PHD THESIS

STATED AND REVEALED PREFERENCES ON GASTRONOMIC TOURISM IN SANTIAGO DE COMPOSTELA

Ismoilov Jasur

PHD PROGRAMME: TOURISM MANAGEMENT AND PLANNING

DEPARTMENT: ELECTRONICS AND COMPUTER SCIENCE

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Dr. Eduardo Manuel Sánchez Vila, Associate Professor and Director of the presented Thesis, and Dr. Xose Manuel Santos Solla, Professor and Tutor of the presented Thesis,

INFORM

The entitled Thesis: "Stated and Revealed Preferences on Gastronomic Tourism in Santiago de Compostela" was held in the Department of Electronics and Computer Science at the Santiago de Compostela University, and it meets all the scientific and formal requirements by current regulations to qualify for the PhD degree.

We present a favorable note and authorize the thesis work for presentation and public defense.

Signed: Eduardo Manuel Sánchez Vila

Signed: Xose Manuel Santos Solla

For my Mum and Dad,

who have inspired me that anything can be achieved by hard work

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1. CHAPTER 1: INTRODUCTION

1.1. Objectives of the Study

The purpose of this research is to analyse why certain restaurants and tapas[1] are preferred by tourists in Santiago de Compostela, what are the original preferences of restaurants and tapas for these tourists, what are the factors that influence a tourist's preference and choice, and the differences in preferences of tourists from different groupings. As tapas are authentic to Spanish culture, and also an attraction of gastronomic tourism of Spain, the research focuses mainly on tapa preferences of tourists and on restaurants that provide them.

The specific objectives of the thesis are as follows:

1. First, the research aims to provide a model of the three entities involved in the gastronomic domain, identifying the relationship between the entities and their attributes. The tourist, or user, is the primary entity. As the objects of experience, the tapa and the restaurant that offers it are the second entities. The situational or context variables are the third and final entities. The main purpose of the analysis is to find out the main attributes of these entities, and to classify them and analyse their relationship. For example, certain unique tourist attributes can be grouped into one class. These groupings or classes can further be used to test whether the preferences of the users within each group are similar to each other.
2. Second, the research aims to find out tourist preferences for restaurants that offer tapas. Therefore, it is important to know the main attributes of both restaurant and tourist entities. User attributes define the tourist classification. Restaurant attributes will give a clear picture of tourist preferences of restaurants in Santiago de

[1] The word *tapas* refers to appetizers or snacks in Spanish cuisine.

Compostela, commonly known as Santiago.[2] Based on the first objective, restaurants can be arranged into groups depending on a variety of attributes. By creating different groups of restaurants based on these attributes, it will be easier to understand the preferences and choices of the tourists. These restaurant attributes can be combined with those of tourists to provide a connection between the two entities.

3. Third, the research aims to identify tourist tapa preferences. As stated in the first objective, the tapa attributes will explain tourist typology preferences for tapas. The tapas can be grouped into different groupings depending on their attributes. With these groupings of tapas, the research intends to find out the relationship between tourist classes and their preferences for tapa groupings.
4. Next, the research aims to find out external attributes that influence tourist preference, choice and satisfaction. These external attributes are context or situational variables. It is important to identify whether these variables influence tourist preferences. These attributes are out of the tourist's direct control, but depending on them, the offer can be changed accordingly to achieve higher satisfaction. If context variables influence choices, then it would be useful to know that a tourist from a certain class can be grouped into another class depending on the context. This is why it is an important objective to identify the influence of context attributes on the preference, choice, and satisfaction of the tourist.

[2] Santiago de Compostela is the capital of Galicia, an autonomous community in the northwest of Spain. The city began as the shrine of Saint James the Great. The old town of the city was designated a UNESCO World Heritage Site in 1985, for which it receives thousands of tourists every year in addition to numerous students attending universities in the area. Restaurants thus play an important role in the sustainability of the bustling tourism industry of the city.

5. 'Ultimately, this study seeks to find out what product should be offered to which tourist market to achieve the highest tourist satisfaction so that a thriving tourist market can be built based on the results of this study.

1.2. Motivations of the Study

1.2.1. Motivation about gastronomic tourism

Tourism is one of the fastest growing industries in the world. According to the United Nations World Tourism Organization (UNWTO), international tourism receipts reached US $1,260 billion in 2015, 254% more than in 2010. The overall income generated by inbound tourism, including transportation, exceeded € 1.5 trillion in 2015, and it accounts for 7% of the world's exports of goods and services (UNWTO, Tourism Highlights, 2016).

Taking into account these numbers, it can be concluded that tourism is an industry that grows year by year. A new division of tourism—Special Interest Tourism— has appeared due to this growth (Hall & Weiler, 1992). The growth of special interest tourism is considered a reflection of the increasing diversity of leisure interests of the early 21st century leisure society (Douglas, Douglas & Derret, 2001). Gastronomic tourism is one of the main types of special interest tourism and, as a result of improving economic and social growth, it has grown considerably each year (Hjalager & Corigliano, 2000).

Gastronomic tourism,[3] also called *culinary tourism*, refers to tourism where the main influential motivator is regional food and beverage (Charters & Ali-Knight, 2002). The

[3] Gastronomic tourism is an important way to learn about food cookery techniques and beverage products from other places. It can be an easy way to get to know new cultures and traditions too. Local food and beverages are the main motivational factors behind it (Shunali & Arora, 2014).

growth of culinary tourism is seen as a trend where people spend less time cooking, but prefer to follow their interest in food as a part of the leisure experience, such as watching cooking shows, dining out, etc. (Sharples, 2003). The term *culinary* covers both cuisine and gastronomy; whereas *cuisine* refers to the local ingredients, regional food preparation and etiquette, whereas *gastronomy* refers to an expression of happiness resulting from eating as well as the inherent joy of eating (Ignatov, 2003).

Eating out is a fast growing form of leisure and entertainment, where food is consumed not only for necessity but also for the pleasure of eating out. In the latter case, atmosphere, context, ambience, etc., are part of the leisure experience, as much as the food itself. While traveling, tourists eat out to satisfy their basic needs, as well as to experience the local food and cuisine. The latter experience provides the basis of the so-called cultural tourism.

Local cuisine is viewed with suspicion; thus, travellers carried around dried food. Nowadays, traveling for food has taken an entirely new meaning from what the days when journeys were undertaken for the spice trade (Tannahill, 1988). For example, in Jamaica, a tourist's daily expenditure on food is five times greater than the average Jamaican (Belisle, 1984). Among all expenses, tourists on a journey are the least likely to reduce their food budget (Pyo, Uysal & McLellan, 1991). In some studies, the travel consumption bundle is identified within five commodity groups: accommodation, food, transport, shopping and entertainment. In the analysis of expenditures within these commodity groups, it is clear that food is one of the most influential (Divisekera, 2010). Hence, this research is about the preferences of international and domestic tourists regarding the restaurants in Santiago de Compostela, Spain, and the tapas they provide.

1.2.2. Motivation about user preferences in gastronomy

As described above, gastronomy is one of the main pillars of tourism in general. Every tourist traveling to a destination must eat; therefore, gastronomy is a part of living, as well as a part of the culture visited. It becomes one of the major factors influencing tourist satisfaction in travel and, therefore, is directly related to the likelihood of the tourist revisiting the destination.

It can be assumed that the primary attribute of travel is the accommodation; therefore, there are many studies on tourist accommodations, both globally and locally. However, there are not many studies of the food and beverage service industries. Nevertheless, in recent years this has changed due to Special Interest Tourism.

If we look into the key indicators of accommodation and food service activities in Europe (see Table 1.1), we can easily determine food and beverage service activities have a higher number of employees and higher turnover than the accommodation industry. That is, 84% of all enterprises in Europe are in the food and beverage service. Further, 77% of all employees in accommodation as well as food and beverage service are employed in the food service.

Table 1.1. Sector Analysis of Key Indicators, Accommodation, and Food and Beverage Service Activities in EU-28, 2014.

	Number of Enterprises	Number of Persons Employed	Turnover	Value Added	Personnel Costs
	(Thousands)		(EUR million)		
Accommodation and Food Service	1 869.8	10 807.8	539 889	230 519	154 170
Accommodation	294.7	2 465.2	163 977	78 220	47 037
Food and Beverage Service Activities	1 575.1	8 342.6	375 912	152 299	107 133

Source: Eurostat, NACE (online data code: sbs_na_1a_se_r2)

Table 1.2. Key Indicators of Accommodation and Food and Beverage Service Activities in EU-28, 2014.

	Number of Enterprises	Number of Persons Employed	Turnover	Value Added	Personnel Costs	Investment in Tangible Goods
	(Thousands)		(EUR million)			
EU-28	**1 869.8**	**10 807.8**	**539 889**	**230 519**	**154 170**	**32 837.9**
Belgium	49.1	179.6	14 296.9	5 102.3	3 177.0	1 143.0
Bulgaria	26.3	136.4	1 853.4	612.2	407.9	263.0
Czech Republic	59.0	162.2	4 729.9	1 524.4	914.1	329.0
Denmark	13.6	72.8	7 044.0	2 950.3	2 239.6	287.5
Germany	226.2	2 085.0	77 404.1	36 062.5	22 652.5	3 575.3
Estonia	2.4	22.5	735.5	259.0	201.6	43.1
Ireland	..	..	..	..	..	..
Greece	90.5	317.1	9 865.6	3 755.6	2 233.1	574.6
Spain	269.8	1 210.7	57 875.5	24 493.8	18 167.7	2 116.4
France	272.9	1 027.3	90 200.0	36 257.6	29 587.6	6 554.3
Croatia	19.5	97.6	3 083.6	1 414.1	806.0	385.3
Italy	312.0	1 295.8	71 642.1	27 455.0	17 682.7	3 455.4
Cyprus	5.3	37.8	1 883.6	977.4	519.9	122.9
Latvia	3.5	32.8	665.6	231.6	167.9	53.5
Lithuania	5.4	40.5	689.0	241.8	195.7	57.4
Luxembourg	2.8	19.0	1 447.4	676.5	541.2	49.2
Hungary	29.2	127.6	3 148.4	889.9	675.0	194.5
Malta	2.2	17.4	820.7	319.3	182.4	47.6
Netherlands	53.9	408.7	20 861.7	9 237.3	5 403.1	784.0
Austria	47.4	291.0	17 157.0	8 234.9	5 604.2	988.8
Poland	48.9	238.2	7 094.7	2 361.9	1 318.1	601.8
Portugal	84.1	273.3	9 189.8	3 413.5	2 384.0	800.9
Romania	25.1	157.8	2 757.1	923.2	555.3	279.3
Slovenia	10.3	34.2	1 581.3	582.3	405.8	85.0
Slovakia	16.3	56.4	1 744.7	406.5	307.6	139.3
Finland	11.6	71.2	6 048.5	2 108.3	1 723.1	175.0
Sweden	31.3	189.2	14 356.7	6 027.9	4 814.3	712.1
United Kingdom	132.0	2 043.4	101 962.9	50 059.6	28 155.6	8 544.2

Norway	11.2	97.5	8 520.8	3 662.5	3 107.4	330.5
Switzerland	17.9	211.9	18 699.4	9 970.9	8 313.4	1 309.0
Macedonia	4.0	..	230.6	79.7	55.0	0.0
Turkey	..	..	..	..	..	..

Source: Eurostat, NACE (online data code: sbs_na_1a_se_r2)

From Table 1.1, we can see the importance of food and beverage service in tourism. Further analysis by country profile in Table 1.2 provides a deeper insight into the food and beverage service in this industry. According to employment in the accommodation and food services sector, the top areas include the capital city regions of France, the United Kingdom, Spain, Italy, Germany, Ireland and Portugal.

