et al., 2009; Nicolau & Más, 2005). Blazey (1992) argues though that seniors still active in the labor market actually suffer more economic barriers to travel. That is, retirement annuities may tend to be lower than labor income, but seniors who are still active in the labor market likely have more family responsibilities and expenses related to their households. Ryan (1995) notes three important events that often occur just

before retirement, marking the height of seniors' purchasing power: their children leave home, they continue to obtain income from work, and their home-related expenses are nearly satisfied. Wu (2003) argues that the likelihood of senior travel increases as their self-perceived economic status increases.

2.2.3. Available time

According to Blazey (1992), seniors who are still active in the labor market are more conditioned by barriers such as time. Nyaupane et al. (2008) also point out that a lack of time is one of the most important barriers facing younger seniors. With a related concept, Cooper et al. (2007) suggest that the propensity to travel may relate closely to a person's internal age—that is, the life cycle stage he or she has reached, which depends on both time available and self-perceived economic status. These two factors also are influenced by other variables, such as household structure, chronological age, and the person's status in the labor market. If, as Cooper et al. (2007) claim, a person's internal age is controlled by economic status and time available, and these variables are subjective in nature, we can predict:

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 reflects extant theory (Blazey, 1992; Chen & Wu, 2009; Faranda & Schmidt, 1999; Fleischer & Pizam, 2002; Huh, 2006; Jang & Ham, 2009; Nyaupane et al., 2008; Pettersson & Schmöcker, 2010; Romsa & Blenman, 1989; Sakai et al., 2000; Wang, 2005; Wu, 2003; Zimmer et al., 1995) and consists of items related to socio-demographic variables (age, gender, employment status, and household constitution) and self-perceived factors (health, economic status, and time available). The telephone interview involved seniors over 55 years of age, living in Spain. The age threshold was set on the basis of two factors. First, 55 years is the average age used in previous studies of seniors and tourism that constitute our theoretical framework. Second, as Plog (2005), Prideaux, Wei, and Ruys (2001), and Ramos (2005) argue, the baby boom generation—who are approximately 55 years of age currently—will introduce profound changes in markets, and perhaps especially in tourism markets (Cooper et al., 2007). In Spain, people older than 55 years accounted for 27.6% of the population in 2010, equivalent to 12,990,731 people (INE, 2010), of whom 44.19% made at least one trip with an overnight stay during that year (IET, 2010).

To obtain the data needed to verify the research hypotheses, we chose two-stage probability sampling. In a first step, we divided the target population into subpopulations, or conglomerates, according to their geographical area of residence (i.e., provinces). From the number of seniors by province and senior travelers by region, we calculated the number of travelers by province. Then in the second step, we calculated a sample size by province, proportional to the number of travelers. The telephone interviews to collect the data, which each lasted about 10 min, were conducted over a period of three months between March and May 2012. A total of 358 valid questionnaires were obtained for all Spanish provinces (50 in total), which represented the sample used for the statistical analysis.

3.1. Data analysis technique

We used a count model to analyze senior trip frequency, or the number of trips a senior made in the past year (a truncated variable, where all possible integer values greater than 0 can be observed), as

well as dimensions that affect it. We specifically adopted the Neg-Bin model, based on a Negative Binomial distribution. The probability of individual t choosing a number y_t of holiday trips thus is given by

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

$$\forall y_t = \{0,1,2,\ldots\},$$

where Γ represents the Gamma function, x_{tk} is the characteristic k of individual t, and β_k is the parameter that indicates the effect of xtk on $P(y_t)$. The parameter α covers the dispersion of the observations, or dispersion of the effects of the variables, such 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, according to the test of the null hypothesis that $\alpha = 0$; the NegBin model is better than a Poisson model, because it captures heterogeneity in the sample (Gurmu & Trivedi, 1996). Furthermore, this model avoids the biases associated with regression analysis (i.e., trip frequency is a discrete variable, whereas a dependent variable in a regression analysis is continuous; Hellerstein & Mendelsohn, 1993), as well as the inefficiency problems of a multinomial logit model (Cameron & Trivedi, 1998).

