



Expenditure pattern analysis of cultural tourists at World Heritage Sites: empirical evidence based on CHAID analysis

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Agenda

1. Introduction

1.1. Driving axioms to present research

1.2. Contextual setting

1.3. Objectives

2. Theoretical considerations

3. Methodology

4. Results

5. Conclusions



▣ **Axioms that drove this research:**

- ▣ **In the case of WHS (World Heritage Sites) destinations only a few studies have explored tourist expenditure patterns** (Amir, Osman, Bachok, and Ibrahim, 2016).
- ▣ **Visitors' expenditure patterns have proven to be a pertinent element** for a broader understanding of visitors' behaviour at cultural destinations (Jordana and Frleta, 2016, among others).
- ▣ **A number of studies have analysed tourist expenditure patterns, mainly in the context of sun and sea destinations** (e.g. Nicolau and Más, 2005; Qiu and Zhang, 1995; Wang and Davidson, 2010; Serra, Correia, and Rodrigues, 2015), but so far **few empirical studies are reported to WHS small historic towns**.
- ▣ **Literature on the determinants of micro-level tourism expenditure is expansive and growing** (Thrane, 2014).
- ▣ **Over the last 20 years, Évora has been subject to a fastest growing effect regarding tourism demand. Shifting patterns in expenditure tourists behaviour should be analysed.**

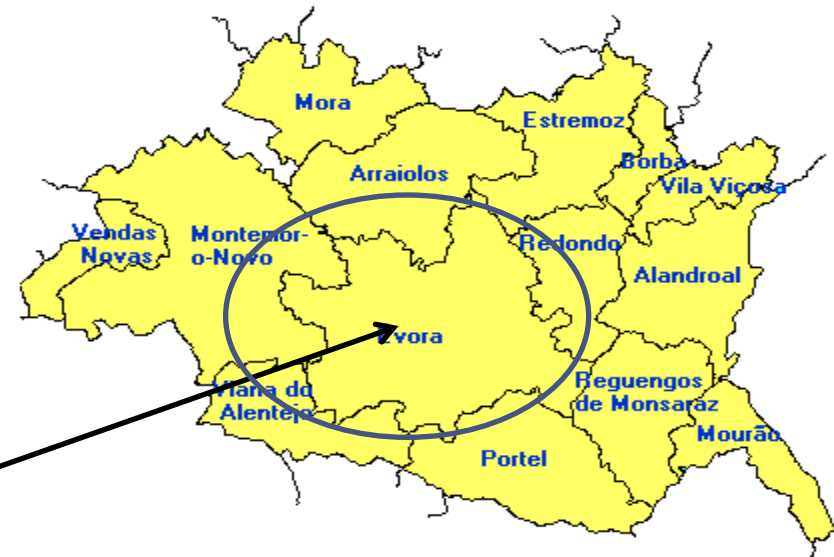
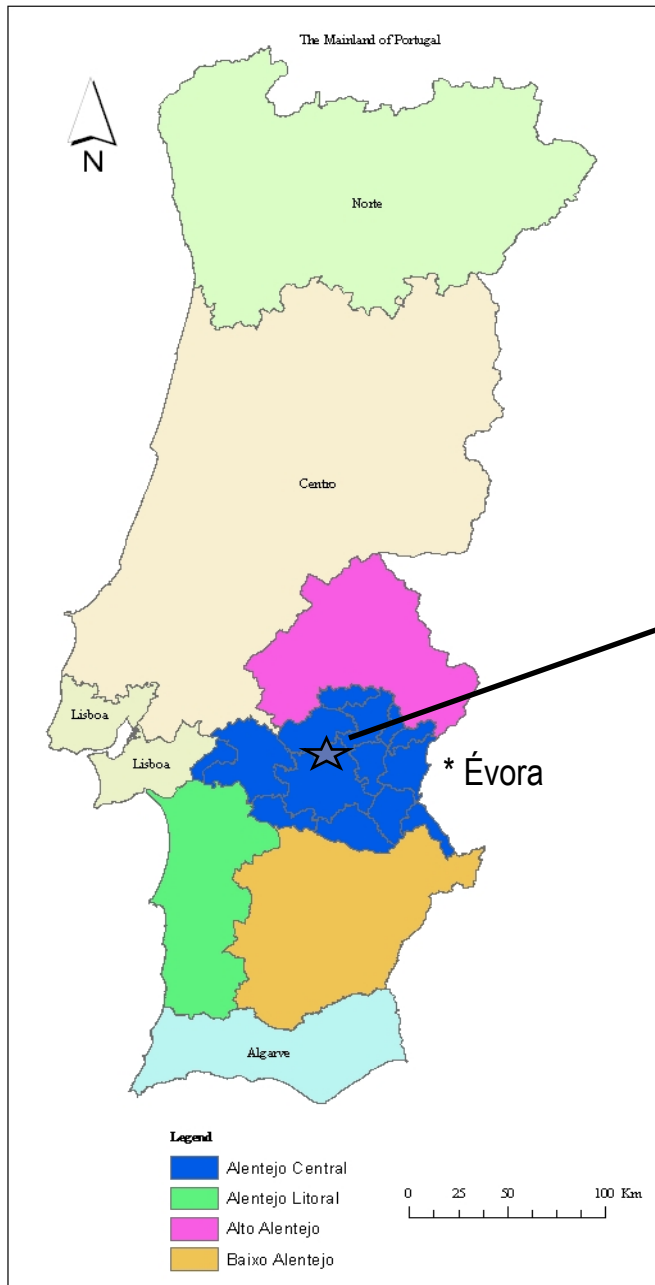
▣ **Therefore the aims of our research is:**