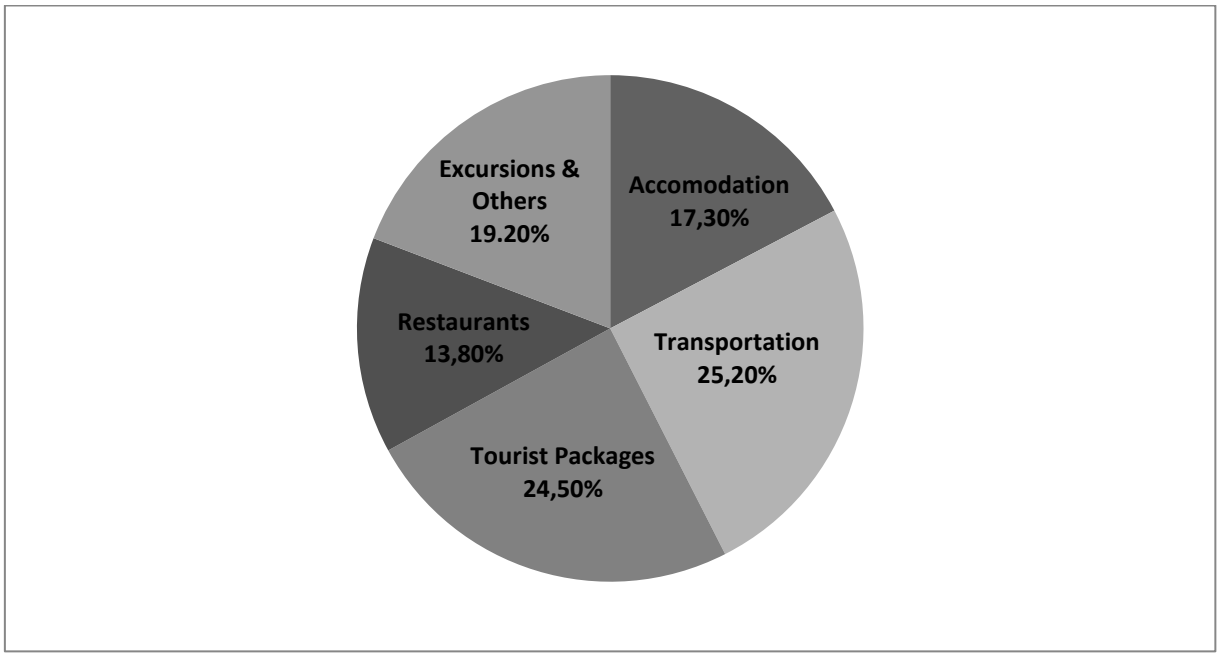


Figure 1.1. Distribution of expenditure of tourists by components, Spain, 2012 (Source: IET, Encuesta de Gasto Turistico, Egatur).

If we look into tourism key indicators by tourist expenses in Spain (Figure 1.1), it is noteworthy that restaurants are one of the five important components of tourism and,

therefore, they should be taken into account in any tourist package. The importance of restaurants to tourism cannot be underestimated.

After clarifying the importance of gastronomy in general tourism, the question 'What should be offered to whom?' arose. Are restaurants and bars offering the right products to the correct consumers (in this case, tourists are the consumers and tapas are the products)? This was the main motivation of the study: to find out what product should be offered to which tourist market to achieve the highest tourist satisfaction so that a thriving tourist market can be built based on the results of this study.

To answer 'What should be offered to whom?', first, the question about the general characteristics of the variables studied in this research must be answered. For instance, what is the typology (kinds) of tourists eating out in Santiago? Second, the preferences of each tourist typology must be determined. Third, the study must determine what are the key factors influencing the preferences of each tourist typology before making the restaurant and tapa(s) choice(s), and ultimately, after making a choice, what are the key factors that explain their satisfaction with the gastronomy experience.

A detailed review of the literature reveals the scarcity of studies analysing the impact of different attributes on tourist restaurant and tapa selection as well as their satisfaction from this choice. The main goal of this research, therefore, is to understand the preferences of certain tourist groups and the motivators that impact their choice and their satisfaction after a certain tapa experience.

The study presented here is organised as follows: (1) find out the typology of tourists in the gastronomy of Santiago and (2) define gastronomic preferences of each type of tourist by key attributes.

1.3. Scope of the Study

The scope of the study is constrained by a number of different factors. To understand the terminology for the scope, Chapter 1.6 provides a detailed description of the main terms and concepts. The constraints of the dissertation research are as follows:

- The dissertation is limited to international tourists and domestic tourists who satisfy the following criteria: (1) they travel for studies or other purposes to visit Santiago de Compostela, and (2) they intend to consume tapa(s) at restaurants in this city.
- Fifty-six restaurants and 109 tapas were analysed from the Santiago(é)Tapas 2010 contest. Sixty restaurants and 113 tapas were analysed from the Santiago(é)Tapas 2011 contest.;
- The dissertation is limited to a certain number of restaurants, tapas and context attributes asked of tourists after their experience for the fulfilment of the conditions presented by the Santiago de Compostela Turismo office; and
- The number of attributes analysed in this research are obtained by questionnaire method before the tapa experience and are limited to a certain amount as previously stated to fulfil the conditions provided by the Santiago de Compostela Turismo office, the organiser of the annual Santiago(é)Tapas contest.

1.4. Hypotheses of the Study

The study aims to find out tourists' restaurant and tapa preferences in Santiago de Compostela. The following six hypotheses were stated prior to commencing the study:

H1. The difference between stated and revealed preferences of domestic tourists on restaurants attributes should be insignificant. The rationale is that they have prior knowledge of the gastronomic experiences and, therefore, have a bias.

H2. The difference between stated and revealed preferences of international tourists on restaurant attributes should be significant because they have no knowledge about the Santiago restaurants and pubs. The probability of their discovering 'new food' is higher and the risk of preference evolution is higher than local tourists.

H3. Restaurants located in the old zone of Santiago are more popular for international tourists than restaurants located in the new zone and outlying area.

H4. International tourists prefer 'traditional' tapas to 'modern' tapas. It is assumed they are interested in the culture and tend to seek traditional food.

H5. Domestic tourists prefer more 'modern' tapas to 'traditional' tapas. The rationale behind this is that they already know traditional tapas and tend to seek food nuance; thus, they prefer modern tapas.

H6. Context attributes have a high impact on the prior preferences and choices of both domestic and international tourists.

1.5. Contributions of the Study

The intention of this study aims to determine tourist classes in the gastronomy of Santiago de Compostela. Segmenting tourists into different groups based on coherent preferences and choices will benefit Santiago restaurants and bars in knowing their niche market. The segmentation benefit is twofold. First, knowledge of the tastes and preferences of these

segments will enable the recommendation of relevant restaurants and tapas. Second, by knowing the desire of each segment, restaurants and bars can change their attributes (adapt their products) accordingly to meet their desired niche market preferences.

This research also intends to identify the contextual attributes, namely those not controllable and change from time to time. Depending on these preferences, restaurants and bars can change their attributes to meet their niche market preferences, and therefore they can benefit from this research. In general, both domestic and international tourists have certain preferences on restaurant and tapa attributes. These preferences tend to change according to different context attribute values. For example, a bad mood can affect tourist preferences and evaluation of the tapa experience. However, the variable is difficult to quantify and, therefore, difficult to study. It can be assumed that a variety of context attributes can have varying effects on each tourist group. By knowing the effect of context attributes on the preferences of each tourist segment, Santiago restaurants and bars can change their internal attributes according to their niche market or even capture new niche market knowing the context attribute effect.

The study is organised as follows: (1) find out the typology of tourists in the gastronomy of Santiago and (2) define gastronomic preferences of each type of tourist by key attributes.

The contributions of this study relate to: (1) helping to identify the market of domestic and international tourists for Santiago restaurants and bars, and (2) to contribute to the research of gastronomic preferences of tourists in Spain.

1.6. Term Definitions

The following terms and meanings are used in the dissertation:

a. *Domestic tourists*: The tourists from Galicia (the autonomous community in which the experiment is held) and Spain.
b. *International tourists*: The tourists from foreign countries.
c. *Stated Preferences*: User-stated preferences prior to the experience. They are gathered from questionnaires in the registration stage of Santiago(é)Tapas experiment.
d. *Revealed Preferences*: User preferences when experiencing tapas, which are revealed by means of the real choices that users made while going out for tapas.
e. *Traditional Tapas*: Galicia tapas famous in the culture of Spain and prepared in an old-fashioned way.
f. *Original* or *Contemporary Tapas*: Non-typical, new tapas made by the chefs of restaurants participating in the Santiago(é)Tapas contest.
g. *Restaurant Popularity*: It is described by the number of visitors to a certain restaurant or pub.
h. *Restaurant Quality*: It is described by means of the user evaluations for the restaurant experienced, using the Likert method from 0–5.
i. *Restaurant Style*: In some studies, this term has been used as décor or restaurant decoration; in this research, the style of the restaurant includes the degree of modernity or traditionalism of the restaurant.
j. *Restaurant Atmosphere*: In many studies, this term is used as ambience.
k. *Restaurant Zone*: This term describes the restaurant location. In our study, it distinguishes among the old zone, new zone and the outlying area of Santiago de Compostela.

2. CHAPTER 2: STATE-OF-THE-ART

Consumption is an integral part of the tourism experience; it includes not only tangibles, sights and sounds, but also the taste of the destination. Whether or not their main purpose of travel is cuisine, most tourists must eat at his or her destination and experience the local culture on a sensory level (Long, 1998). As local food is a fundamental element of a destination's attributes, it adds value to the range of attractions and the overall tourist experience (Symons, 1999). Local food is an essential part of local culture, delivering sociocultural meanings in the context of traditions.

There are few studies of tourist preferences in gastronomy tourism. This study includes research on the tourist preference for local food and the restaurants offering it. This chapter reviews the literature regarding the restaurant and food preferences of tourists and customers, including research about the context or situational variables that impact the overall evaluation of the user's gastronomic experience.

2.1. Preferences about Restaurant Attributes

Gastronomy involves cuisine and beverages of the destination. While there are different aspects of gastronomy, one main element is the restaurant, which offers service and product. Generally speaking, for any tourism the restaurant plays an important role in the tourist experience. According to Gyimothy, Rassing and Wanhill (2000), approximately 34%–54% of tourists consider restaurants an important aspect of visiting a destination.

Table 2.1. Restaurant Attributes Used for Restaurant Selection in This Study.

Restaurant Attributes	Clark & Wood (1998)	Cohen & Avieli (2004)	Cullen (2004)	Johns & Howard (1998)	Kivela et al. (2000)	Koo et al. (1999)	Sparks et al. (2003)	Upadhyay et al. (2007)
Location	-	-	X	X	-	X	X	X
Atmosphere/Ambience	X	X	X	X	-	-	X	X
Decoration	-	X	X	X	X	X	-	-
Popularity/Reputation	-	-	X	-	-	-	-	-
Service Quality	X	X	X	X	X	X	-	-
Food Quality	X	X	X	X	X	X	X	X
Food Price	X	-	X	-	-	X	X	-
Cleanliness	-	X	X	X	X	-	X	-
Working Time	X	-	-	X	-	-	-	X
Restaurant Popularity	-	-	X	-	-	-	X	X

Table 2.1 summarises various past studies and restaurant attributes used to analyse the influence of these attributes on tourist restaurant selection. A significant number of studies focus on the product in gastronomy tourism, but few use restaurants in their research. In fact, these past studies examined the complex issues related to the selection of restaurants by users, not tourists. These studies identified different restaurant attributes that influence the user's selection process, and they provided a framework for the restaurant selection process. Most studies suggest that restaurant selection follows a process of elimination based on each restaurant's attributes, such as quality, location and food.

Most past studies describe a variety of attributes. The literature review summarises how researchers unanimously agree the most important attribute that influences the decision of restaurant selection is the quality of food. However, if we accept food as an object, and not a restaurant attribute, then it is clear that restaurant cleanliness, service, location and atmosphere are the most important attributes.

The top five food attributes used by much of the literature are: food quality, service quality, ambience, decoration and cleanliness. For example, Cullen (2004) used food quality, cleanliness and ambience in his studies, where a sample size of 330 consumers was approached with various purposed questionnaires. Clark and Wood (1998) echo that food quality is an important variable in restaurant selection. Many researchers, such as Auty (1992), Johns and Howard (1998), Koo, Tao and Yeung (1999) and Kivela, Inbakaran and Reece (2000), used the abovementioned attributes in their studies of consumer intentions and restaurant selection.

