

Steady tourists' relation with a mature destination

The case of Portugal

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Abstract

This paper aims to assess how the last-visit features and the socio-demographic profile of tourists moderate the repeat-visit patterns of tourists with Portugal, a mature destination where the persistence of loyal visitors has made its mark on the patterns of tourism development. The methodology followed is a survival analysis to assess the repeating patterns of the tourists. To test the model, a database of 4,612 observations obtained from a survey among international tourists was employed. Only repeat visitors with more than two visits over the years were considered for the purpose of this research. Furthermore, this research found that the combination of socio-demographics, expectation/satisfaction, trip purposes, pull motivations and regional destinations has a positive effect on the tourists' repeating patterns, confirming that tourists' willingness to repeat their visits to Portugal is far from ceasing. Based on repeat tourists in Portugal who declared when they started to visit Portugal, and the number of years of their repeat visits, this paper contributes to the literature by introducing new methods of assessing the tourists' repeating patterns with destinations.

Key-words - *Survival analysis, Demand, Repeat visitation, Tourists' life cycle, Portugal*

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Introduction

Repeat visits and improving the life cycle of a destination are two increasingly researched topics in tourism literature (Oppermann 2000; Salmasi, Celidoni, and Procidano, 2012). Research about repeat visits tends to concentrate on the decision-making process, habits, inertia and familiarity, among others, extensively highlighted in the literature as the reasons that are drivers of repeat visits (Oppermann, 2000). While repeat visits have received considerable attention in the tourism literature, an understanding of repeat behaviour patterns was limited due the systematic use of behavioural intentions as a proxy of repeat visits patterns (Correia, Zins and Silva, 2015).

Sun and sand tourism destinations tend to exceed tourism life cycle patterns, as the consequence of the development of these destinations rely on tourists seeing these destinations as their second home, and as such, they tend to go there on a yearly basis, buying second homes with the intention of moving there once retired (Godbey and Bevins, 1987; Alegre and Cladera, 2006), suggesting a tourism area life cycle that is everlasting.

The most common theory that supports the life cycle approach in tourism is the Tourism Area Life Cycle (TALC) developed by Butler (1980). Butler's model comprises 6 stages where an everlasting relation is not possible, and only rejuvenation may bring a new market demand dynamic to destinations (Douglas, 1997). Aguiló, Alegre and Sard (2005), opened a new discussion suggesting that old tourists may become new tourists with some improvements on the supply side. Further, Almeida and Correia (2010) also found the decline of market demand as the most obvious outcome for a destination after a certain period of growth. Research relies mostly on panel data analysis where the very nature of repeat visitors is impossible to depict (Lundtorp and Wanhill, 2001).

There is a plethora of evidence and the insights of Strapp (1988), Baum (1998), Lundtorp and Wanhill (2001; 2006), Almeida, Ferreira and Costa (2010), among others, are relevant, positing that in certain destinations the relation with the tourism place might be everlasting. There is also an absence of an approach where repeat visitors' life cycle may be understood, which gives rise to this research, aiming to understand the longstanding behaviour of those tourists based on the duration of their destination visitation patterns, ensuring the resurgence of survival models in the literature, as its first original form was to predict life expectancy. Survival analysis has been applied in tourism to explain/predict the length of stay (among others, Crouch, 1995; Lim, 1997; Song and Li, 2008), but never to explain the tourists' repeating patterns duration with a particular destination.

The steady repeat visitation patterns in Portugal, where more than 60 out of 100 tourists (Correia and Pimpão, 2012) repeat visits to the destination over a long period of time, justifies the contextual setting where this research was developed – although these features are perceived in other destinations (Alegre and Cladera, 2006; Aguiló, Alegre and Sard, 2005; among others) – which aims to explain and predict tourists' relation with Portugal.

The present research contributes to the resurgence of survival models as they were originally formulated – to predict life cycle events. Furthermore the paper offers a new perspective on loyalty based on repeat visiting patterns. Theoretically speaking, this research is grounded in the Duration of Tourists' life cycle (DTLC), which is the number of times (e.g. years) that a tourist repeats a visit within a particular destination (e.g. number of years that a tourist visited a particular destination), and Tourists' Repeat Behavioural Patterns (TRBP), another contribution that has failed to be considered in past literature.

To conduct this analysis, section 2 reviews the literature on the topic, section 3

describes the methodology and sections 4 and 5 present the results and conclusions, respectively.