However, adapting the NegBin model to this context requires an additional modification, because a zero value for the dependent variable has a qualitatively different meaning than any other values. Any value above 0 indicates the number of trips a person has taken; a value of 0 represents the qualitative decision not to travel during the study period. Therefore, the focus should be the observations whose dependent variable is not equal to 0, which truncates the distribution of the variable (Greene, 2012). Accordingly, the NegBin model applies to the sample truncated at 0. Following Cameron and Trivedi (1998), the expression that represents the probability of an individual t choosing a number y_t of travel days greater than 0 is as follows:

(average of 2.2). The respondents were economically independent, such that the average number of economically dependent household members was just 0.3. Among the self-perceived factors, health and self-perceived time earned the highest average scores, of 4.14 and 3.87, respectively; available income indicated a lower valuation of 3.04 on average.

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

In contrast, with respect to age, we found no relationship with senior travel frequency, so both H1 and H2 are rejected. Even though age determines senior travel participation (Chen & Wu, 2009; Nyaupane et al., 2008; Pettersson & Schmöcker, 2010; Wang, 2005; Wu, 2003; Zimmer et al., 1995)—as signaled by research that identifies a nonlinear relationship between age and travel likelihood (Alegre et al., 2009; Jang & Ham, 2009; Nicolau & Más, 2005)—travel frequency does not appear be conditioned by a person's age, contrary to arguments posed by Lohmann and Danielsson (2001), Oppermann (1995), Schröder and Widmann (2007), and Zimmer et al. (1995).

The relationship between gender and travel frequency was statistically significant, in support of H3. In particular, female Spanish seniors travel more frequently than male Spanish seniors do, which aligns with the results obtained by Pettersson and Schmöcker (2010).

With regard to H4, no significant relationship arose between employment status and travel frequency, so we must reject this hypothesis. According to Blazey (1992), Faranda and Schmidt (1999), and Romsa and Blenman (1989), this variable affects senior travel participation, but the current study shows that it does not influence travel frequency. This lack of a relationship enables us to affirm a widely applied gerontological theory, namely, Atchley (1989) continuity theory. This theory holds that adults maintain the same activities, behaviors, and social relations they adopted in the past during the last stage of their lives too (Agahi, Ahacic, & Parker, 2006). Chen and Shoemaker (2014), Nimrod and Rotem (2012), and Zimmer et al. (1995), among others, argue that leisure in adulthood features a high level of continuity. Even though people

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

where β_k is the parameter indicating the effect of x_{tk} on $P(y_t|y_t > 0)$, and the x variables include age, household size, number of dependent family members, self-perceived health, self-perceived economic status, self-perceived time, and the number of trips made in past years.

4. Results and discussion

The average age of the respondents was 67.2 years, and 56.7% were women. Most of the respondents were retired (63.1%), though a significant percentage still worked actively (21.8%). As Table 1 shows, most households were composed of two members

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.

In terms of the household variables, H5, H6, and H7 were not supported, because none of these variables showed statistically significant relationships with travel frequency. Senior participation in trips may be related to household size, the number of economically dependent members, and type of household (Huh, 2006; Jang & Ham, 2009; Nyaupane et al., 2008), but these three variables are not relevant in terms of the frequency of travel by seniors, consistent with the findings of Pettersson and Schmöcker (2010). The impact of these variables on travel frequency also could be offset by

Table 1
Description of the sample.

Variables		$\overline{X}$ or %
Age		67.2
Gender	Man	43.3%
	Woman	56.7%
Employment status	Retired	63.1%
	Unemployed	3.6%
	Inactive/housewife	11.5%
	Working	21.8%
Household size[a]		2.2
Number of dependent family members		0.34
Type of household/home	One-member	18.7%
	Nuclear family without children	51.1%
	Nuclear family with children/others	21.5%
	Single-parent family/others	8.7%
Self-perceived health (1—5 Likert scale)		4.14
Self-perceived status (1—5 Likert scale)		3.04
Self-perceived time (1—5 Likert scale)		3.87

[a] Interviewee included.

Table 2
Results of the determinant factors of trip frequency.