For these reasons, although there are many factors for consideration and inclusion, most of the current research focuses on the quality of service and food. Furthermore, restaurant location, décor and ambience are emphasised as important factors augmenting tourists' gastronomic experience as well (Sparks, Bowen & Klag, 2003). In Sparks et al.'s (2003) study, more than 55% of respondents were affected by attractive décor when choosing a restaurant while traveling. Barta (2008), Cullen (2004) and Erik and Nir (2004) also found that attractive décor and atmosphere influence the choice of dining place. Specifically, Cullen (2004) found that 76% of respondents considered 'location' and 30% considered 'restaurant decoration' as two of the most important attributes when selecting a restaurant for a social occasion.

On the other hand, research into consumer behaviour in the restaurant industry mainly focuses on analysing and understanding the food attributes or characteristics that influence a consumer's choice of restaurant. 'Food liking' and 'food preference' are two major points of study in the restaurant industry. While many studies use these terms interchangeably, there are subtle dissimilarities between them. *Food liking*, according to Giesen et al. (2010), refers to 'the palatability or pleasure obtained from tasting a given food', while *food preference*, according to Rozin and Vollmecke (1986), concerns 'the availability of at least two different items, and refers to the choice of one rather than the other'. Although one can assume that consumers, including tourists, would be driven by food liking, other factors can influence a consumer's choice, such as availability, pricing and perceived health value (Logue, 1991).

In a cumulative form, food choice creates consumer demand for suppliers in the food industry who produce, process or allocate food (Sobal, Khan & Bisogni, 1998). Gastronomy plays a main role in the symbolic, economic and social aspects of life. It is a way of expressing preferences, personalities and cultural meanings. *Food intake* refers to the amount of food actually consumed by an individual (Kissileff & Van Itallie, 1982). Therefore, food liking and preference overlap, but they are not exactly equivalent concepts associated with food consumption behaviour (Logue, 1991).

It can be concluded that most of the studies focused on restaurant goers in general, rather than consumers who were tourists in the area. If the restaurants were for locals and the destination were not touristic, then it would make sense not to include the tourist profile, but most of the restaurants engaged in the studies were located in the tourist destinations. For instance, June and Smith (1987) developed a model of customer choice behaviour and demonstrated the efficiency of the model using decisions made about a restaurant meal. However, they studied consumer behaviour in general and did not account for tourist behaviour in specific.

This paper recommends future studies include both tourist and local profiles in the research. It would be noteworthy to see the difference in the attributes that influence the restaurant selection process for tourist and local profiles.

2.2. Food Preferences by Food Attributes

As previously mentioned, food is an essential part of culture and carries symbolic meaning in the context of traditions. It makes up a primary part of the vacation experience for the tourist. The analysis of literature available on restaurant attributes affecting the dining experience and the restaurant selection process includes food quality, which has been an essential attribute of restaurants in almost all investigations. This chapter analyses different studies regarding food attributes and attributes used for analysing the interaction between food and tourists.

An early study investigates the tourist classification regarding local food selection. Cohen (1972) uses concepts such as 'strangeness' and 'familiarity' when selecting local food. According to the author, tourists carry a cultural bubble based on their proximity to or confidence in the new food. Thus Cohen (1972) classifies tourists into institutionalised and non-institutionalised tourists.

Institutionalised tourists look for travel experiences from a familiar base, so their travel plan should be comfortable and non-threatening. For instance, they avoid eating local food but search for familiar food they know from back home. They often travel in tour groups, which means the so-called mass tourism belongs to this category. These types of tourists carry their inner bubble to the destination thus avoiding unknown food to be digested (Cohen, 1972). *Non-institutionalised tourists* attempt to move away from regular packages and popular tours, therefore seeking personal and unique experiences. These tourists enjoy tasting local food, including the experience of watching its preparation.

In a broader range, Plog (1974) applied the population curve of psychographic groups to classify tourist types into self-inhibited psychocentric tourists, near psychocentric, mid-centric, near-allocentric and allocentric tourists. His study extends Cohen (1972) using the same concepts as 'strangeness' and 'familiarity', but extending these concepts to the destination in general. According to Plog, allocentric travellers look for new discoveries and novel destinations. Thus, they can be matched as Cohen's non-institutionalised tourists. Psychocentric travellers tend to travel to popular and safe places, as well as prefer similar places to their homes. This makes them coherent with Cohen's institutionalised tourists. In-between allocentric and psychocentric travelers are near psychocentric, mid-centric and near-allocentric travellers. The two-edged typology of Plog is similar to Cohen's tourist typology but introduces three more levels in-between.

Cohen (1979) later extended the classifications into five groups: existential tourists, experimental tourists, experiential tourists, recreational tourists and diversionary tourists. Not only were 'strangeness' and 'familiarity' attributes used but also attributes such as purpose of the visit, authenticity, tourist expectation and interpretation. His research focused not only on the food but also on the destination itself (Cohen, 1979).

Existential tourists tend to abandon their own culture and seek everything local from the destination, including the food (Cohen, 1979), which can be compared to the non-institutionalised tourist in Cohen's (1972) earlier study. They seek local culture to 'go native' (Redfoot, 1984). When it comes to authenticity, they are more trustful of the local. *Experimental tourists* are very close to existential tourists but they tend to experiment with various potential elective centres of interest. Experiential tourists aim to participate vicariously in the authentic life of the local: they read and learn from media about the local culture, and experience it without being directly in touch with the local. *Recreational tourists*

tend to seek joy rather than local life. They are prepared to accept authenticity for the sake of experience, but usually 'deep down' they are not convinced of its authenticity. Finally, *diversionary tourists* are closed tourists who do not seek any authenticity and tend to be far from local life, including the local food, which can be compared to the institutionalised tourist type (Cohen, 1972).

Food-related personality traits are individual characteristics and psychological precursors that influence consumer behaviour. When it comes to tourist food consumption, two main traits are identified in the food literature: food neophobia and variety seeking. These traits use the same attributes as Cohen's (1972) 'strangeness' and 'familiarity'. According to the study of Fischler (1988), *neophobia* is the tourist tendency to avoid interaction with local or unknown food, and *neophilia* is the tourist tendency to be open to local or unknown food.

According to the descriptions, both traits can be found on an individual level. Although suspicious of foreign food (neophobia), tourists can be interested in trying unknown food for the novelty (neophilia). Cohen and Avieli (2004) argue, however, that eating involves actual ingestion of unknown food at the tourist destination, which might make prominent the neophobia of tourists. Along the same line of thinking, Torres (2002) emphasises tourist nationality as the main variable with regard to local food consumption. According to him, many studies suggest that tourists generally prefer foods to which they are accustomed and resist trying local cuisine.

Finkelstein (1989) proposed a more specific classification on the basis of theoretical insights. He divided dining experiences into three main categories according to preferences about local food: experiential, experimental and existential. *Experiential dining experience* is the least active type in which diners are referred to as 'try at least-once', where consumers try some

unfamiliar food at least once. *Experimental dining experience* is the medium active type in which diners taste unknown food on a trial basis to find the food that complements their previous culinary preferences. Finally, *existential dining experience* is the most active type, and represents those diners devoted to trying local food and finding new experiences.

Hjalager (2004), on the other hand, identified four modes of gastronomy tourists with regard to their attitudes and preferences for familiarity or novelty of food at the host destination: 'recreational', 'diversionary', 'existential' and 'experimental'. Hjalager's (2004) study is based on theoretical insights into different attitudes and preferences toward food interaction but it lacks empirical research data. *Recreational* and *diversionary gastronomy tourists* are risk avoiders who keep away from unknown food and prefer dining in familiar restaurants. *Existential* and *experimental gastronomy tourists* actively seek new food/dining experiences at the destination. Hjalager's (2004) study follows the line of Cohen (1972), where the latter distinguishes institutionalised and non-institutionalised tourists in terms of being open or closed to local or unknown food.

Kim, Eves and Scarles (2009) explain consumption of local food at the destination using three main factors. First is the physiological factor, which includes food neophobia and food neophilia. Second is the motivational factor, which includes sensory appeal, exciting experience, etc. Third is the demographic factor, which includes the gender, age and education of the tourists. Kim et al.'s (2009) study is based on qualitative research interviewing 20 participants who had tourist dining experience. The study found that tourists who had a predisposition to neophobia seemed reluctant to eat exotic food (Kim et al., 2009).

Food neophobia can be defined as the reluctance to ingest foreign or novel foods (Pliner & Salvy, 2006). Most people are suspicious of ingesting novel foods, even if they are open to

trying various food types. Therefore, food neophobia is a very important phenomenon that dictates human food choice and can be described as the 'natural biological correlation of omnivorous exploratory behavior' (Köster & Mojet, 2007). According to Pliner and Salvy (2006), food neophobia can be conceptualised as a personality trait involving a relative preference for familiar foods over novel foods. Although in most individuals food neophobia is consistent over time and in various situations, the extent to which an individual suffers from food neophobia can vary greatly. In 1992, Pliner and Hobden (1992) developed a Food Neophobia Scale, an instrument with which to measure the extent to which an individual suffers from food neophobia, scaled from one to 10. Research shows that when measured with the scale, people who are more neophobic tend to expect various novel foods to taste worse than those less neophobic, and thus are generally less willing to taste or choose novel foods (Pliner & Hobden, 1992; Tuorila et al., 1994; Tuorila et al., 1998).

Variety-seeking behaviour generally occurs when consumers switch from one hedonic product to another because of the utility derived from experiencing variety. Hedonic products can be referred to as products for which fun, pleasure or enjoyment is a primary benefit, and they tend to generate stronger emotional responses (Carroll & Ahuvia, 2006). Tourism and gastronomy are often regarded as hedonic products and, thus, can be subject to the influence of variety-seeking behaviour. For example, variety-seeking behaviour is very common in the food market, as product differentiation, driven by real or illusory perceptions, make people want to switch brands for the sole purpose of trying different things. Moreover, in the tourism industry, Kemperman et al. (2000) found that choice is partly influenced by variety-seeking tendency.

Analysing tourist food consumption patterns is a complex task because the entity is directly affected by a variety of factors. Socio-demographic factors, such as age, gender, education, occupation, income and marital status, all play an important role in consumer food choices. Socio-demographic factors combined with religious and cultural influences play a complex role in user choices. Khan (1981) states that due to diminished taste and olfactory sensitivity, elderly people tend to display different food preferences compared to younger persons. Rozin (2006) points out that meat avoidance, weight anxieties and biases toward low-calorie foods are higher in women in the USA, especially those of younger age.

Chang, Kivela and Mak (2011) identify three gastronomy groupings in their investigation. It is based on a qualitative analysis of 25 tourists from three groups from China, Hong Kong and Taiwan, where they underwent seven interviews, including group interviews after having sufficient dining experience in Australia as tourists. The three groups were taken as a target because all shared the same Chinese cuisine from home, as Chang et al. (2011) describe it in the investigation. According to their findings, Chinese tourist food preferences fall into three groups: Chinese food, local food and non-fastidious about food selection. The Chinese food group includes the diners who seek their own culture in the local food. The local food group includes the diners who try the local food to explore the culture of the destination. The non-fastidious about food selection group identifies the diners who have little interest in trying the local food or they do not have any interest in experiencing the local food.

Additionally, many studies about the influence of food attributes on local food selection or dining preferences are based on theoretical insights (Long, 1998; Redfoot, 1984; Rozin & Rozin, 1981). Table 2.2 summarises the findings.

Table 2.2. Food Attributes Used for Food or Restaurant Selection.