Tourists' Repeat Behavioural Patterns (TRBP)

Frequency as a proxy of repeat visitation patterns is grounded on Ehrenberg's (1955) repeat-buying theory, which states that this behaviour can be explained by panel data about market share and average purchase frequency, throughout a Poisson distribution with a certain long-run average. Despite the assumed correlation between loyalty and frequency it is not clear when and how frequency may be assumed as a proxy of loyalty (Jacoby, 1971). Despite the importance of Ehrenberg's findings, the applicability of this to tourism is still unclear.

The frequency of purchase may be explained by inertia or because the consumer is fond on the brand (Dick and Basu, 1994). The first has been connoted as spurious loyalty, whereas commitment to the brand is true loyalty. As such it may be assumed that frequency of repeat visits to a destination does not allow a distinction between spurious and true loyal tourists. Correia *et al.* (2015) show that recency, frequency, monetary value and satisfaction explain the frequency of repeat visitations to a destination. Further it has been assumed that repeat visitation follows a behavioural pattern (Woodside and MacDonald, 1994) like other decisions and this pattern should be explained in life cycle behaviour. In the same vein, Jang and Feng (2007) used TRBP (Tourists repeat behavioural patterns) tourist segmentation to explain frequency of revisit. The authors conclude that revisit patterns and brand loyalty rely on involvement with the brand, with involvement recency perceived as the steady revisit pattern over the years. As such, this research assumes that the first step to understanding loyalty patterns is by depicting the duration of the tourists' life cycle in

a destination, this duration being a proxy of the tourists' involvement with the destination.

Duration starts to be modelled by means of survival models, mostly in mortality of human beings; more concretely it is expected to estimate and explain life expectancy (Aalen, Anderson, Borgan and Keiding, 2009). The tourism literature evidences a lack of studies that include survival models and indeed a non-existence with regards to the duration of relation with a destination. Almost all research has considered length of stay as the most common dependent variable (Gokovali *et al*, 2007, Barros *et al* , 2008; 2010, Menezes *et al*, 2008, Peypoch *et al*, 2012, among others). The application of survival models in other contexts is very limited. Hong and Jang (2005) apply survival models to predict the duration of visits to a casino. Further, Falk (2013) conducted a study in order to investigate the factors influencing the survival of ski-lift operators in Austria. It is under this thought-provoking framework that our research arose, aiming to determine the duration of tourists' life cycle in a destination by means of a survival model that proves its superiority to estimate life duration in other fields. Furthermore, the level of involvement measured by the tourists' life cycle is a step towards understanding the loyalty formation process.

Despite the existence of a tourist life cycle, the revisit behaviour process implies a new decision process, which might be based around other factors: tourists past visit experience; individuals' life-span; and family life cycle.

Consequently, such previous theoretical insights support a further analysis about the relation between the duration of relation and repeat visitation patterns of international tourism demand in Portugal.

Following Thrane's suggestion (2012), in order to explain the effect of tourists' repeating visit patterns with Portugal and considering the hazard event, for each passing year of visit of a tourist in the data facing a certain risk of probability of repeating their visit, both

Poisson and Survival regressions are estimated (Thrane, 2012). The fundamentals of the research design are presented in the following section.

Methodology and the empirical model

The duration of the tourists' relation was measured by the number of years; this relation lasts since its very beginning and is adopted as the duration of relation with Portugal. It was analysed with survival models and with a Poisson regression analysis. To test the model, a database of 4,612 observations, obtained from a survey among international repeat tourists was employed. Data were collected during the whole of 2012 in all Portuguese airports. The general characteristics of the respondents were that they are repeat international tourists who have travelled to Portugal in at least two successive years, with the main purpose of leisure/holiday (85.7%) and with a considerable degree of return intention (87%). These tourists present a very steady relation with Portugal that lasts 30 years on average, with an average frequency of 19 visits. Figure 1 relates the year of the first visit with the average frequency of visit within the time frame they declared for their visits to Portugal. The cycle is more than evident: the early visitors are the ones with the highest yearly frequency of revisit, and considering that these tourists present a very high probability of intention to return (87%) the next year, it seems that this relation is set to last forever.

(INSERT FIGURE 1)

Considering trip and socio-demographic characteristics, these tourists hold higher academic qualifications (66.4%), they have an average age of 40 years, are frequent travellers (3.19 trips per year), and intend to keep on visiting Portugal every year (return intention of 87%). Their last visit to Portugal involved 9.15 nights at the destination, suggesting that despite the number of their visits, Portugal still has

something to offer. Other characteristics of the sample are presented in Table 1 and Table 2.

(INSERT TABLE 1 AND TABLE 2)

Survival models, commonly known as duration models, are statistical methods for analysing longitudinal data on the occurrence of events. According to Kleinbaum and Klein (2012, p. 4) ‘survival analysis is a collection of statistical procedures for data analysis for which the outcome variable of interest is time until an event occurs’.