- ▣ Analyse tourists' expenditure patterns in the city of Évora, through a market segmentation perspective.

▣ **Additionally, with the present research we intend to accomplish the following specific objectives (SO):**

SO1 – to identify tourists' expenditure patterns at a WHS (small town) based on segmentation criteria.

SO2 - to compare, within the years studied, tourist profiles based on expenditure patterns in the city of Évora.



Alentejo Region

Resident Population= 733.370 inhabitants

Establishments = 412 (112 Hot. + RT/HT 195 + 105 LA)

Lodging capacity = 18.374 (11486 Hot. + 3528 RT/HT + 3360 LA)

Guests = 919.205

Évora

Resident Population= 54.271 (7,4%)

Establishments = 27 (14 Hot. + RT/HT 6 + 7 LA) (6,5%)

Lodging capacity = 2.282 (1 858 Hot. + 92 RT/HT + 332 LA) (12,4%) | Guests = 241.406 (26,2%)

Guests in Alentejo region and Évora (2014)

	Alentejo	Évora	% Évora/Alentejo
ALENTEJO	919,205	241,406	26,3
Domestic	643,147	115,524	18,0
International	276,058	125,882	45,6
Spain	59,528	16,670	13,2
Brazil	25,562	na	
Germany	24,613	10,084	41,0
France	38,710	17,527	45,3
The United Kingdom	17,229	5,081	29,5
USA	15,705	na	
The Netherlands	14,327	na	
Italy	11,006	na	
Belgium	9,410	na	

Source: Statistics Portugal (2015); Tourism Statistics (2015)

Note: Data cover the total of tourism accommodation and the hotel accommodation activity (hotels, apartment hotels, hostels, apartments and holiday villages), local accommodation and rural tourism and housing tourism, according to the current legislation of governing the sector.

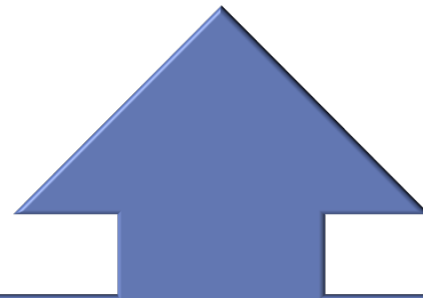
Due to the difference in time for the availability of data, there are cases where figures for guests are unavailable (na).



- Tourism literature highlights that **cultural visitors is a heterogeneous market with different characteristics and behaviour patterns** (Brida *et al*, 2013).
- *Travellers' expenditure belongs to objective specific criteria, related to the purchase and consumption behavior for a specific product* (Svensson, Moreno, and Martín, 2011:31).
- The segments obtained by means of expenditure-based segmentation fulfil the following requirements: **identifiability, measurability, substantiability, stability, accessibility and actionability** (Kotler, 2001; Picón, Varela, and Levy, 2004; Sarabia and Munuera, 1994; Svensson, Moreno, and Martín, 2011; Wedel and Kamakura, 1998).
- **Tourism literature reported a plethora of studies which have segmented visitors based on travel expenditures**, that is, to divide the tourists for a specific destination into different groups in terms of spending (Svensson, Moreno, and Martín, 2011; Serra, Correia and Rodrigues, 2015; among others).
- **Results of these studies indicate that travel expenditure is perfectly viable as a segmentation criterion** (Svensson, Moreno, and Martín, 2011).