Food Attributes	Chang et al. (2011)	Cohen (1972, 1979) / Cohen & Avieli (2004)	Finkelstein (1998)	Fischler (1988)	Hjalager (2004)	Kim et al. (2009)	Koo et al. (1999) / Kivela et al. (2000) / Cullen (2004)	Long (1998)	Plog (1974)	Redfoot (1984)	Rozin & Rozin (1981)	Torres (2002)
Food	X	X	X	X	-	X	-	X	-	-	X	X
Food Flavour	X	X	X	X	-	X	-	X	-	-	X	X
Cooking Method	X	-	-	-	-	-	-	-	-	-	-	-
Ingredients	X	-	-	-	-	-	-	-	-	-	-	-
Food Price	X	-	-	-	-	-	X	-	-	-	-	-
Quality	X	-	-	-	-	-	X	-	-	-	-	-
Authenticity	-	X	-	-	X	X	-	-	X	X	-	-
Strangeness/ Familiarity	-	X	X	X	X	X	-	X	X	X	-	X
Neophobia/Neophilia	X	X	-	X	-	X	-	-	-	-	-	X

To sum up, the main factor driving the gastronomy experience discussed in the literature concerns how tourists accept and/or interpret the food they have experienced, which is described as the strangeness / familiarity attribute in the studies. Food neophobia / neophilia is the second attribute used in most studies, where, food strangeness / familiarity are very close attributes. The only difference is that neophobia and neophilia traits can be found in the same person.

As it has been indicated in this section, the food is stated as an object and not as a restaurant attribute. As an object, it is clear that different aspects have been taken into account, but most

of the studies are either based on theoretical insights without any experimental evidence or based on qualitative research, resorting to stated preferences.

2.3. Context and Situational Variables Influencing the Gastronomy Experience of Tourists

There are many studies about the context or situational variables of the gastronomic experience. These variables influence the user evaluation of the experience, which happens to occur during the experience. Context is identified as an important factor in understanding the acceptance of food, as well as in food consumption prediction (Meiselman, Hirsh & Popper, 1988). Contextual variables are situational variables that impact tourist choice during the selection of an eatery. These variables are difficult to be completely controlled (Cardello, 1994). Context variables cannot be excluded from research because it may oversimplify the user experience and thus provide incomplete or misleading results (Bell & Meiselman, 1995; Meiselman, 1993). Thus in our research, the context variables have been taken into account, and their impact on the overall evaluation of the experience by the tourist has been analysed.

Belk (1975) suggests that situational variables are to be thought of as an influence arising from factors specific to a certain time and place, and independent of consumer and object characteristics. This means situational variables are independent and, in most times, uncontrollable variables that may influence factors experience.

There have been various attempts to develop comprehensive taxonomies of situational variables. The earliest by Sherif and Sherif (1956) suggested using general guidelines. Then, Sells (1963) constructed a subjective classification of over 200 situational variables. Even though the classification was broad, it lacked characteristics such as noises, colours and size of the area.

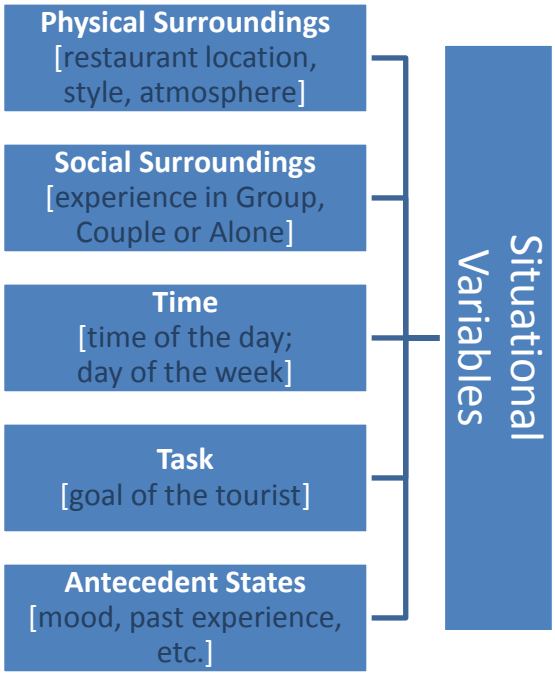


Figure 2.1. Situational variables grouped by five characteristics.

Belk (1975) introduced five groupings regarding the situational factors: physical and social surroundings, temporal perspective, task definition and antecedent states. *Physical surroundings* include tangible properties of the situation, such as location and decoration. *Social surroundings* include the presence of other people during the experience, such as parents, friends and spouses. As our research is held for one month, the logical time variables would be the time of day, meaning afternoon or evening (the restaurants serve only during these hours), and the weekday, meaning weekend or working day. *Task definition* is a particular goal that a user has in the situation, such as eating out, having fun or chatting. *Antecedent states* is the temporal mood or condition that a consumer brings to the situation; that is, the past experience of the user has partially been taken into account.

In some studies, the abovementioned variables are defined as context variables. 'Context' is defined as the situation in which something happens: the group of conditions that exist where

and when something happens ('Context', 2014). As can be interpreted, context variables are those variables arising from the situation, meaning the experience or situational variables. As shown in Figure 2.1, Belk (1975) provided a general grouping in regard to situational/context variables.

Table 2.3. Context Attributes Used for Food or Restaurant Selection.

Context Attributes	Anic & Radas (2006)	Belk (1975)	Kahn (1995)	King et al. (2004)	Köster (2007)	Lindemann et al. (1996)	Meiselman (1988)	Park et al. (2007)	Randall & Sanjur (1981)	Sells (1963)
Location	X	X	-	X	X	X	X	X	-	X
Time	X	X	X	-	X	X	X	X	-	X
Day	X	X	-	-	X	-	X	-	-	X
Season	X	X	X	-	X	-	X	X	X	X
Weather	X	X	-	-	-	-	X	X	-	X
Mood	-	X	-	-	-	-	-	-	-	X
Social Surroundings	X	X	X	X	X	X	X	-	X	-
Atmosphere	X	X	X	X	X	X	X	-	X	-
Motivation	-	X	-	-	-	-	-	-	-	X

Based on theoretical insights, a complex model of essential factors that influence eating and drinking behaviour and food choice was generated (Köster & Mojet, 2007). It included six different variables that were to be explored: psychological, socio-cultural, biological, physiological, situational factors, product characteristics perception and extrinsic product characteristics expectations. According to Köster and Mojet (2007), situational factors such as time, social and physical surroundings are grouped as one variable.

In King et al.'s (2004) study, the analysis of positive and negative effects of context factors on the meal component has been carried out, while adding different context factors on each test in order to find out the impact of each individual context factor. The research uses six tests from a population of 545. According to King et al. (2004), different meal components, different context factors and their different combinations have a different effect.

Context attributes such as location, surrounding people (social context), speed and mood have a significant impact on the choice of consumers (Jaeger & Rose, 2008). In this study, a choice between different types of fresh fruit is analysed, where 160 people were given different options to select from, and thus it was stated preferences of those users. They have used context attributes in the research to allocate the level of influence of different attributes in the selection of the certain option.

For the sake of the usage of situational / context variables, Table 2.3 summarises the variables with their usage by different scholars.

3. CHAPTER 3: METHODOLOGY

3.1. Restaurant, Food and Context Variables

Using the entities and their variables mentioned in Chapter 2, we have identified the three variables for our research: location, atmosphere and social context.

First, the *location* variable defines the location of the restaurants that participated in the Santiago(é)Tapas contest. The location variable includes three main values—old, new and outlying area—that come by city setup and expert of the Santiago de Compostela Turismo office. Many researchers, such as Johns and Howard (1998), Koo et al. (1999), Sparks et al. (2003), Cullen (2004), and Upadhyay, Kumar and Thomas (2007), have used the variable.

Second, the *atmosphere* variable defines the ambience of the restaurant. The atmosphere variable includes three main values: adult, young and mixed ambiences. Many researchers, such as Clark and Wood (1998), Johns and Howard (1998), Sparks et al. (2003), Cohen and Avieli (2004), Cullen (2004), and Upadhyay et al. (2007), have the variable as a main attribute in restaurant selection research.

Third, the *social context* variable is a situational variable that influences the tourist evaluation of the experience during the experience. It falls under the physical surroundings group of Belk (1975). Most studies that used context attributes include social surroundings as a main attribute.

3.2. Santiago(é)Tapas Experiment

3.2.1. The contest

Figure 3.1. Santiago(é)Tapas contest (2010 and 2011). The photos show a coaster voting forms, restaurants and advertising panes.

Each year the Santiago de Compostela Turismo office organises the Santiago(é)Tapas contest in the city. The contest promotes gastronomy and attracts participation using different prizes for certain groups of consumption of tapas and drinks, which are collected through a personal Tapasporte. The contest is part of the Santiago marketing campaign. The contest is a vital development tool in the gastronomy of tapas as new types of tapas are included in the contest every year.

Figure 3.2. Tapasporte of Santiago(é)Tapas contest. Consumers receive stamps for their gastronomy experiences from different bars/restaurants of Santiago de Compostela

Figure 3.2 shows an example of personal Tapasporte book, where consumers can get stamps of their gastronomy experiences from different bars/restaurants of Santiago de Compostela.

In the Santiago(é)Tapas contest, many restaurants participate elaborating on their best tapas. The tapas and drinks are promoted in the Tapasporte, a guidebook for international, domestic and local tourists. It includes information about restaurants, locations, serving timings and brief descriptions of the participating restaurants. The Tapasporte also includes detailed information about the tapas and drinks offered in the contest. When a tourist experiences the tapa or drink, the restaurant puts a stamp on his or her Tapasporte. By collecting certain groups of stamps, tourists and locals can get certain prizes. Apart from these prizes,

consumers giving the personal information can participate in a lottery to win a trip to a variety of tourist destinations. The best three tapas also get a monetary prize and a trip to one of the promoted tourist destinations promoted.

In this way, the contest aims to attract more tourists to Santiago to try tapas and drinks; and to motivate the restaurants to create new tapas and increase the quality of the local gastronomy.

3.2.2. Design

In accordance with the Santiago de Compostela Turismo office and the University of Santiago de Compostela, the Santiago(é)Tapas experiment occurred in 2010 and 2011. The experiment aimed to create a recommendation system in the local gastronomy for tourists.

Figure 3.3 shows registration pages used to get the data about the participants of Santiago(e)Tapas, and our experiment.

For the purpose of this experiment, a website (http://gsi.dec.usc.es/santiagoetapas/) was created. Registration on the website was promoted in the participating restaurants and in the Tapasporte during the Santiago(é)Tapas contest. Those who registered to participate in the experiment were gifted with 5 free tapa tickets. To get those tickets, international and domestic tourists were asked to first register on the Santiago(é)Tapas experiment website. On the registration page, users entered basic information as shown in Figure 3.3.

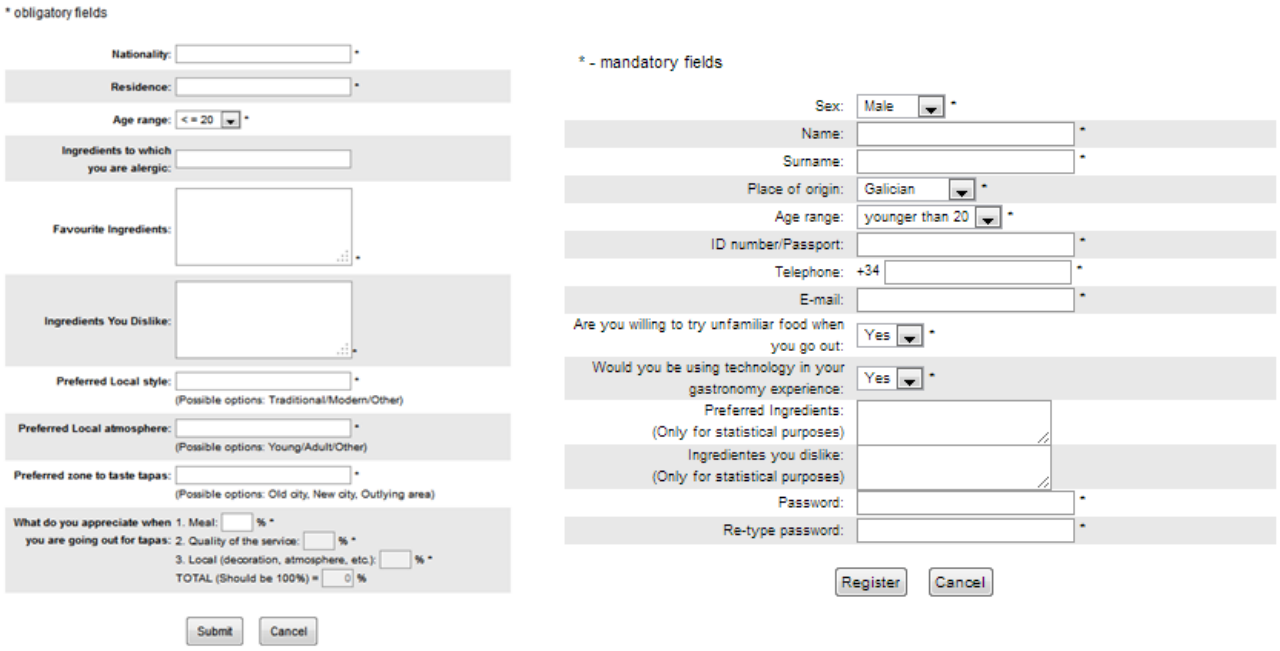


Figure 3.3. The registration pages for the Santiago(é)Tapas experiment in 2010 (left) and 2011 (right). The registration pages captured data about the participants of the Santiago(é)Tapas content and our experiment.