For this model, the hazard is specified as:

$$h(t, \mathbf{X}) = h_0(t) \exp\left[\sum_{i=1}^p \beta_i X_i\right] \quad (1)$$

where: $X = (X_1, X_2, \dots, X_p)$ are the explanatory/predictor variables. $h_0(t)$ is the baseline hazard and exponential of the sum of β_i and X_i .

The parameters are estimated using Cox likelihood given by:

$$L(\boldsymbol{\beta}) = \prod_{j=1}^k \frac{\exp(\sum_{i=1}^p \beta_i X_{[j]i})}{\sum_{t \in R(t; j)} \exp(\sum_{i=1}^p \beta_i X_{ti})} \quad (2)$$

where \mathcal{L} is partial likelihood.

Models are estimated using maximum likelihood (Wooldridge, 2002).

For the appropriate use of survival models in tourism, the three econometric issues suggested by Thrane (2012) were taken into account. A first concern is related to the properties of the data-set; data censoring and heterogeneity of the population. A second issue is related to the justification about choice of the distributional form of the survival/hazard function. A last but not less important concern is related to the clear reading of the magnitude of reported effects of survival analysis when compared with a Poisson regression model (which will be estimated apart from a survival regression). Following these assumptions suggested by Thrane (2012), if the data-set is cross-sectional data, no censored-data is confirmed; if no-time-invariant of the

dependent variables is identified and the proportional-hazard assumption is not met, 'the most feasible multivariate models is the Cox model through an OLS regression mode (...)' (Thrane, 2012, p.132). For the present research, the Poisson regression model was adopted, because of the count-data nature of the dependent variable (duration of tourists relation with destination).

Results and analysis

Tourists who visited Portugal in 2012 were asked how many years they had been visiting Portugal before and when this relation had started. This past trip frequency is based on the utility that the tourist receives on previous visits and can be explained by several factors. Thus, the utility underlying the destination choice follows the next hypotheses. Table 1 outlines the explanatory variables that justify the research hypothesis that supports this research.

(INSERT TABLE 3)

In order to test the hypotheses outlined above (see Table 3), we utilized survival models and a Poisson regression model to compare the performance of each (Hosmer and Lemeshow, 2008; Kleinbaum and Klein, 2012).

Table 3 presents the results of the estimated survival regression model. The dependent variable is the logarithm of the duration of relation with Portugal, measured in years, of tourists travelling to Portugal more than two times consecutively. The log-likelihood value of the estimated Cox model is -34,347.895 and the overall fit of the model is good with a Chi-square statistic value of 421.61 for 22 degrees of freedom and a level of significance of $p=0.000$ due the sample size. Concerning the estimation of the Poisson model, we confirmed that the dependent variable follows a Poisson distribution using a Kolmogorov–Smirnov test with Lilliefors correction (32.324, $p=0.000$). The log-likelihood value of the estimated Poisson model is -20,538.2 and

the overall fit of the model is good with a Chi-square statistic value of 2,306.89 for 19 degrees of freedom and a level of significance of 0.000 due to the sample size. Results also evidence a pseudo- $R^2 = 0.054$. Marginal effects (ME) were also computed. ME represent the change in the probability of an observation of being classified in each specific category of the dependent variable, according to the values of the predictors. The list of the independent variables, the respective coefficient, parameter significance and marginal effects are also available in Table 4a and Table 4b.

(INSERT TABLE 4a & TABLE 4b)

The results across the two models demonstrate that the parameters have the same signs, with the exception of tourists from UK and IRELAND and the regional destinations of LISBON and AZORES. SATISFACTION variables are not significant in the Poisson model results. Following the recommendations of Thrane (2012), apart from the results obtained in the survival model, results provided by the Poisson regression analysis will be considered.

H1 was not rejected, as socio-demographic characteristics of tourists are positive and statistically significant. More concretely AGE is statistically significant with positive effects. However, COUNTRY OF RESIDENCE variables display as statistically significant with mixed effects. With regard to AGE this result suggests that middle-aged (between 31-50) and older (more than 51) tourists tend to extend the duration of their relation with the destination. These results are reinforced by marginal effects: an increase of 1.822 for the middle-age tourists and of 3.730 for the seniors suggests that senior tourists are more likely to extend their relation with Portugal, with a high duration pattern, a result that is in accordance with previous research of (Correia *et al*, 2015), reinforcing that the tendency of Portugal is to become a potential residential tourism country among seniors. COUNTRY OF RESIDENCE increases the duration

