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THE SEGMENTATION OF THE CANARIAN TOURISM MARKET WITH REGARD TO EXPENDITURE: AN EMPIRICAL STUDY OF LA PALMA

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1 Introduction

Tourism is a source of wealth and employment, especially in areas where most economic activity corresponds to the primary sector. The tourist industry generally enables areas in which the development of the secondary sector is comparatively difficult, to reach employment and income levels that would be impossible if activities were to continue to focus exclusively on agriculture and/or fishing.

If, in addition to the above considerations, we take into account the fact that the region in question is an island, the function of tourist activities as the driving force behind economic development becomes even more evident. The reason for this lies in the fragmented nature of the territory, which generates discontinuity in the economic flow, thereby giving rise to impending diseconomies of scale and scope with regard to the manufacturing of traditional industrial export products.

When set against other European Union Countries, the Canary Islands clearly enjoy a number of undeniable comparative and competitive advantages in the field of tourist products which, thanks mainly to business initiatives and foreign capital, rather than the desires and initiative of the local population, have resulted in a widespread monoculture focusing almost exclusively on tourist production.

The boom in the service sector which has accompanied the development of the tourist industry is a logical consequence of an activity that is characterised as being basic (Begg, 1993), i.e. as having a strong influence over all other economic activities.

Due to the vital economic importance of tourism in the Canary Islands, the local authorities have made a commitment to maintaining and improving the competitiveness of their tourist industry, at both a national and international level (Canary Island government, 1998).

As part of the effort to maintain and improve competitiveness, the tourist offer has been segmented in order to respond to the demand for, on the one hand, greater competitiveness as regards the price of similar products on the tourist markets (especially in the sun and beach sector); and on the other, increasingly personalised services, which enable tourists to organise their time in accordance with their own individual preferences, as opposed to the typical ‘organised package’ traditionally offered by tour operators.

To this transformation we must also add that derived from the development of information and communications technologies (ICT), which is bringing about drastic changes in the tourist markets, facilitating customer access to direct sales.

A thorough knowledge of the characteristics of the demand for tourist services is vital to the development of an effective tourist policy. For this reason, a good tourist product diversification policy should bear in mind the extent to which such diversification is beneficial (extreme products or similar products). To do so, it is necessary to be aware of the characteristics of both the demand and the tourist products which are most profitable for the region in question and which are most likely to result in sustainable competitive and comparative advantages.

In this sense, a breakdown of tourist expenditure may help us determine what percentage of the total money spent corresponds to the current offer of tourist services available in the resort itself, thereby giving us a clearer idea of which tourist products and services (both traditional and new) may generate the most wealth for the regions visited¹. The information obtained regarding the structure of tourist expenditure is a key element in the design of a tourist product innovation policy, aimed at generating greater profits for the local community.

The approach used in this study is therefore based on segmented markets offering a wide range of tourist products, each of which satisfies (to a greater or lesser extent) the

¹ In fact, a study of tourist expenditure should be accompanied by a profitability analysis, or an analysis of the profits obtained by the companies offering the said services, in order to quantify the effect on the island’s general economy.

needs of a particular segment of the demand. The project has a twofold objective. Firstly, it aims to identify the segments of the current demand that are obtained in situ during the visitors' stay on the island, and secondly, it aims to determine which niches of these segments are associated with a high level of expenditure. This information will enable us to trace the outlines of a regional product innovation policy designed to foster increased local development.

To this end, we will analyse a number of different data sources, including the Tourist Expenditure Survey conducted by the Canary Island Statistics Institute and an empirical study carried out within the Canary Island Autonomous Community over recent years, focusing especially on the island of La Palma. This information will enable us to quantify how much tourists who visit the islands spend during their stay, and to identify the most important areas with regard to the objectives of this study. In specific terms, we will establish two segments: low expenditure and high expenditure, and then proceed to determine the characteristics associated with the tourists who fall into the highest in situ expenditure category.

2 The importance of tourism in the economy of La Palma

The Canary Island archipelago comprises seven islands, including La Palma. The island has a surface area of 708.32 km² and in the year 2000 had 80,537 inhabitants, mainly distributed along the coastal regions. Over the last 15 years, La Palma's tourist industry has risen sharply, although the boom experienced by this smaller island is by no means equal to that of larger islands such as Tenerife and Gran Canaria.