Variables	Coefficient	Std. error	Statistic
Constant	−1.732	3.043	−0.569
Age	0.065	0.086	0.750
Age^2	0.000	0.001	−0.727
Gender	−0.192[b]	0.096	−1.991
Self-perceived health	0.058	0.065	0.888
Self-perceived status	0.138[b]	0.067	2.054
Self-perceived time	−0.126[a]	0.047	−2.665
Household size	−0.061	0.071	−0.856
Dependent family members	−0.008	0.073	−0.105
Nuclear family without any other member	0.186	0.141	1.318
Nuclear family with more members	0.332	0.204	1.624
Single-parent family	0.126	0.208	0.606
Retired	0.239	0.160	1.497
Unemployed	0.182	0.278	0.653
Working	0.258	0.187	1.381
α	−1.504[a]	0.176	−8.547
LR statistic	145.41[a]		

a = prob < 1%; b = prob < 5%.

economic status and self-perceived time available. That is, these two subjective variables, which strongly determine senior travel participation, are largely conditioned by their household constitution, as noted by Cooper et al. (2007).

We found no relationship between the first self-perceived factor, health, and senior travel frequency. Thus, H8 is rejected. According to Kazeminia et al. (2015), this lack of a relationship may occur because the health of seniors behaves more like a travel limiter—seniors with poorer self-reported health substitute long journeys with shorter journeys—than like a travel inhibitor (cf. Fleischer & Pizam, 2002; Wang, 2005; Zimmer et al., 1995). In addition, Pettersson and Schmöcker (2010) point out that the household variable indirectly mediates perceived health and senior travel frequency. That is, living with a spouse or other family members encourages travel by seniors with mobility problems, who otherwise would not travel (alone). Thus, travel barriers may be negotiable, in the sense that they can be overcome, in line with the hierarchical model of leisure barriers by Crawford et al. (1991).

A statistically significant and positive relationship emerged between self-perceived economic status and Spanish senior travel frequency, in support of H9. Increasing self-perceived income not only increases senior travel participation, in line with Wu (2003), but it also increases travel frequency.

Finally, in support of H10, the results revealed a relationship between self-perceived time available and travel frequency. However, this relationship was negative; increasing the time available actually decreases senior travel frequency. According to Cooper et al. (2007), this result could stem from the subjective nature of this variable and the influences of other variables, such as age. As the age of the person increases, so does the self-perceived time available for travel, due mainly to the absence of workloads and family burdens, but travel frequency also decreases, mainly for age-associated health reasons. This explanation 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 a primary barrier to travel among younger seniors, whereas our results indicate that these seniors are precisely the ones who travel the most frequently.

5. Conclusions

Seniors are increasingly important to the tourism industry, and particularly to the travel industry, considering that they exhibit very high travel frequency. This study has analyzed the determinants of senior travel frequency by testing the variables that largely regulate their travel participation. However, the variables that determine senior travel are not the same ones that influence travel frequency, nor do they behave in the same manner. This finding is consistent with previous research that indicates adult women travel more frequently than men, which relates positively to self-perceived economic status but negatively to self-perceived time available (see Alegre et al., 2009). Our findings also confirm heterogeneity in the behavior of seniors, in their role as consumers of goods and tourism services, as also noted by Javalgi, Thomas, and Rao (1992), Ryan and Trauer (2005), Schröder and Widmann (2007), Van Den Berg et al. (2011), and Wu (2003).

Our results imply several insights about this sector. First, in terms of gender, the travel industry must adapt to appeal to adult women, whose travel frequency is significantly greater than that of adult men. This target market traditionally has been important to the tourism industry, given the longer life expectancies of women and the increased desire to travel exhibited by new generations of adult women. The female population continues to be the main beneficiary of increased life expectancies, and women significantly outnumber men in older age groups (Patterson, 2006; Richter, 2005). The generations of women currently reaching maturity have more training and economic independence, as a result of their greater rates of participation in the labor market, so their

involvement in leisure activities and tourism is greater than that of previous generations too (Oh, Parks, & DeMicco, 2002; Patterson, 2006; Ryan & Trauer, 2005). Ryan and Trauer (2005) note the growing trend of adult women who travel alone, a segment to which the tourism sector must adapt. Similarly, Patterson (2006) and Ryan and Trauer (2005) suggest the tourism industry should pay more attention to safety matters, which represent primary demands for female, senior tourists.