of tourists' relation with Portugal, mainly within the international markets, essentially France, Sweden, Finland and Canada. Marginal effects evidence a strong involvement with the destination of new markets, such as, Canada (me=7.802), Finland (me=4.107) and Sweden (me=1.788), suggesting that retaining tourists is an issue that does not stand only in traditional markets. In the case of FRANCE results are reinforced by marginal effects: an increase of 3.043 for this market suggests that they are more likely to extend their relation with Portugal than the other two traditional international markets (for example, UK and IRELAND). The negative coefficient for the traditional international markets (UK and IRELAND), suggests that these markets tend to shorten the duration of their relation with Portugal. This result is reinforced by marginal effects: a decrease of -1.418 for UK tourists and of -2.894 for the IRISH tourists, suggests that traditional tourists are about to cease their relation with the destination, as previously suggested by Correia *et al* (2015), whereas new markets potentiate loyal tourism.

H2 was not rejected as TRIP PURPOSE has a positive effect on the hazard, which means that the duration of tourists' relation with Portugal tends to increase when they are travelling for leisure purposes, increasing further when tourists are likely to VISIT FRIENDS AND RELATIVES (VFR). This result is reinforced by marginal effects: an increase of 1.419 for travel under this purpose suggests that tourists are more likely to extend the duration of their relation with Portugal. This result also suggests that involvement with the destination relies mostly on social (family and friends) and emotional (leisure) features of the trip.

H3 was also not rejected as EXPECTATIONS degrees of tourists are positive and statistically significant. With regard to EXPECTATIONS, this result suggests that tourists with low expectations tend to extend the duration of their relation with the destination. Marginal effects reinforce these results: 1.425 for tourists with low

expectations suggests that these are more likely to extend their duration of relation with Portugal; this result suggests that the surprise effect is more likely to retain tourists (Baloglu, 2001). Concerning the SATISFACTION variable, it is also positive and statistically significant in the Cox model. Thus, results suggest that tourists that were very satisfied with their visit tend to extend their duration of relation with Portugal. As it is evidenced throughout marginal effects, increases of 0.324 in their satisfaction degree suggest that very satisfied tourists promote a long, steady relation with the destination, which is not surprising considering the previous literature about satisfaction and loyalty (Kozak, 2001, among others).

H4 was also not rejected as travel companion (FAMILY) has a positive effect on the duration of relation with Portugal. This result suggests that tourists who travel with their family tend to extend the duration of relation with Portugal. Marginal effects support this result: an increase of 1.039 for travel with family, suggests that these traditional dependable tourist profiles tend to extend their relation with Portugal, in accordance with Aguiló *et al* (2005) who proved that family tourists are the most steady market in the Balearic Islands.

As hypothesized (H5), the variable PULL MOTIVATIONS (BEACHES) has a positive effect on the hazard, which means that the duration of tourists' relation with Portugal tends to increase when they value the attribute of beaches. Marginal effects reinforced this outcome: an increase of 0.008 under this motivation tends to extend their relation with Portugal, suggesting that sun and sea tourists are more likely to extend the duration of their relation with Portugal.

Conclusion and implications

The aim of this study was to analyse the duration of tourists' life cycle with Portugal. As was underlined, the destination seems to evidence growing patterns from international tourism demand, and tourists' life cycle revealed a steady growth pattern. Both a survival model and Poisson model were used for the analysis in order to provide the duration of this relation (acting as the number of times an individual visits Portugal in their lifespan). Results have demonstrated that socio-demographics, tripographic characteristics (trip purpose and travel companion), pull motivations (beaches), expectation/satisfaction and regional destinations in Portugal are all controlling factors in the duration of tourists' relation with Portugal. From these results, several considerations emerge, particularly: the traditional international markets of Portugal, such as the United Kingdom and Ireland seems to set a mature stage at the destination evidencing some decreasing patterns in their relation with the destination. Instead of that, a few mature markets (for instance France) and emerging markets (for example Sweden, Finland and Canada) seem to gain a repeat-buying behaviour for their relation with Portugal as a country for their holidays; older tourists tend to prolong the duration of their duration with the destination, probably residential tourists, which is the most probable consequence of tourism in a mature destination. Further, these tourists are highly involved with Portugal, suggesting that information and maturity allowed them to make this the elected choice for their holidays. This result is even more evident when it is found that behavioural variables, such as expectations and satisfaction also reveal positive effects. Concerning the results of pull factors, essentially beaches, the importance of Portugal's "Sun and Sea" core product is revealed to increase the relation of duration with destination. This conclusion meets some remarks highlighted by Aguiló *et al* (2005), since demands for the new sun and sand tourists do not differ as much from "old tourists".

