

4. Ensaios: Determinants of rural tourists' travel expenditures in North Portugal²

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I. Introduction.

Increasingly, rural tourism is considered an alternative tourism form in Portugal, a country that attracts international visitors mainly due to the Algarve's "sun and sea" product, the culturally attractive capital Lisbon, and by the unique and naturally appealing island of Madeira. Several authors have identified the country's potential as a rural tourism destination, with the recent development of family-owned, typical and frequently architectonically and historically most interesting manor and country houses as tourist accommodation contributing to the country's increasing appeal (Cavaco, 1995; Kastenholz, 2002). Particularly North Portugal has succeeded in attracting growing numbers of domestic and international travellers (Edwards and Fernandes, 1999; Kastenholz, 2002). These tourist flows may produce significant impacts on the local and regional economies at stake, marked by rural exodus and social and economic marginalization, with tourism sometimes being (exaggeratedly) perceived as the only chance left for rural populations to survive and prosper (Ribeiro, 2003). However, it is particularly in this context that an understanding of the market, its profile, behaviour and spending patterns is most relevant for a rural destination to be able to correctly address it, define the most interesting target market and design the complex tourism product in a way most appealing and satisfactory to this market.

This article starts with a review of previous studies on visitor spending in tourism. It presents next results of a large-scale study of the rural tourist market visiting North Portugal, particularly analysing determinants of visitor spending with multiple regression analysis. In light of these results, implications on destination marketing are discussed.

II. Visitor spending in tourism.

Tourists' visitor spending is one of the most critical variables of analysis for tourist destinations, since they directly determine the tourism sector's profitability. In a paper reviewing tourism expenditure research (on the macro level), Sheldon (1990) identified as the three most typically used determinants in these models: the level of income in the tourist generating country, the price level at the destination country, compared with the price level at the tourist generating country.

On the micro-level, individual tourist expenditure levels have been studied as dependent upon socio-demographics, professional status and available income (Seiler *et al.*, 2002, Jang *et al.*, 2004; Cannon and Ford, 2002; Downward and Lumsdon, 2003). Cannon and Ford (2002) demonstrated that spending patterns were also related to the visitors' place of residence and to the fact of children being in the travel party. Also travel purpose revealed significant impacts, with business travel identified as related to highest spending patterns (Sakai, 1988). Specific leisure travel motives (e.g. nature, culture, sun and beach tourism) or benefits sought have rarely been studied in this context. However, a recent study of tourist expenditure levels in the Portuguese Central Region revealed that culturally interested tourists tended to spend relatively more than other tourist groups (Eusébio, 2005). Group size (Downward and Lumsdon, 2003) and duration of stay was shown to be positively correlated to overall expenditure levels (Seiler *et al.*,

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2002; Downward and Lumsdon, 2003; Jang et al., 2004). Downward and Lumsdon's (2003) study demonstrated, on the other hand, that decreased spending per day was related to longer duration. Jang et al. (2004) showed that first time visitors spent more than repeat visitors, although in this context the overall benefit of repeat visits should not be neglected.

From the destination's point of view, the visitors' spending behavior at the destination is of particular interest, but has not frequently been studied (Downward and Lumsdon, 2003). In this article this on-site spending is chosen as the dependent variable, being most important for identifying tourist segments and travel contexts that actually contribute most to the economic impact of tourism at the rural destination.

III. A survey of the rural tourism market in North Portugal

The data used for studying determinants of destination loyalty was collected in a one-year survey undertaken between 1998 and 1999, directed at tourists staying in rural areas in North Portugal, which yielded a total of 2280 valid responses. The main objective of the survey was the identification of the tourists' profile, their tourist behavior and their image of North Portugal as a rural tourist destination (Kastenholz, 2002).

Data collection was planned to lead to an approximately representative sample of leisure tourists staying in rural areas in Northern Portugal for holiday purposes. The carefully chosen cluster-sampling procedure, at diverse tourist attraction sites in the region, at different points in time, the very assertive approach of directly interviewing about 88 percent of the tourists encountered in these circumstances, and the global number of valid responses obtained sustains this assumption. The sample was controlled for a balanced spread between the rural sub-regions Minho, Douro and Trás-os-Montes, high and low season and the national versus foreign tourist market. Most important foreign nationalities were the German (20 %), British (15.4 %), French (14.4 %), Dutch (10.4 %) and Spanish (9 %) markets. Respondents tended slightly to the younger age ranges and higher educational levels. They revealed a high propensity of traveling and visiting the countryside for a holiday.