The first 75 registered users were selected for the experiment. These 75 people were informed about the steps of the experiment. They were expected to try seven tapas among the tapas participating in the contest. After experiencing the tapas, their experience feedback was entered into a database. The database was also populated with the experience of other international and domestic tourists who tried and evaluated tapas participating in the contest. After gathering the data, the selected users were given five recommendations for tapas and restaurants generated by five different recommender algorithms. The algorithms took into account the information of 13,324 evaluations in 2010 and 14,759 evaluations in 2011 as well as the evaluations of our selected users.

Figure 3.4. User page of Santiago(é)Tapas experiment 2011.

Apart from the website-based survey, a paper questionnaire was designed for international tourists. The questionnaire included queries about preferences on restaurant attributes. The purpose of the questionnaire was to increase the sample of interrogated international tourists to get more insight into preferences on restaurant attributes.

3.2.3. Dataset

As described in the previous section, the Santiaigo(é)Tapas contest included many restaurants and the tapas offered by these restaurants. During the contest, each participating restaurant had coaster-shaped voting forms. After tasting a tapa, the tourist filled in the voting form and put it in a special box. This voting form asked about the user's demographics, asked about the evaluation of the tapa and restaurant using a Likert scale, and gathered info about the context of the experience, namely with whom and when the experience occurred. This information was entered into the database.

Figure 3.5. Coaster voting form for Santiago(é)Tapas contest 2011.

The information gathered from the Santiago(é)Tapas 2010 contest was inserted in a database. First, there was the registered user information. The user profile data included the following

attributes: first name, surname, sex, DNI (identification number), telephone number (not obligatory), email address, nationality, residence, age range, favourite ingredients, distasteful ingredients, allergic ingredients, preferred restaurant style, preferred restaurant atmosphere and preferred restaurant zone.

Second, there was the information about tapas and restaurants. The restaurant profile data included the following information: restaurant number (associated with the Santiago de Compostela Turismo office, a content organiser), name, address and location (latitude and longitude). The tapa profile data included tapa number (associated with the Santiago de Compostela Turismo office), corresponding restaurant and name (in English, Spanish and Galician).

Third, there was the questionnaire survey data. The obtained data included the participant's first name surname, sex, age range, nationality, temporary residence, permanent residence, preferred restaurant style, preferred restaurant atmosphere, preferred restaurant zone, knowledge of local cuisine (tapas), level of experience in tapa tasting and willingness to try unfamiliar food.

Fourth, there was the coaster voting form evaluation data obtained after the contest. The evaluation profile data included information on user ID, DNI, tapa number, tapa rating (evaluation of the tapa using a Likert scale ranging from 0–5), service rating, restaurant value, global experience rating and restaurant ID.

In the 2011 contest database, slight changes were made to include new attributes expected to influence the user evaluation of the tapa experience. Figure 3.5 shows the coaster voting form with the data fields where tourists had to fill in the data. Most important among these new

characteristics were the context attributes. Figure 3.6 shows how the rating profile was expanded to include time, month and accompanying people as context attributes.

The restaurant profile also was extended to incorporate information such as zone, environment and restaurant style. The information came from the Santiago de Compostela Turismo office, which in turn came from the participating restaurants. For example, the restaurant environment is a numeric attribute with values 1, 2 and 3, representing young, adult and indifferent environment types, respectively. The restaurant profile finally included restaurant id, zone id (five zones introduced by the Santiago de Compostela Turismo office where some attraction is taken as a core), environment, style, address and location.

The tapa profile only added one attribute: the tapa character. It also has a numeric attribute of values 1 and 2 representing traditional and original tapa types, respectively. This information also came from the Santiago de Compostela Turismo office. When a restaurant applied for participation in the contest, it had to introduce the corresponding information about the offered tapas. The tapa profile thus includes tapa id, name (in English, Spanish and Galician), character and restaurant (to which the tapa corresponds).

The users who registered in our system to participate in the experiment had to introduce information such as first name, surname, sex, origin, age range, DNI, telephone (not obligatory), email, preferred ingredients and undesired ingredients. The data was inserted into the user profile along with their corresponding user id.

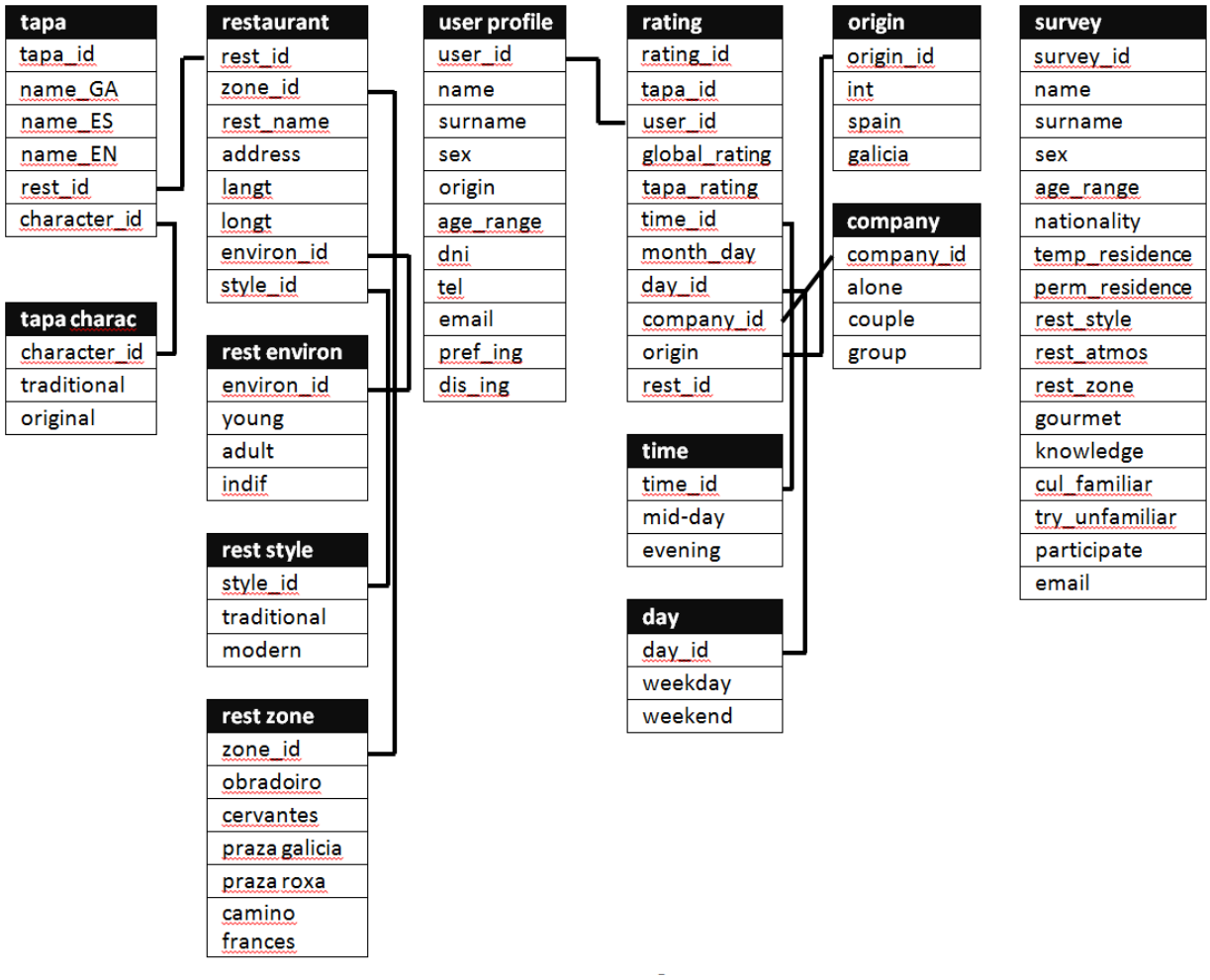


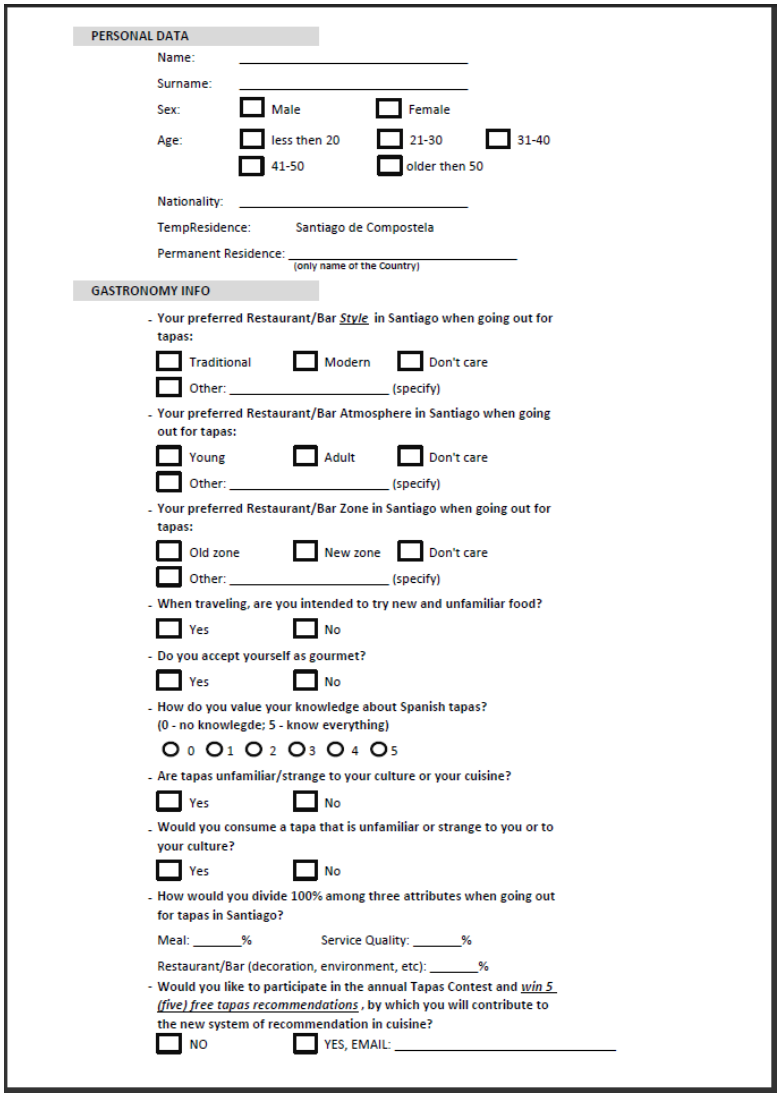
Figure 3.6. Santiago(é)Tapas contest 2011 data set.

After the contest, the coaster evaluations were entered into our database. The rating data table included information on user ID (corresponding to the user profile data table, where DNI is used for checking correspondence), DNI, tapa number (corresponding to the numbering system used in the tapas data table), tapa value (evaluation of tapa using the Likert method, where 0 is does not like at all, and 5 is like a lot), service value, restaurant value, global experience value and restaurant ID (corresponding to restaurant data table ID).