In terms of self-perceived economic status, the travel industry should promote inexpensive trips among seniors to increase their travel volume throughout the year. Nyaupane et al. (2008) suggest that public or private investments might help subsidize senior travel, through so-called social tourism. Such programs would make it easier for people with modest incomes to access leisure and tourism and also increase their chances of traveling. In turn, the improved flow of travelers throughout the year may generate economic benefits for the travel industry. In Spain, trips subsidized by the public sector specifically target the senior population, in the form of IMSERSO programs. Similar programs have served to reduce demand seasonality and generate profits for the tourism industry, as well as important sources of revenue for the state (Price Waterhouse, Social World, Aeca, Zontur, Anet, Emer-GfK, Imserso, 1997). However, new models of these types of trips are required, because as Chen and Shoemaker (2014) caution, existing trip offerings may not be of interest to younger seniors.

Finally, in terms of self-perceived time available, it would be worthwhile for the tourism industry, and particularly operators that organize package tours for seniors, to offer shorter, more flexible trips to enable seniors with less time to travel more often (Fleischer et al., 2011). Low cost airlines, which already have helped increase travel frequency in recent years, also could beneficially target a senior market that consists mainly of women who are price sensitive and have little time available to travel. As Patterson (2006) highlights, adult women prefer to take shorter, more affordable trips, using readily accessible air travel, that are compatible with

sciences. To overcome this limitation, a longitudinal study would be necessary, a recommendation offered by other researchers studying senior tourism too (Chen & Shoemaker, 2014; Huh, 2006; Wang, 2005). Further research thus might try to capture any behavior-related changes across time at the moment they happen.

We did not account for whether seniors live in areas with greater access to transportation, which may increase their opportunities to travel more frequently, according to Bernini and Cracolici (2015). Additional studies might determine if seniors with greater access to air transport, and especially to low cost airlines, travel more frequently than those whose place of residence hinders their access to this means of transport. Such an investigation could confirm whether the rise of low-cost airlines really has contributed to increasing senior travel frequency.

Finally, an important avenue for further research is to determine the correlation between senior travel frequency and certain of its features, such as length or expense, together with the main motivation for traveling. Dellaert, Ettema, and Lindh (1998) note that variables related to trip characteristics are interdependent, assuming the decisions about the same trip are not made independently of each other. In terms of travel motivation and its connection to travel frequency, that prior study sought to discover if work-related trips generated higher travel frequency among seniors, particularly those still active in the labor market. Such trips (offered in low seasons) represent deseasonalized demand (Mochón, 2008), which is less elastic than the demand for leisure travel (OECD, 2014). Therefore, this type of trip is particularly relevant for the travel industry, considering the high percentage of seniors traveling for this reason, according to Blazey (1992) and Collins and Tisdell (2002).

Appendix. Descriptive statistics

a. Ordinal variables

	Minimum	Maximum	Mean	Standard 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	3025	8649	4585.3	1169.82	0.837	0.129	0.271	0.257
Household size	1	8	2.20	1015	1854	0.129	6144	0.257
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							

their family responsibilities.

In addition to these insights, this study entails several limitations, such as those related to the setting. Spain's current economic situation, and particularly its battered labor market, create a unique study context. Alegre, Mateo, and Pou (2013) suggest that Spain's high unemployment rate offers an explanatory variable for the travel participation and expenditure decisions of Spaniards. Households with an unemployed member or employment uncertainty significantly reduced their participation in and spending on tourism during 2006–2010. Pensioners in Spain also have become a mainstay of families affected by unemployment (Laparra & Pérez, 2012), which may lead to the existence of "hidden" market segments.

As Wooldridge (2006) cautions, the predictive ability of cross-sectional studies, such as this one, also is limited, even though cross-sectional data are widely used in economics and other social

b. Categorical variables

		Frequency	Percentage
Gender	Man	155	43.3
	Woman	203	56.7
Type of household/ home	Single person	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		

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