Table 1. Tourists

	Canary Islands			La Palma		
	Num. tourists	Average stay	Employment rate	Num. tourists	Average stay	Employment rate
1997	8,433,873	8.6	79.3	117,007	6.7	65.9
1998	9,349,152	8.6	82.3	127,093	6.8	67.0
1999	9,855,255	8.5	83.2	135,376	6.8	72.9
2000	9,975,977	8.1	76.5	135,324	6.3	69.1
2001	10,137,202	-	-	133,412	-	-

SOURCE: ISTAC

In general, the results for La Palma are lower than the regional average for the Canary Islands as a whole. For example, the average stay is almost two days shorter than the general average for the period analysed (1996-2000). The employment rate is also lower than the regional average. In specific terms, the average employment rate for the four-year period in question (68.7) is 11.6% lower in La Palma than in the Canary Islands as a whole.

Furthermore, the growth rate for the number of tourists who visit the island each year is 13.4%, as opposed to the regional average of 24.6%.

The results therefore indicate a lower level of tourist expansion and a slower growth in tourist demand. This is not necessarily a negative sign, since it may indicate the development of a different type of tourism, easily distinguishable from the en masse kind that tends to characterise other resorts in the Canaries, particularly those located on the larger islands.

As for demand, the data given in the table below indicate that the countries best represented on the market are Germany, Spain, Austria and Holland, in that order.

Table 2. Overnight stays on La Palma, according to nationality (1999)

	% of total
Spanish	26.2
German	55.7
Austrian	6.9
Dutch	5.6

Source: ISTAC

Economic structure

In relation to the available offer, the data given in table 3 reveal the importance of the activities of the service sector, particularly in those areas linked to tourism. The construction industry also plays an important role, since its development often goes hand in hand with that of the tourist sector. Finally, the island's agricultural tradition

accounts for a significant percentage of the employment still generated by the primary sector.

Table 3. Jobs according to industrial sector (third quarter, 2000)

Area of activity	Total num. Jobs	%
Agriculture, livestock farming, hunting and forestry	2430	11.3
Manufacturing industry	1593	7.4
Construction	3392	15.7
Retail industry, car, motorbike and moped repair and personal items	4212	19.5
Catering	1801	8.3
Transport, storage and communications	1001	4.6
Real estate and leasing; business services	1132	5.2
Other activities	6014	27.9
TOTAL	21575	100

SOURCE: ISTAC

On a slightly different note, a detailed analysis of expenditure carried out by the Canary Island government shows that the smaller islands (including La Palma) are associated with a lower in situ expenditure than the two larger islands. Consequently, a study of the disaggregation of in situ expenditure must be a key factor in any attempt to increase local economic development (Díaz, Alvarez & Bethencourt, 2001).

Table 4. Average in situ expenditure per person and day (all year round) (euros)

	Año 1996		Año 1998		Año 1999		Año 2000		Año 2001	
	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands
Total	23,4 100,0	28,7 100,0	29,5 100,0	31,6 100,0	26,3 100,0	33,6 100,0	26,1 100,0	34,7 100,0	26,1 100,0	37,0 100,0
A	–	–	–	–	10,4	2,0	5,8	2,3	6,2	3,0
B	24,2	19,8	17,1	17,4	18,1	16,2	22,4	18,2	28,8	22,8
C	36,6	39,7	36,0	37,2	36,2	35,3	31,5	33,9	34,9	32,9
D	1,6	5,3	4,3	5,6	2,1	6,0	5,3	6,4	1,22	3,1
E	0,9	3,9	3,6	4,2	2,5	5,1	2,7	5,0	2,7	4,5
F	19,9	12,0	14,0	13,7	15,7	13,9	16,2	13,5	14,4	17,6
G	1,9	1,7	2,3	2,1	3,6	2,5	2,4	2,4	1,4	2,6
H	7,7	13,1	13,6	12,5	7,8	6,0	6,6	11,4	6,4	9,8
I	1,1	1,8	2,1	2,1	1,0	2,0	1,5	2,1	0,9	0,7
J	5,9	2,7	7,1	5,1	2,6	5,1	5,6	4,9	3,2	2,9

A: accommodation; B: food purchases, supermarkets; C: restaurants, bars and cafés; D: discos, disco pubs; E: leisure, entertainment; F: excursions, vehicle hire; G: public transport; H: non food purchases; I: personal services; J: other expenses

SOURCE: ISTAC

In general, in situ expenditure on La Palma dropped considerably during the analysed period, moving even further away from the regional total. The percentage by which the average expenditure rate for the Canary Islands as a whole exceeded the specific average for La Palma increased from 22.6% in 1996 to 41.6% in 2001.