Based on the recent literature, this research, through an exploratory perspective, based on the previous results gathered in 2010 and 2015, based on the expenditure patterns segmentation criteria of tourists in Évora...



intend to compare the profile of cultural tourists between the years of year 2010 **a recent survey (2015)** applied in the same city. **We adopted a segmentation-method (CHAID)** allowing us to find a **population classification in groups that is able to describe the dependent variable (average daily tourist expenditure).**

- ❑ Data was collected near the main cultural attractions in the city centre of Évora, between May and October in the 2010 and 2015 years.
- ❑ The survey was submitted only for **those visitors that had spent a minimum of half-day in the city**. In this way, the survey asked them to identify their intended average daily amount spent, which in fact is **the amount they are willing to pay during their stay in the destination**.
- ❑ A total of 451 surveys were collected in 2010, and 465 surveys were collected in 2015.
- ❑ Method: - Chi-squared Automatic Interaction Detection (CHAID) **was applied to model consumer patterns of visitors**, based on socio-demographic factors, trip characteristics, length of stay and the degree of satisfaction with destination attributes.
- ❑ CHAID allowed us to find a population classification in groups that is able to describe **the dependent variable, average daily tourist expenditure**.
- ❑ CHAID (Chi-square Automatic Interaction Detection) is more sophisticated than other multivariate analysis techniques (McCarty and Hastak 2007).



Table 1. Descriptive Statistics – Respondents profile

		Visitor Daily Expenditure		Overnights Évora		Overnights Portugal		Travel companion		Education		Professional Situation		Past visit	
Year		2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015	2010	2015
N	Valid	351	465	451	465	451	465	447	465	447	465	446	465	447	465
	Missing	100	0	0	0	0	0	4	0	4	0	5	0	4	0
Mean		66,58	104,19	2,86	2,59	6,78	17,18								
Median		61,00	70,00	3,00	2,00	7,00	5,00								
Mode								<i>Couple</i>	<i>Couple</i>	<i>Bachelor</i>	<i>Bachelor</i>	<i>Work for others</i>	<i>Work for others</i>	<i>No</i>	<i>No</i>

Source: authors elaboration

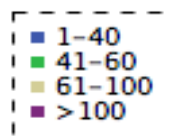
T-Test for two samples [visitor daily expenditure 2010 \neq 2015?]

H0: There is no statistically significant difference between the two samples in the dependent variable

Reject

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence	
									Lower	Upper
Visitor daily expenditure	Equal variances assumed	50,882	,000	-5,573	914	,000	-37,610	6,748	-50,855	-24,366
	Equal variances not assumed			-5,615	755,004	,000	-37,610	6,698	-50,760	-24,461

Visitor Daily Expenditure



Node 0		
Category	%	n
1-40	26,2	92
41-60	25,6	90
61-100	27,1	95
>100	21,1	74
Total	100,0	351

Place of residence
Adj. P-value=1,000, Chi-square=16,186, df=1

Portugal; UK; France; Others Americas; Italy

Germany; Others_EU 27; USA; Spain; Brazil; Africa; The Netherlands; Others_EU; Others Asia; Japan; Oceania

Node 1		
Category	%	n
1-40	32,8	57
41-60	29,9	52
61-100	22,4	39
>100	14,9	26
Total	49,6	174

Node 2		
Category	%	n
1-40	19,8	35
41-60	21,5	38
61-100	31,6	56
>100	27,1	48
Total	50,4	177

Heritage/Monuments and Buildings
Adj. P-value=0,000, Chi-square=20,478, df=1

Welcoming and hospitality of the people
Adj. P-value=0,011, Chi-square=8,466, df=1

<= very satisfied

> very satisfied

<= very satisfied

> very satisfied

Node 3		
Category	%	n
1-40	44,6	50
41-60	27,7	31
61-100	17,9	20
>100	9,8	11
Total	31,9	112

Node 4		
Category	%	n
1-40	11,3	7
41-60	33,9	21
61-100	30,6	19
>100	24,2	15
Total	17,7	62

Node 5		
Category	%	n
1-40	24,8	27
41-60	21,1	23
61-100	35,8	39
>100	18,3	20
Total	31,1	109

Node 6		
Category	%	n
1-40	11,8	8
41-60	22,1	15
61-100	25,0	17
>100	41,2	28
Total	19,4	68

Visitor daily expenditure

■ 1-20
■ 21-70
■ 71-141,5
■ + 141,5

Node 0		
Category	%	n
1-20	4,5	16
21-70	30,0	106
71-141,5	32,6	115
+ 141,5	32,9	116
Total	100,0	353