This research has some limitations that open paths for further research. Methodologically this research is not longitudinal as recommended by Thrane (2012), but is based on one single destination and applied to international tourists. Future research should be developed on a longitudinal basis as suggested by the author.

Results also suggest that further research should include other variables to make clear some relations, such as behavioural intentions, experiences, and residence, among others.

Strategic implications

Overall it may be concluded that Portugal is far from a stagnation stage concerning tourists' duration of relation with the destination. The positive relation between duration of relation and expectation/satisfaction suggests that despite the number of revisits and the long history of involvement with Portugal, this relation is not set to cease in the near future, and comparing this result with tripographic characteristics and pull motivations (beach), leads us to the conclusion that the natural consequence of mature touristic relations is residential tourism and new forms of sun and sea tourism. Despite the optimism the results provide, in accordance with duration of tourists' relation, it is time to potentiate new markets and product innovation.

The first recommendation is grounded on the announced dependence of the traditional markets, and in fact this long-lasting relation will end soon, regarding the 30 years of successive visits.

Product innovation anticipates the announced stagnation of tourists' life cycle and their intentions. Residential tourism, sea tourism, health care and wellness tourism are some of the trending ways to capture and retain tourists.

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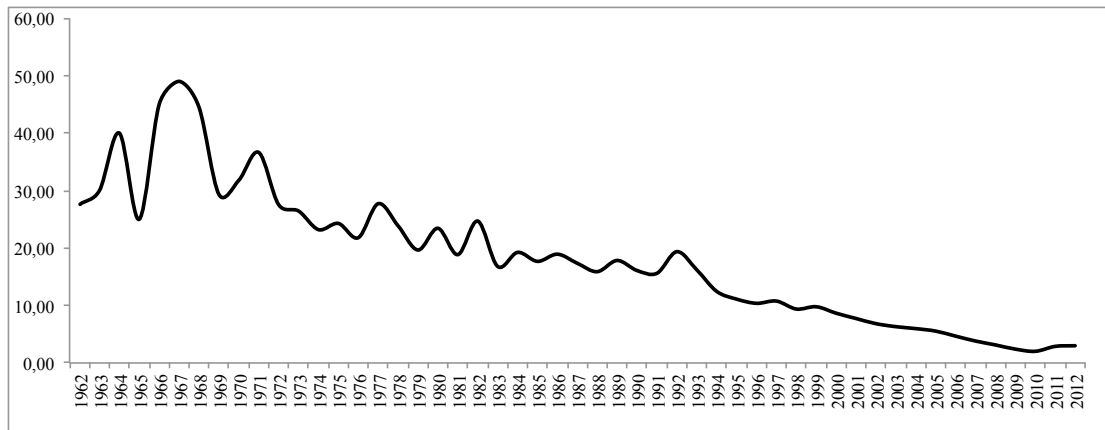
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Figure 1. Year of first visit by yearly average frequency of revisit



Source: Authors' elaboration

Table 1. Characterization of the sample

Variable	%
Nationalities	
Germany	35.5
United Kingdom	18.4
France	7.3
Belgium	4.0
Others	34.6
Age	
< 30	28.7
31 - 50	48.7
> 51	21.7
Education	
Elementary	3.1
Secondary	21.6
University	47.1
Pos-graduate	19.2
Other	2.9
Travel frequency	
1	23.9
2	32.8
> 3	43.3
Travel purpose	
Leisure	81.9
Business	2.5
Visit Friends and relatives	15.6
Intention to return	
No	3.2
I don't know	3.6
Maybe	28.6
Yes	57.3
Expectations	
Worse than expected	25.0
Exactly as expected	31.1
Better than expected	43.9
TOTAL (N)	4612

Source: Authors' elaboration

Table 2 – Characterization of the sample

	Length of stay	Travel frequency	Advanced booking	Age
N	4612	4612	4612	4612
Mean	9,15	3,19	54,69	40,59
Std. Deviation	6,405	,797	68,020	14,405
Minimum	1	2	0	18
Maximum	70	4	365	99

Source: Authors' elaboration

Table 3 - Hypothesis and explanatory variables

Variables	Authors (a)	Hypothesis
Socio-demographic	Niininen and Riley (1998)	H1
Trip Purposes		H2
Expectations and overall satisfaction	Kozak (2001); Oliver (1980); Correia <i>et al</i> (2013)	H3
Travel companion	Plog (1974)	H4
Pull motivations	Yoon and Uysal (2005); Huang and Hsu (2009)	H5
<i>(a) among others</i>		