The evolution of in situ expenditure from 1996 to 2001 is linked to changes in the structure of the demand. In this sense, during the five-year period there was a certain change from tourism based mainly on German culture, to tourism based on Latin culture (mainly Spanish). As a consequence, spending on excursions and vehicle hire decreased while spending on food purchases in supermarkets increased, with this latter expenditure remaining consistently above the regional average. Throughout the entire five-year period, the highest results were recorded for category C – restaurants bars and cafés, with expenditure in this area being only slightly lower than the regional average, with the exception of the last year, in which it actually exceeded the general figure. This evolution brings the structure of expenditure on the island gradually closer to that recorded for the Canary Islands as a whole during the period in question.

Table 5. Average in situ expenditure per person and day (all year round), according to duration of stay (euros)

	Año 1996		Año 1998		Año 1999		Año 2000		Año 2001	
	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands	La Palma	Canary Islands
Total	23,4 100,0	28,7 100,0	24,1 100,0	31,6 100,0	26,3 100,0	33,6 100,0	26,1 100,0	34,7 100,0	26,1 100,0	37,0 100,0
1-7	118,7	121,7	127,5	135,3	100,6	125,3	146,6	126,5	129,6	128,1
8-14	97,3	96,0	93,9	93,9	104,8	93,8	94,2	93,8	102,5	91,8
15-21	99,6	91,1	81,8	84,3	94,1	88,2	96,8	87,4	101,3	81,9

SOURCE: ISTAC

The table above shows that the shorter the stay, the greater the expenditure, both throughout the Canary Islands as a whole and on La Palma. Nevertheless, this trend is more pronounced in the case of the regional average, i.e. the difference in expenditure depending on the duration of the stay is narrower in the case of La Palma, with the exception of the year 2000.

In addition to the expenditure statistics compiled by the Canary Island government analysed so far, the study also took into account a survey conducted in situ of the tourists that visited the island. The objective of the survey was to identify the characteristics of the demand, with special emphasis on in situ tourist expenditure.

3. The segmentation of tourist demand: a case study - La Palma

Tourist demand is subject to segmentation in accordance with a series of basic elements, such as demographic, socioeconomic and psychographic characteristics that include tourists' motivations and opinions, among others.

The majority of studies on tourist expenditure are based on regression analyses (Dardis, Derrich, Lehfeld and Wolfe (1981); Cai, Hong and Morrison (1995); Taylor, Fletcher and Clabaugh (1993); Leones, Colby and Crandall (1998), among others). Such studies are based on the idea that aggregate demand for tourist services is determined by a specific series of factors, which usually include the income of the tourists in question, relative prices and the relative quality of the services offered in comparison with their competitors.

The general approach to product diversification or market segmentation, on the other hand, is to try and divide participants in the tourist market into subgroups, each with their own specific attributes and demand for different service packages. This approach has been used by a number of studies on tourist demand, which segment the market into various expenditure groups, each with their own specific characteristics, thereby enabling researchers to identify a number of characteristics that are not exclusively linked to nationality. This is the case with the works published by Pizam and Riechel (1979); Woodside, Cook and Mindak (1987); Spotts and Mahoney (1991); Legohérel (1998); and Monk and Iverson (2000), among others.

In this paper, we have followed the same approach, segmenting the markets in accordance with expenditure.

3.1 Methodology

With the aim of verifying the hypothesis of the study, a survey was conducted during both the high season (November – December 2001) and the low season (August 2001) of a representative sample of the total number of the tourists who visited the island. Interviews were held at the end of the subjects' holiday period. Total number of valid interviews: 235.

The characteristics of the sample as regards daily expenditure and gender, are shown in the table below:

Table 6. Characteristics of the sample

Daily expenditure (euros)		Male	Female	Total
NS/NC	Count	3	3	6
	% of Total	1.3%	1.3%	2.6%
- 24,0	Count	10	33	43
	% of Total	4.3%	14.0%	18.3%
24,0 – 36,1	Count	16	48	64
	% of Total	6.8%	20.4%	27.2%
36,2 – 48,1	Count	29	34	63
	% of Total	12.3%	14.5%	26.8%
48,2 – 60,1	Count	21	19	40
	% of Total	8.9%	8.1%	17.0%
60,2 – 72,1	Count	7	5	12
	% of Total	3.0%	2.1%	5.1%
72,1 – 90,2	Count	4	1	5
	% of Total	1.7%	.4%	2.1%
90,3 – 120,2	Count	2		2
	% of Total	.9%		.9%
Total	Count	92	143	235
	% of Total	39.1%	60.9%	100.0%

The questionnaire used comprised two blocks. The first block included all the data relative to segmentation variables, while the second block covered the variables designed to measure service quality.