IV. Analyzing determinants of visitor spending with multiple regression

Potential determinants of individual daily expenditure levels at the destination, measured on ten intervals, were analyzed based on a multiple regression model. Specifically, daily expenditure per person is used as the dependent variable and motivational factors (resulting from a Principal Components Analysis of importance attributed to 25 selected destination attributes), age, educational level, length of stay, number of prior visits, nationality group (foreign versus domestic tourists), tourist season (high versus low) are used as independent variables. The two last mentioned independent variables enter the equation as "dummy variables", whereas all other represent ordinal or interval variables.

The six motivational components or factors of benefits sought resulted from a *Principal Components Analysis* (PCA) of perceptive ratings of 25 destination attributes, assessed through 5-point Likert-type scales, revealing reasonable values of internal consistency (Hair *et al.*, 1998: 118). Missing values were excluded from analysis and Varimax rotation was applied in order to improve the interpretability of components. Both, inspection of the scree-plot and Kaiser's criterion were considered for component-extraction. The summarized results of the PCA are: KMO = 0.876; Bartlett's test of Sphericity: approximated chi-square = 11242,860, sign.= 0.000; all communalities are above 0.46; all variables with factor-loadings above 0.5; the measures of sampling adequacy of all variables are above 0.77; 68 percent of the residuals between observed and reproduced correlation have an absolute value below 0.05; 57 percent of total variance is explained by six factors:

- 1) Information and Access: sign-posting, tourist information, accessibility, professional service, infrastructures, ease of communication (13.2% variance explained, alpha=0.82);
- 2) Nature: peace and quiet, closeness to nature, isolation, walking paths, rural life, unpolluted environment (10.8% variance explained, alpha=0.82);
- 3) Action/ Fun/ Socializing: sports and recreation, nightlife, opportunities for children, socializing, variety of attractions (10.4% variance explained, alpha=0.74);
- 4) Basics: climate, sympathy of population, price, scenery (9.3% variance explained, alpha=0.64);
- 5) History and Culture: history and culture, architecture and monuments (7.4% variance explained, alpha=0.72);
- 6) Tourist Infrastructures: gastronomy, accommodation (5.9% variance explained, alpha=0.61);

Resulting factor scores were introduced in the regression model, permitting the least possible colinearity amongst these variables, due to the orthogonality of principal components. Tolerance values were all situated above the acceptable minimum of 0.1 (Pestana and Gageiro, 1998: 408-409). Still, it was considered desirable to minimize multicollinearity by eliminating the variable “number of prior visits” from the model, improving tolerance values considerably. Obviously, the before identified correlation must be considered when interpreting the model.

A stepwise regression procedure was used to highlight those variables that most contribute to the model. The model used in this research may be specified in the following way:

$$y_i = b_0 + b_1x_{i1} + \dots + b_px_{ip} + e_i, \text{ where}$$

- y_i is the value of the i^{th} case of the dependent scale variable,
- p is the number of predictors,
- b_j is the value of the j^{th} coefficient, $j = 0, \dots, p$,
- x_{ij} is the value of the i^{th} case of the j^{th} predictor,
- e_i is the error in the observed value for the i^{th} case,

with y corresponding to the individual daily expenditure level per person and the different x values corresponding to the independent variables inserted (age, educational level, nationality group, tourist season, length of stay and the six motivational factors).

The final model was obtained after eight steps, with the final model explaining 13.3% of the total variance in individual expenditure levels, which is not impressive, but statistically significant, as visible in the F test for the final model ($F=14.87645$; $Sig=0.000$). The variables entered into the model as significantly contributing to the explanation of the dependent variable are shown in table 1, where each variable’s standardized beta coefficient permits a conclusion about each determinant’s relative contribution.