3.2.4. Stated and revealed preferences

As mentioned above, when registering on the Santiago(é)Tapas experiment website, users had to provide information about their preferences. For the purpose of this thesis, these preferences are designated as ‘stated preferences’ because the user stated them, and the preferences are not their choice without bias. Apart from the registration form, the questionnaire analysis has been made where users stated their preferences prior to consuming the tapas. Figure 3.7 shows the questionnaire that was used to get wider information about preferences. This data is also referred to as ‘stated preferences’.

Also mentioned above, both international and domestic tourists who experienced the tapas of restaurants participating in the Santiago(é)Tapas contest had to vote for the tapa and the restaurant. The user’s preference is identified through these votes; therefore, it is referred to the user’s ‘revealed preferences’. For the purpose of this research, the revealed preference is the real preference of the user depending on the situation, mood and context of the experience, which may differ from the stated preference.



PERSONAL DATA

Name: _____

Surname: _____

Sex: ☐ Male ☐ Female

Age: ☐ less then 20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ older then 50

Nationality: _____

TempResidence: Santiago de Compostela

Permanent Residence: _____ (only name of the Country)

GASTRONOMY INFO

- Your preferred Restaurant/Bar *Style* in Santiago when going out for tapas:
  ☐ Traditional ☐ Modern ☐ Don't care
  ☐ Other: _____ (specify)
- Your preferred Restaurant/Bar Atmosphere in Santiago when going out for tapas:
  ☐ Young ☐ Adult ☐ Don't care
  ☐ Other: _____ (specify)
- Your preferred Restaurant/Bar Zone in Santiago when going out for tapas:
  ☐ Old zone ☐ New zone ☐ Don't care
  ☐ Other: _____ (specify)
- When traveling, are you intended to try new and unfamiliar food?
  ☐ Yes ☐ No
- Do you accept yourself as gourmet?
  ☐ Yes ☐ No
- How do you value your knowledge about Spanish tapas? (0 - no knowlegde; 5 - know everything)
  ○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5
- Are tapas unfamiliar/strange to your culture or your cuisine?
  ☐ Yes ☐ No
- Would you consume a tapa that is unfamiliar or strange to you or to your culture?
  ☐ Yes ☐ No
- How would you divide 100% among three attributes when going out for tapas in Santiago?
  Meal: _____% Service Quality: _____%
  Restaurant/Bar (decoration, environment, etc): _____%
- Would you like to participate in the annual Tapas Contest and *win 5 (five) free tapas recommendations*, by which you will contribute to the new system of recommendation in cuisine?
  ☐ NO ☐ YES, EMAIL: _____

Figure 3.7. Questionnaire for Santiago(é)Tapas experiment.

3.3. Data Analysis

For the analysis of stated and revealed preference of the users, we used different methods and techniques for identifying different purposes.

3.3.1. *K*-means clustering

K-means clustering is a method of cluster analysis that aims to arrange *n* observations into *k*-clusters where each observation belongs to the cluster with the nearest mean or centre ('*k*-means clustering', n.d.). Given a set of observations (x1, x2, …, xn), where each observation is a *d*-dimensional real vector, *k*-means clustering matches the n observations into k sets ($k \leq n$) S = {S1, S2, …, Sk} to minimise cluster sum of squares (WCSS):

$$\arg_{\mathrm{S}}\min \sum_{i=1}^{k} \sum_{x_j \in \mathrm{S_i}} \left\| \mathrm{x_j} - \mu_i \right\|^2 \quad (1)$$

where, μi is the mean of the points in Si.

3.3.2. *X*-means clustering

X-means clustering is an extension of *K*-means clustering and was proposed to overcome its three major shortcomings: (1) it scales poorly computationally, (2) the number of clusters *K* has to be supplied by the user and (3) the search is prone to local minima (Pelleg & Moore, 2000). *X*-means provides an efficient estimation of the number of clusters by exploiting cached sufficient statistics and testing whether a *K*-means trial selects the most promising subset of classes for refinement. This method yields a fast, statistically founded algorithm that outputs both the number of clusters and their parameters.

3.3.3. Expectation-maximization algorithm

Expectation-maximization (EM) algorithm is a method aimed at finding maximum likelihood or maximum a posteriori (MAP) estimates of parameters ('Expectation-maximization algorithm', n.d.). It is an iterative method that performs by alternating between an expectation (E) step, which computes the expectation of the log-likelihood assessed using the current

estimate for the latent variables, and a maximisation (M) step, where parameters are calculated by maximising the expected log-likelihood found on the E step.

Given a statistical model consisting of observed data with a set X and a set Z of unobserved data or missing values, and a vector of unidentified parameters θ, together with a likelihood function L(θ; X, Z) = p(X, Z|θ), by the marginal likelihood of the observed data, the maximum likelihood estimate (MLE) of the unidentified parameters is determined:

$$L(\theta; X) = p(X|\theta) = \sum_{Z} p(X, Z|\theta) \qquad (2)$$

3.3.4. Hypothesis testing

A null hypothesis is a statistical hypothesis testing, where possible hypothesis rejection under the assumption that it is true is tested (where usually observations are the results of chance), and is denoted by H_0 ('Statistical hypothesis testing', n.d.). It is a tool to reject or to prove the existence or non-existence of a relationship between two attributes investigated.

In the statistical implication of observed data of a scientific experiment, the null hypothesis refers to a general point where there is no relationship between two measured phenomena or that a possible behaviour has no effect. By rejecting or disproving the null hypothesis, it is concluded there is a relationship between two phenomena or that a possible behaviour has a measurable effect. In the modern practice of science, the main aim of this implication is to prove the claim to be false.

For statistical inference, null hypothesis concept is used differently in two approaches. Even though the same term is used, when it comes to statistical significance its usage is different. According to Fisher's significance testing approach, on the basis of data a null hypothesis is

theoretically rejected, but never accepted or proved. Whereas, according to Neyman and Pearson's significance testing approach, a null hypothesis is analogised with an alternative hypothesis, and thus by rejecting the null hypothesis, the alternative hypothesis is to be accepted on the basis of data. These two approaches criticised each other, but today a hybrid approach is widely practiced and presented in papers.

3.3.5. Chi-square test

Chi-square test or X^2 test is a statistical hypothesis test in which the sampling distribution of the test statistic is a chi-squared distribution when the null hypothesis is true ('Chi-squared test', n.d.). The chi-square test also is a test in which this is asymptotically true, meaning the sampling distribution can be made to approximate a chi-squared distribution as closely as desired by making the sample size large enough:

$$X^2 = \sum \frac{(o - e)^2}{e} \qquad (3)$$

where, *o* is observed data and *e* is expected data.

Using the chi-squared distribution to interpret Pearson's chi-squared statistic requires one to assume the discrete probability of observed binomial frequencies in the table can be approximated by the continuous chi-squared distribution. This assumption is not quite correct and introduces some error.

To reduce the error in approximation, Yates, an English statistician, suggested a correction for continuity that adjusts the formula for Pearson's chi-squared test by subtracting 0.5 from the difference between each observed value and its expected value in a 2 × 2 contingency table. This reduces the chi-squared value obtained and thus increases its *p*-value.

The effect of Yates' correction is to prevent overestimation of statistical significance for small data. This formula is chiefly used when at least one cell of the table has an expected count smaller than 5. Unfortunately, Yates' correction may tend to overcorrect. This can result in an overly conservative result that fails to reject the null hypothesis when it should ('Yates's correction for continuity', n.d.).

The following is Yates' corrected version of Pearson's chi-squared statistic:

$$X^2_{Yates} = \sum_{i=1}^{N} \frac{(|O_i - E_i| - 0.5)^2}{E_i} \qquad (4)$$

where, O_i is an observed frequency, E_i is an expected (theoretical) frequency asserted by the null hypothesis and N is the number of distinct events.

3.3.6. Associate rule learning method

Associate Rule Learning is a method used to find associations between many variables ('Association rule learning', n.d.). It is intended to identify strong rules discovered in databases using different measures of interestingness. Using Associate Rule Learning, the confidence for buying or using a certain product based on previous consumption of certain products is calculated. That is, it defines a rule basing on the previous consumptions of the user:

$$\text{Confidence (X->Y)} = \text{Support (XUY)} / \text{Support (X)} \qquad (5)$$

where, Support (XUY) is the proportion of transactions in the dataset that contain the items set X and Y, and Support (X) is the proportion of transactions in the dataset that contains the item set X.

4. CHAPTER 4: DOMAIN MODEL

The first step in our research consists of understanding the domain of our problem. It is essential to sketch the basis before any research, so it supports in understanding and solving the problem. The domain model described below includes the description of the entities involved in the gastronomy experience. Moreover, the relationship among the entities and the entity attributes are described.

4.1. Entity–Relationship Model

In our research, the entity model includes three main entities: tourist, restaurant and tapa. The main entity is tourist and includes two instances: international and domestic tourists. Tourist is at the core of the research, as it is directly involved with the gastronomy experience and its evaluation. The inter-relation between these entities and their attributes are shown in Figure 4.1.

Tourist has its own attributes like character, age range and origin. In fact, culture may determine the tourist's preferences on gastronomy**.** Other attributes are: expectations about the food of the destination they are traveling to, tourist mood when experiencing the tapa, the degree of influence of the surrounding people and finally the prior gastronomy experience.

Gastronomy experience involves the choice of a restaurant or a gastronomy place. After deciding where to eat out, there are restaurant attributes that may impact the tourist evaluation of the experience. These attributes are: location, atmosphere, style (decoration), hygiene, service quality, additional services (live music, TV set, etc.), quality / price ratio and noise, among others.

Last comes the food—which is tapa in this case. The tapa has its own attributes, which are: appearance (if it looks tasty or nasty), smell (if the tapa has some smell that attracts the tourist), taste, ingredients (if the tapa has some ingredient(s) that remind tourist his/her culture), amount (if it is big or small), temperature (if it is served hot or cold) and others.

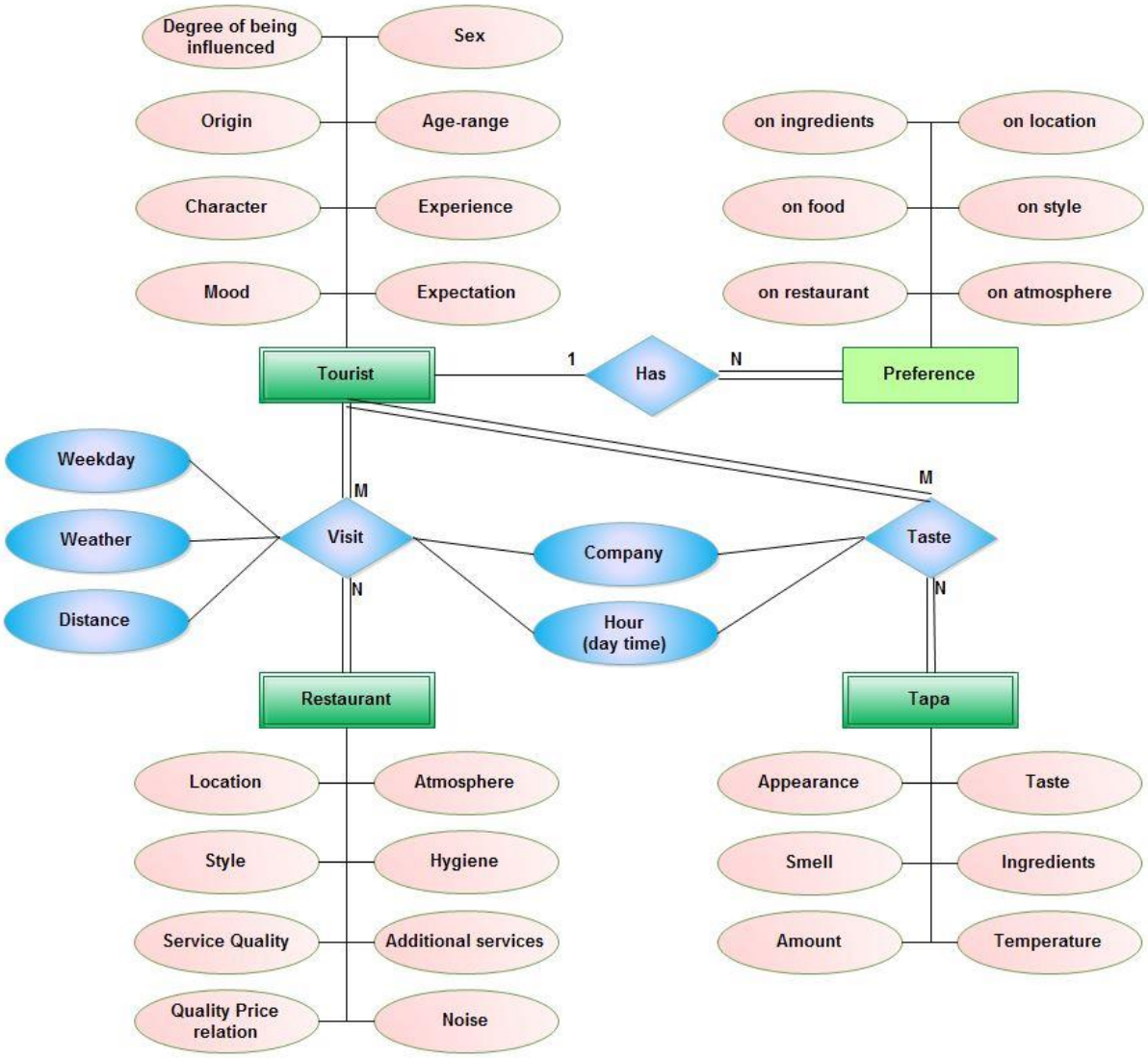


Figure 4.1. Entity–relationship model of the research. The main entities are tourist, restaurant and tapa. Preferences were modeled as an entity and context variables are characterised as relationships.