As explained earlier in this study, the aim was to identify the sample characterisation variables which best forecast in situ tourist expenditure (or pocket money spending) on the island of La Palma. The reason for this choice lies in the fact that it is this element of tourist expenditure that has the most direct effect on the local economy, and therefore the greatest influence on the wealth of the island as a whole.

The analysis tool used was the CHAID procedure (Chi-squared Automatic Interaction Detection, Kass 1980) included in the Answer- Tree statistical analysis package.

The daily expenditure of the tourists who visited the island was used as the *critical variable*. This variable was dichotomised (the dividing line being the arithmetical mean of the surveyed sample) to give a variable with two separate values (high expenditure and low expenditure). *Predictive variables* included nationality, gender, age, travelling alone or with others, profession, income level, intention to return in the future, type of establishment in which he/she was staying and season during which he/she visited the island.

3.2 Results

The results obtained enabled us to identify homogenous groups of tourists based on their in situ daily expenditure during their stay. These groups were mainly identified by *nationality, average income and season*, the total mean expenditure being **30,7 euros**.

Based on the decision tree generated by the CHAID procedure, we identified tourist nationality as the first significant segmentation (chi. .005). The result is two opposed segments: on the one hand, we have the German tourists and a small group of Dutch tourists whose recorded expenditure is below the general mean; and on the other, we have a second group consisting mainly of Spanish tourists (although Austrian and Italian tourists also fall into this category) whose expenditure is above the average level.

The group of tourists whose expenditure is below the general mean (mainly Germans) is further segmented by the CHAID into two subgroups with significant values. These subgroups are defined according to income level: those with incomes lower than **1.803 euros tend to spend** an average of no more than 23,4 euros, while those with higher income levels, tend to spend an average of **25,2 euros**.

If we take these variables (nationality and income) into consideration, the below-average expenditure segment has a correct classification power of 87%.

On the other hand, when we tried to find a predictive pattern for above-average expenditure, we noted that, in addition to nationality (Spanish, Austrian and Italian) the season (high or low) during which the tourist visited the island was also a determining factor, reaching a group discrimination power of 87%. This is partly due to the subdivision of the group and the number of nationalities included in this segment, which also showed significant differences with regard to spending criteria.

Despite the limitations imposed by the size of the sample, the results obtained during the study on La Palma were fairly similar to those obtained during previous studies (Díaz, Alvarez y Bethencourt, 2001) focusing on the entire region as a whole. The variables: *nationality*, *high-low season*, *profession* and *type of establishment* recur in both studies, indicating a certain consistency with regard to results. However, given their low discrimination power, in this case we have decided not to include the variables *type of establishment* and *profession* in the table given in appendix 1.

Another aspect taken into consideration during the study was the services contracted in situ, since this area accounts for the majority of the money spent by tourists during their holiday period.

Based on the classification resulting from the segmentation process carried out by the CHAID, we have structured expenditure according to the components of the most significant nationalities, both as regards the high expenditure group (Spanish, Austrian and Italian tourists) and the low expenditure group (German and Dutch tourists).

If we analyse the results of the following table, we see that among the major spending areas encompassed within the total in situ expenditure on contracted services, car hire is the most significant. The remaining expenditure is mainly distributed among leisure activities (excursions, sports), restaurants and shopping. The other expenditure components are not considered representative, since they account for only a very low percentage.