Place of residence
Adj. P-value=0,001, Chi-square=25,182, df=1

USA; Germany; France; UK; Belgium;
Canada; Others Europe; The Netherlands

Portugal; Brazil; Others World;
Spain

Node 1		
Category	%	n
1-20	3,0	4
21-70	14,1	19
71-141,5	39,3	53
+ 141,5	43,7	59
Total	38,2	135

Node 2		
Category	%	n
1-20	5,5	12
21-70	39,9	87
71-141,5	28,4	62
+ 141,5	26,1	57
Total	61,8	218

Recreation Activities
Adj. P-value=0,010, Chi-square=9,222, df=1

Overnights
Adj. P-value=0,001, Chi-square=11,068, df=1

<= satisfied

> satisfied

<= daily visitors

> daily visitors

Node 3		
Category	%	n
1-20	4,7	4
21-70	15,3	13
71-141,5	47,1	40
+ 141,5	32,9	28
Total	24,1	85

Node 4		
Category	%	n
1-20	0,0	0
21-70	12,0	6
71-141,5	26,0	13
+ 141,5	62,0	31
Total	14,2	50

Node 5		
Category	%	n
1-20	7,9	8
21-70	49,5	50
71-141,5	23,8	24
+ 141,5	18,8	19
Total	28,6	101

Node 6		
Category	%	n
1-20	3,4	4
21-70	31,6	37
71-141,5	32,5	38
+ 141,5	32,5	38
Total	33,1	117

SO2 – compare, within the years studied, tourist profiles based on expenditure patterns in the city of Évora

▣ Considering results from 2010:

▣ SEGMENT 1 (Portugal, the UK, France, Italy and other countries from the Americas)

- ▣ 32.8% spent between €1 and €40 | 29.9% spent between €41 and €60.**
- ▣ attribute destination - *heritage/monuments and building***
- ▣ 44.6% visitors that were **very satisfied or less** spent between **€1 and €40**, while 33.9% of those who were **very or extremely satisfied** spent **€41-€60**.**

▣ SEGMENT 2 (Germany and other EU countries, America, Spain, Brazil, African countries, Dutch, other countries from Asia, Japan and Oceania countries)

- ▣ 31.6% spent between €61 and €100 | 27.1% spent more than €100.**
- ▣ attribute destination – *welcoming and hospitality of the locals***
- ▣ 35.8% of visitors **less or equal to very satisfied** spent between **€61 and €100** and visitors who were **more than very satisfied** spent over **€100**.**

SO2 – compare, within the years studied, tourist profiles based on expenditure patterns in the city of Évora

▣ Considering results from 2015:

▣ SEGMENT 1 (USA, Germany, France, the United Kingdom, Belgium, Canada, The Netherlands and other countries from Europe)

- ▣ 43.7% spent more than €141.50.**
- ▣ attribute destination - *recreation activities*.**
- ▣ 47.1% of visitors who were satisfied or less spent between €71 and €141.50 | more than satisfied spent more than €141.50.**

▣ SEGMENT 2 (Portugal, Brazil, Spain and other countries of the world)

- ▣ 39.9% between €21 and €70.**
- ▣ Overnight stays**
- ▣ 49.5% of daily visitors spent between €21-€70 | visitors staying at least 1 night, 65%, spent more than €71.**

Conclusions

- Two groups of visitor segments were identified by place of residence, which in a few cases do not match between the years.
- In the year 2010, attributes that explained expenditure patterns were *Heritage /Monuments and Buildings* and *Welcoming and Hospitality of Locals*. In the year 2015, significant variables were *Recreation Activities* and *Overnight Stays*.
- Results suggest that an increasing spending pattern is evident explained by two independent variables, **recreation activities (Year 2015)** and **Overnight stays (Year 2015)**.
- Another contribution for tourism literature was that **culturally interested tourists** tended to **spend** relatively more (Bob Mckercher, 2002; Kastenholtz, 2005).

Conclusions

- Present research **contributes to tourism marketing literature**, through the adoption of **CHAID as a market segmentation method**, since this technique has rarely been used (Dias-Pérez and Bethencourt-Cejas, 2016).
- Managerial implications should be highlighted, mainly based on this way of segmenting the market of cultural visitors. **Local authorities should be aware of these changing expenditure patterns of cultural visitors in Évora.**
- **Limitations** open new paths for further research. For **future research**, our results suggest, a separate analysis about two different expenditure patterns (**daily visitors and tourists**). Since the majority of tourism demand studies are longitudinal studies (Marcuseen, 2011) **this study should adopt a cross-section model (multiple regression analysis) in order to contribute to the growing literature of tourist spending analysis (WHS).**

Thank you! QUESTIONS?