Tapa is the product with which a tourist gets the experience and the restaurant is the one offering the tapa. Even though the gastronomy experience of the tourist involves direct consumption of the tapa, the restaurant is still as important as the tapa. The restaurant creates the environment for the consumption and highly influences the final evaluation of the gastronomy experience.

As stated in Figure 4.1, a tourist has some predefined preferences when going out for a gastronomy experience. One tourist preference is toward the ingredients of the food. The tourist also has preferences toward style and atmosphere of the restaurant offering the tapa. These preferences highly impact the tourist in regard to the choice of the restaurant or tapa. These tourist preferences are described in detail in later sub-chapters.

The research includes the attributes of relation of the tourist with the tapa and the restaurant. These attributes are called context attributes in some literature and situational variables in other literature. According to Belk (1975), situational variables are the influence arising from factors special to a certain time and place; and they are independent of consumer and object characteristics. In Figure 4.1, all entities, attributes, and their interrelation are shown.

The choice is made under a certain environment, which includes attributes such as social context, daytime, weekday, weather and location. These are attributes of tourist relation to tapa and restaurant, or as described earlier, situational variables.

One situational variable is social context, namely the type of people accompanying the given tourist. It influences the choice of restaurant or tapa to a certain degree. Besides, the time of the day, weekday (working day or holiday), weather (cold, sunny or raining), and location (how far to walk to the restaurant) as well has high influence on the choice.

To understand the tourist experience, all these entities must be taken into account. In the following sub-chapters, each entity is explained in detail along with the usage of their attributes.

4.2. Tourist

Tourist is at the core of the entity–relationship model of our research. As the one who evaluates the gastronomy experience, the tourist has a big impact on the overall research. As stated earlier, a tourist has his or her own attributes that can be grouped into observed and unobserved as well as constant and variable attributes.

Many studies highlight that the country of origin influences tourist perception of a destination, satisfaction levels and tourist activities (Armstrong, Mok, Go & Chan, 1997; Danaher & Arweiler, 1996; Huang, Huang, & Wu, 1996; Richardson & Crompton, 1988). Similarly, Torres (2002) emphasises the nationality of the tourist as the main variable on local food consumption. These studies include tourist attributes, such as gender, age range, and nationality. These attributes are constant attributes, which means they have less probability of changing over time. Origin is the most constant attribute, as it can define from which gastronomy the tourist comes from, and the tendency of its change is very low. In our research, the origin is used for defining the type of tourist: international or domestic. Moreover, other constant attributes can be considered as well: sex, character, and the degree of the influence of others.

The origin attribute defines from which culture the tourist comes from, and predefines his or her preferences on eating culture. This attribute can be used in different forms, meaning, it can be defined by country, region or nationality. The origin attribute defines the tourist's own

food culture, which includes cooking methods, flavour and way of eating. It is one of the main attributes taken into account in the research.

The next attribute is the age range, which defines the tourist's age group. This attribute is taken into account in the research too. The age group defines which style, atmosphere and location a tourist chooses when going out for tapas. The age of the tourist can be used for grouping purposes, as certain age groups have a tendency to have the same likes and preferences on certain attributes.

The next attribute is the character of the tourist, which defines the nature of the tourist. This looks as whether a tourist is open to a new type of food, meaning, if the tourist is non-institutionalised or institutionalised. This attribute defines the tourist's willingness to try unfamiliar (when his or her origin is non-Spanish) food. This willingness defines the evaluation of the experience. If the tourist is not willing to try an unfamiliar food, then the possibility that he or she will not like the unfamiliar food is higher.

The degree of influence by others is another tourist attribute. It defines how much tourist is influenced by others. When in a company of friends or another, a tourist makes a decision under the influence of the preference of the company or if a tourist's preference dominates the company's preference in restaurant or tapa. This attribute determines how the social context attribute influences tourist preference.

The second group of attributes is variable attributes, which can change after each experience. These attributes evolve and change over time. For example, a person who never liked fish might change his or her opinion after trying a certain fish tapa because of the ingredients or cooking style. Other variable attributes are: mood, location, expectations, and tourist preferences for tapa or restaurant.

Another tourist attribute is mood, which defines how a tourist accepts negative aspects of the experience. If the mood of the tourist is bad, even the smallest negative aspect could lead to a negative evaluation of the overall experience. In the case of good mood, some aspects that might negatively influence the overall experience might not affect the evaluation of the experience. Thus, it is one of the most important attributes of the tourist to be taken into account. On the other hand, it is one of the hardest to be obtained from the tourist, as people tend to hide their mood, or prefer not state their mood correctly.

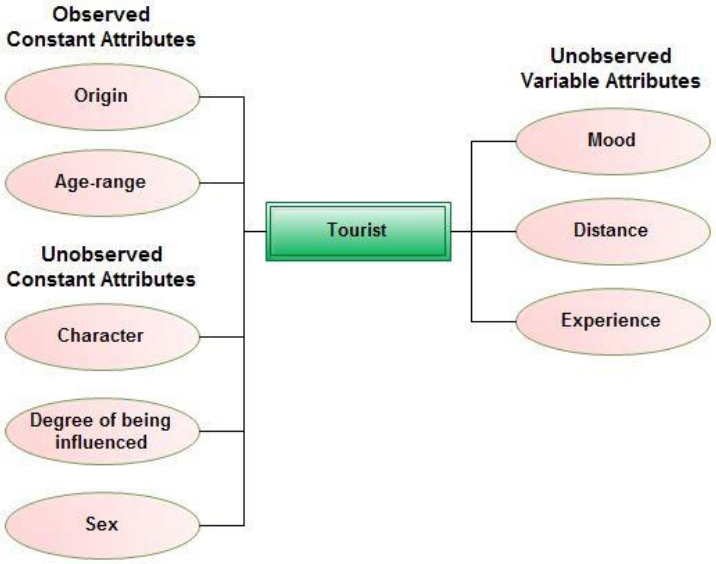


Figure 4.2. Tourist entity: Constant and variable types of attributes can be found in the data.

Distance is another attribute and it determines how much time a person takes to get to a restaurant. This attribute influences not only the mood but also a negative or positive evaluation of the experience. For example, in the case of bad weather, a tourist is most likely not to take a long distance for the gastronomy experience.

The next attribute is expectation. What a tourist expects is obtained from preliminary research before going to the destination. A tourist gets information by searching about the gastronomy

of the destination or by word-of-mouth from others who have previous experience. Summarising the information obtained, a tourist builds an expectation on the chosen restaurant. Another expectation is obtained from the preliminary view of the chosen restaurant, or from the price or the popularity of the chosen restaurant. Tourist expectations depend on many attributes. The influence of expectation is high on the final global gastronomy experience, because high expectation makes the evaluation criteria difficult, whereas low expectations make the evaluation criteria easy.

Another important attribute for this research is the primary tourist preferences on tapas and restaurants. In other words, what kind of food, ingredients and flavour does a tourist like when eating tapas, or what kind of place does he or she prefer when going out to a restaurant and etc. As stated earlier, this attribute is tended to evolve over time, and the influence of each experience is positive, negative or neutral.

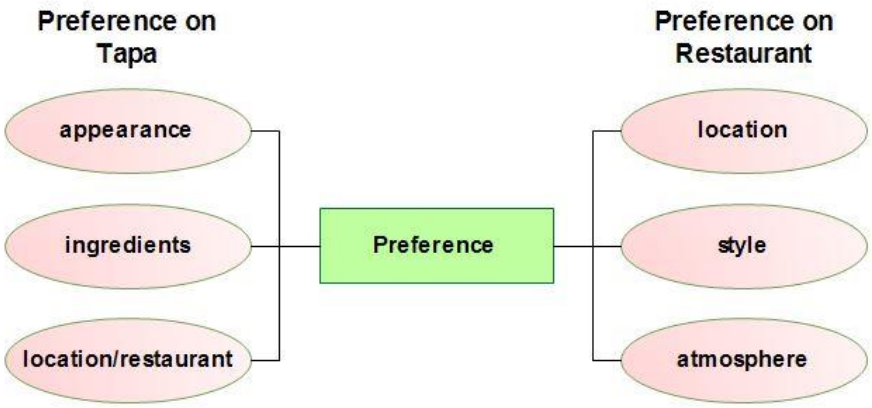


Figure 4.3. Tourist preferences on restaurant and tapa attributes.

While registering on the Santiago(é)Tapas experiment website, users had to fill in information about their preferences (the preference attributes of the tourist entity). These preferences are later referred to as stated preferences, which are in fact not their real choice.

Each tourist in our research has preferences on restaurant and tapa attributes, as shown in Figure 4.3. These preferences exist prior to the selection of the restaurant and consumption of the tapa. They tend to change over time after the gastronomy experience. Tourist preferences can be grouped into two groups, as shown below: preferences on tapa appearance, ingredients and location; and preferences on restaurant location, style (decoration) and atmosphere (ambience).

4.3. Restaurant

The restaurant entity is probably one of the main entities because it is the place of the experience. It includes not only tangible attributes, such as design, decoration and cleanliness, but also intangible attributes, such as atmosphere, ambience and service.

There are many studies emphasising the restaurant attributes that influence a consumer's intention, some of which are: comfort, cleanliness, food freshness, staff appearance and restaurant temperature (Kivela et al., 2000). We have divided the restaurant attributes into observed and unobserved (see Figure 4.4). The observed attributes were included in our research and were provided by the Santiago de Compostela Turismo office.

The first observed attribute is location, which is the placement of the restaurant in a certain area. According to Cullen's (2004) research, 76% of respondents considered location as one of the most important attributes when selecting a restaurant for a social occasion. Location has been used in many kinds of research related to restaurants and consumers (see Table 2.1). Our research was conducted in Santiago de Compostela city, which has different areas such as Old

city, New city and Surrounding areas. These areas have been taken as values of the location attribute.