Table 7 Services contracted in situ

		German	Austrian	Spanish	Dutch	Italian
Accommodation (no meals)	Count	0	0	1	0	0
	%	0.0	0.0	0.4	0.0	0.0
Half board accommodation	Count	3	1	4	2	0
	%	1.3	0.4	1.7	0.8	0.0
Full board accommodation	Count	0	0	2	0	0
	%	0.0	0.0	0.8	0.0	0.0
Tourist lodgings (house)	Count	9	1	2	0	0
	%	3.8	0.4	0.8	0.0	0.0
Country house (rural tourism)	Count	23	1	5	0	0
	%	9.7	0.4	2.1	0.0	0.0
Rented apartment	Count	46	2	6	1	0
	%	19.5	0.8	2.5	0.4	0.0
Time-share apartment	Count	0	0	0	0	0
	%	0.0	0.0	0.0	0.0	0.0
Car hire	Count	101	1	79	1	4
	%	42.8	0.4	33.5	0.4	1.7
Excursions	Count	64	0	29	1	2
	%	27.1	0.0	12.3	0.4	0.8
Cultural activities	Count	52	0	29	0	0
	%	22.0	0.0	12.3	0.0	0.0
Sporting activities	Count	54	1	4	1	0
	%	22.9	0.4	1.7	0.4	0.0
Training activities	Count	27	0	2	0	0
	%	11.4	0.0	0.8	0.0	0.0
Restaurants and shopping.	Count	93	1	33	1	1
	%	39.4	0.4	14.0	0.4	0.4

4 Conclusions

We were able to draw a number of conclusions from the results of the study.

Firstly, tourist activities clearly play a vital role in the island's economy. However, in general, the results show that tourist indicators for La Palma are lower than the regional average for the Canary Islands as a whole. This situation calls for policies designed to consolidate the industry on the island.

Furthermore, the smaller islands (including La Palma) are associated with a lower level of expenditure than their larger counterparts, a circumstance that considerably reduces the tourist industry's potential for generating greater levels of wealth on the former. Expenditure on areas such as restaurants, bars and cafés plays an important role in the creation of jobs and the generation of wealth, although the average in situ percentage recorded for La Palma in these areas was lower than the regional mean. Another key factor in creating employment is expenditure on excursions and car hire. Spending on

such areas is relatively high on the island, although the average fell somewhat during the period studied. This may be the result of changes in demand, perhaps due to the increasing number of Spanish tourists.

Without a doubt, the aforementioned situation calls for an increase in the leisure activities on offer, with the aim of encouraging a greater level of in situ expenditure.

On a slightly different note, the duration of the stay, which normally has a decisive influence on in situ expenditure (the shorter the stay the higher the expenditure), is less pronounced on La Palma than in the Canary Islands as a whole.

The above results indicate that tourist activities have less potential to generate wealth and employment on La Palma than in the Canary Islands as a whole. This justifies the analysis carried out here into in situ expenditure and the segmentation of tourist demand on the island.

Secondly, the results of the market segmentation process carried out using the CHAID tool indicate that it is not enough to take only one variable (such as nationality, for example) into account when attempting to identify homogenous tourist groups. Rather, we must also consider other variables such as income level and high/low season, thereby making it necessary to identify increasingly smaller and more sharply defined target groups using a combination of several different variables.

Our results corroborate the conclusion drawn from the analysis of the statistics obtained during the Canary Island Government Expenditure Survey; i.e. that the increase in the percentage of Spanish tourists affects the component-based tourist expenditure structure. In fact, the results of the segmentation process carried out using the CHAID tool confirm that Spanish tourism constitutes the highest expenditure segment on the island, while German tourism is associated with a lower spending rate.

Cultural traits therefore seem to be a key factor in spending habits. This becomes even more evident if we consider that the spending habits of the German tourist segment are closely linked to individuals' monthly income level.

The theory that German tourists' tendency to spend less during their holiday period is a cultural trait is corroborated by the fact that more than half the components of the German nationality segment have a monthly income of over 1.803 euros.

Spanish tourists, on the other hand, are those that spend the most and generally visit the island during the low season. We may therefore deduce that the offer of tourist products and services on La Palma should be channelled to respond to the consumer demands of Spanish tourists, since this segment is associated with a higher expenditure and a greater tendency to visit the island during the low season. It would therefore be advisable to establish, alongside the current offer of services designed mainly to respond to tourist needs based on German culture, a parallel offer targeted more towards satisfying the demands of Latin consumer culture.

An offer of this kind would enable the establishment of a complementary relationship between two markets (German and Spanish) on the island itself (in situ), thereby helping to maintain high employment levels all year round.

We should also begin to consider, albeit tentatively, the other nationalities included in the high expenditure segment which tend to visit the island during the high season (Austrian and Italian, for example). These nationalities may constitute market niches associated with higher in situ expenditure levels.

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ANEXO 1

Nacionalidad

Ingresos medios al mes

Temporada alta /baja