Model 8	Unstandardized Coefficients		Stand. Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Beta	Zero-order	Partial	Part	Tolerance
(Constant)	5.083	0.321		15.823	0.000					
importance food& lodging	0.392	0.081	0.168	4.825	0.000	0.182	0.177	0.167	0.981	1.020
foreign	0.590	0.189	0.117	3.123	0.002	0.112	0.116	0.108	0.850	1.177
age	0.191	0.067	0.111	2.846	0.005	0.227	0.106	0.098	0.785	1.274
importance information	0.256	0.086	0.106	2.984	0.003	0.117	0.111	0.103	0.950	1.052
importance history & culture	0.204	0.082	0.087	2.480	0.013	0.123	0.092	0.086	0.966	1.035
high season	-0.398	0.178	-0.082	-2.242	0.025	-0.151	-0.083	-0.077	0.903	1.107
importance fun	-0.247	0.093	-0.103	-2.663	0.008	-0.195	-0.099	-0.092	0.794	1.260
duration of stay	-0.021	0.006	-0.125	-3.528	0.000	-0.141	-0.131	-0.122	0.954	1.048
Dependent Variable: daily expenditures										

Table 1. Regression coefficients of the final model explaining daily expenditure levels and collinearity statistics

However, apart from the daily expenditure levels, also the overall expenditure levels are of interest. As explained before, expenditure levels were assessed as intervals and duration of stay as a numerical variable. For an estimation of total expenditure levels a mean value within each interval (and an assumed

minimum and maximum value for the extremes) was multiplied with the number of days stayed in the region. The resulting value was now entered as the dependent variable in a regression model with the same independent values, used before. The model, resulting from a stepwise regression procedure was obtained after seven steps, explains a total of 44.1% of the variance in total expenditure, which is quite reasonable and statistically significant ($F= 77.48$, $sig= 0.000$), with multicollinearity not being a problem (see table 2).

Coefficients	Unstandardized Coefficients		Stand. Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Beta	Zero-order	Partial	Part	Tolerance
(Constant)	-3630,590	5795,208		-0,626	0,531					
duration of stay	3243,059	159,056	0,592	20,389	0,000	0,609	0,619	0,585	0,977	1,024
foreign	19167,798	3675,246	0,161	5,215	0,000	0,263	0,197	0,150	0,862	1,160
age	3650,901	1280,674	0,090	2,851	0,004	0,159	0,109	0,082	0,830	1,205
imp. Information	4878,267	1685,767	0,085	2,894	0,004	0,071	0,111	0,083	0,952	1,051
imp. food & lodging	4075,686	1588,195	0,074	2,566	0,010	0,065	0,099	0,074	0,981	1,019
imp. fun	-4814,065	1815,436	-0,085	-2,652	0,008	-0,163	-0,102	-0,076	0,805	1,242
imp.history&culture	3661,879	1595,550	0,067	2,295	0,022	0,069	0,088	0,066	0,977	1,023

Dependent Variable: total_exp

Table 2. Regression coefficients of the final model explaining total expenditure and collinearity statistics

The most relevant differences, when comparing with the first model, are slight differences in the order of importance of independent variables, the outstanding role of duration of stay, being positively correlated with total expenditure levels and the fact that season does not play a significant role in the last model.

V. Conclusions

The regression models revealed the most significant variables in determining tourists' expenditure levels in rural North Portugal. Results help identifying the economically most interesting market groups, as defined by these variables, but apart from the economic benefits aimed at, also sustainability objectives must be considered, leading to some less evident conclusions. Thus, the mature market, valuing good quality hospitality facilities, history and culture, as well as good quality tourist information is undoubtedly an interesting segment.

However, the focus on the apparently more interesting foreign tourist market may imply the need for higher investments, due to its lower accessibility, differences in language, culture, lifestyle, requiring a larger investment in market studies, communication and distribution efforts, with the mediation of foreign tour operators frequently decreasing the profitability of the business for the destination. On the other hand, the domestic market is particularly interesting due to its destination loyalty (foreign tourists had visited the region, on the average once before, whereas Portuguese had done so for 3.1 times). Probably, both markets should be considered, with the foreign market eventually more interesting for the high and the domestic market for more frequent repeat, eventually short-break visits in the low season. Destination managers would probably do well in using differentiated strategies in the high versus low season, trying to further increase duration of stay or to increase the number of short-break visits in the low season (with higher daily expenditure levels), in order to achieve an overall higher economic benefit.

The presented market analysis and critical interpretation of results, considering the consequences of choosing specific target markets, is fundamental for a destination's success in a highly competitive environment. In this context, strategic marketing planning is most important, especially for rural areas that invest in tourism development, frequently based upon a variety of small, traditional and dispersed family businesses, not disposing of relevant financial, technological nor human resources. These rural tourist destinations need to direct their efforts in an intelligent way, in order to optimize the use of scarce resources (Moutinho, 1991) and to simultaneously guarantee the destination's sustainable development, and thereby its attractiveness on the long run (Kastenholz, 2004).

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