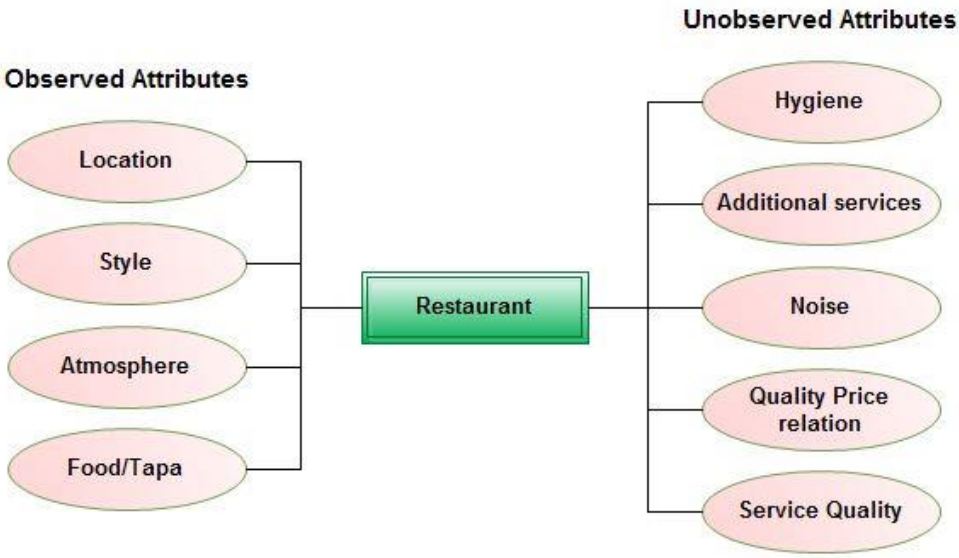


Figure 4.4. Observed and unobserved restaurant entity attributes.

The next observed attribute is style. Generally, style defines the restaurant's decorations and, therefore, in some research it is referred to as decoration. According to Sparks et al. (2003), 55% of respondents were affected by attractive décor when choosing a restaurant while traveling. This research considered two values of style: traditional and modern decorations.

The atmosphere is another observed attribute of the restaurant. Restaurant atmosphere plays the deciding factor in consumer's choice of a restaurant (Auty, 1992). In our research, the atmosphere attribute of the restaurant entity includes values, such as young and adult, which refer to the type of people typically attending the restaurant. In other research (Barta, 2008; Cullen, 2004; Erik & Nir, 2004) this attribute is also mentioned as ambience and also used for analysing the choice of restaurant.

Depending on the atmosphere or ambience attribute, noise can be accepted differently by the tourist. If we take the young atmosphere, it would be normal to have a noisy environment because young people tend to have loud conversations. The adult-aged atmosphere tends to have less noisy environments.

Another observed attribute of the restaurant entity is the food attribute. At the same time, food, which is tapa in our case, is accepted as a product entity. The tapa entity is the second part of the product entity, which is explained in the next sub-chapter.

Hygiene is the first unobserved attribute. It is an important attribute of the restaurant entity and is stated as a cleanliness attribute in much research (see Table 2.1). Cleanliness is a comparative attribute. It depends on the time of day, making it hard to take into account in the research. Other unobserved attributes are additional services, noise, quality-price relation and service quality. Service quality measures how good the service is given to the tourist. As it is the first direct connection between the restaurant entity and the tourist entity, it explains a big part of the global gastronomy experience evaluation.

The availability of additional services includes arcades or other tools for game playing, music, etc. These additional services make the restaurant entity more attractive to the tourist, as the combination with other experiences makes the overall experience more positive. Quality-price relation is also an important attribute that makes a restaurant attractive or not. Depending on the tourist's preferences, this attribute might be a trigger for choosing the restaurant.

4.4. Tapa

Local food is a fundamental component of a destination's attributes in regard to the overall tourist experience (Symons, 1999). Food, which is tapa in our research, is an important entity, because the tourist gets in direct communication with the tapa. As stated earlier, the tapa

entity along with the restaurant entity is part of a product entity. Additionally, tapa as restaurant and tourist has certain attributes that define it, which include view, taste, smell, ingredients, amount and temperature. The mentioned tapa entity attributes are show in Figure 4.5. Food attributes are also taken into account in much research regarding the selection of restaurants (see Table 2.2).

The appearance attribute defines whether the tapa is attractive or unattractive to the tourist. Thus, it defines the tourist expectation of the taste and whether the tourist will like it. Concisely, the appearance of the tapa creates an expectation of the taste and liking.

Smell is another attribute that defines the odour the tapa produces. In some cases, this attribute is null, because some tapa might not have any smell. In most of the research, this attribute is not taken into account.

Amount is an attribute of the tapa entity. In Santiago, especially in Spain, the amount of food is one of the important attributes when ordering it. In most research, this attribute is not taken into account because the food is most likely to be in same quantity throughout all research.

Authenticity means conforming to an original so as to reproduce the essential features or doing the same way as an original. For our case, authenticity defines whether tapas were made according to the original way of cooking, using same ingredients, etc. The degree of authenticity defines how well known the tapa is by people, basically stating if the tapa is traditional or contemporary to Spanish culture.

The next attribute of the tapa is taste. It defines the result of direct communication of the tourist with the tapa and is directly reflected on the overall evaluation of the gastronomy experience. This attribute is not used in most of the research, because the final result itself is

taken into account; meaning, if the tourist evaluates the tapa as good, the taste is to be accepted as good by the tourist.

Key ingredients are another important attribute because they are linked with the tapa entity directly. They are linked with the preference attribute of the tourist. Tourist preference defines whether he or she orders a certain tapa depending on its ingredients.

The next attribute is the temperature of the tapa. This refers to the temperature of the tapa when served to the tourist. In general, this attribute might have values as cold, hot or warm.

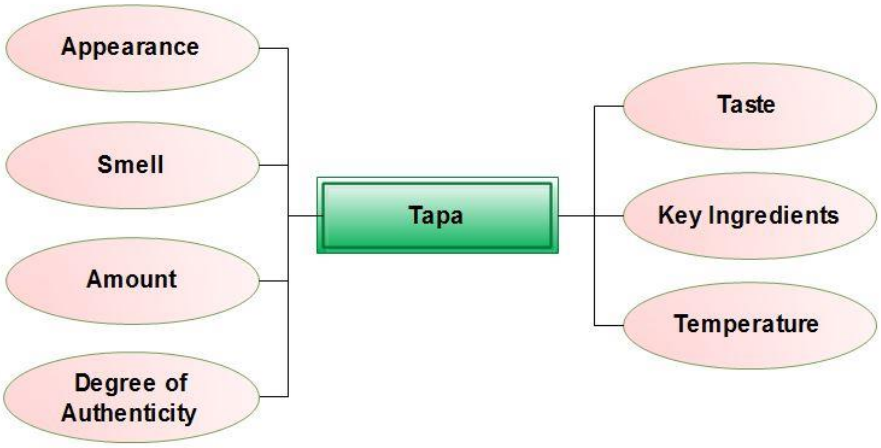


Figure 4.5. Tapa entity attributes.

There are more attributes related to the tapa and restaurant entities, but the most commonly used attributes are described above.

4.5. Context

Context is a variable or dynamic entity in any research. In this case, context is all that surrounds the tourist when going out for a tapa gastronomy experience. Context variables,

also known as situational variables, include all attributes that have an indirect effect on the tourist's choice while selecting the restaurant or tapa.

Context attributes are attributes of a relation of the tourist with tapa and restaurant entities. According to Belk (1975), situational variables are to be thought of as an influence arising from factors special to a certain time and place, independent of consumer and object characteristics. Most commonly, research tends not to include this entity because context attributes are unstable and uncontrollable.

Context variables can be placed into five groups (see Figure 2.1). The first group is physical surroundings, which includes location, decoration (style), ambience, weather, etc., of the gastronomy experience. In our research, location, decoration and ambience are attributes of the location, which is the restaurant. Weather falls under the physical surrounding group and is an unobserved attribute. It is one of the most uncontrollable attributes. Depending on the weather, a tourist might stay closer or go a further distance for gastronomy experience, so the location attribute is in close relation with the weather attribute.

The second group is social surroundings, which includes surrounding people who are together with the tourist when he or she has a gastronomy experience. In our research, this attribute is called company. The company attribute of the context entity is closely linked with the subjectivity attribute of the tourist. If the tourist is not subjective then it means he or she is influenced by the preferences of the company and if the tourist is subjective then it means his or her preferences influence the company preferences. Another side of the company is more sensitive, that is, what kind of company does the tourist have when going out for tapas. For example, if the tourist is going out with friends, or with a girlfriend or a boyfriend, then the preferences and selections are totally different; thus the type of the company has an impact on

both overall selection and evaluation of the gastronomy experience, which is stated in the hypothesis part of this research (see Chapter 1.4).

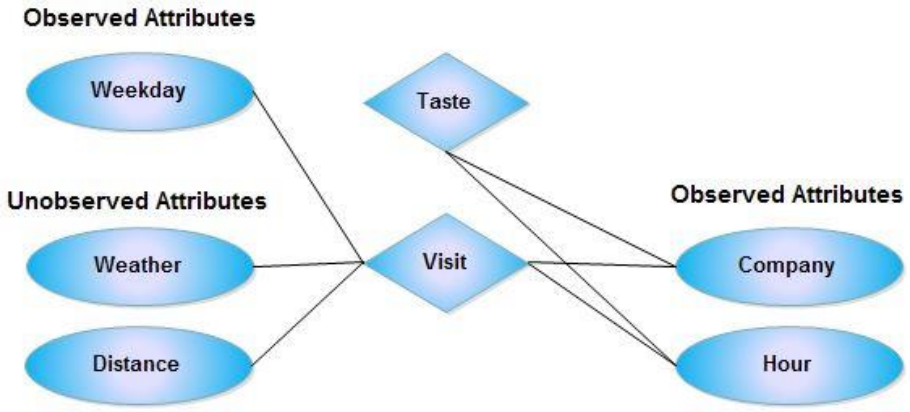


Figure 4.6. Context attributes.

Time is the third group of context. Depending on the time of the day, certain tapas are more preferred than others. The hour (time) is also important in combination with the company attribute. The company preference influencing tourist preference might be influenced by the hour of the day.

Weekday is an attribute of the time group. Weekday defines in many cases if the day of the week is a weekend or a working day. In some cases the preferences of the tourist might be influenced by the day of the week; thus, this attribute is part of the context. In some cases this attribute might define the type of company attribute; that is, a tourist might go out for tapas with friends on weekdays, with a girlfriend or a boyfriend on weekends, or vice versa.

In Figure 4.6, we have linked five attributes by visiting the action of the user and two attributes by tasting action. The weekday attribute is an observed attribute linked by restaurant

visiting action and the other two attributes, company and time. They are linked with visiting and tasting actions.

5. CHAPTER 5: RESTAURANT PREFERENCES

In this chapter, we will analyse the stated preferences and revealed choices of both domestic and international tourists for restaurants based on the restaurant attributes. We will divide tourists into several groups using the EM-algorithm method on stated preferences and revealed choices. These groupings will help to discover the demand for each tourist group.

Additionally, we will look into the difference between the stated preferences and revealed choices of both domestic and international tourists for each restaurant attribute and will identify demanded restaurants based on the stated preferences and revealed choices of tourist groups.

5.1. Hypothesis of the Chapter

In this chapter we will test the following hypotheses about the preferences of domestic and international tourists on restaurant attributes:

H1. The difference between stated and revealed preferences of domestic tourists on restaurants attributes should be insignificant because they have prior knowledge of the restaurant and therefore have a bias. It can be assumed that their final preferences do not change quickly.

H2. The difference between stated and revealed preferences of international tourists on restaurant attributes should be significant because they have no knowledge of the restaurant, thus the probability of opening new food to them is higher and the risk of preference evolution is higher, as compared to that of the local tourists.

H3. For international tourists, restaurants located in the old zone are more popular than restaurants located in the new zone and outlying area.

5.2. Stated Preferences on Restaurant Profiles

5.2.1. Restaurant profiles

To establish the stated preferences on restaurant profiles, first we must identify which restaurant attributes are important and feasible to obtain. These attributes will define the restaurant profiles on which the preferences will be based. In Chapter 4 we described the restaurant attributes and the ones observed in this research (Figure 5.1).

In this chapter we will focus on three observed attributes: restaurant location, style, and atmosphere (see Figure 5.1). Each attribute has its own possible values provided by a tourism specialist of the Santiago de Compostela Turismo office. We did not include the tapa attribute as tapa preferences will be discussed in Chapter 6.

The style attribute, also known as restaurant décor or restaurant decoration, covers the look of the restaurant on the basis of the knowledge of an expert of the Santiago de Compostela Turismo office. Two possible values can be associated with this attribute: traditional and modern. Traditional-style restaurants possess an authentic decoration style from Spanish, or Galician, culture, while modern-style ones have a contemporary decoration style.

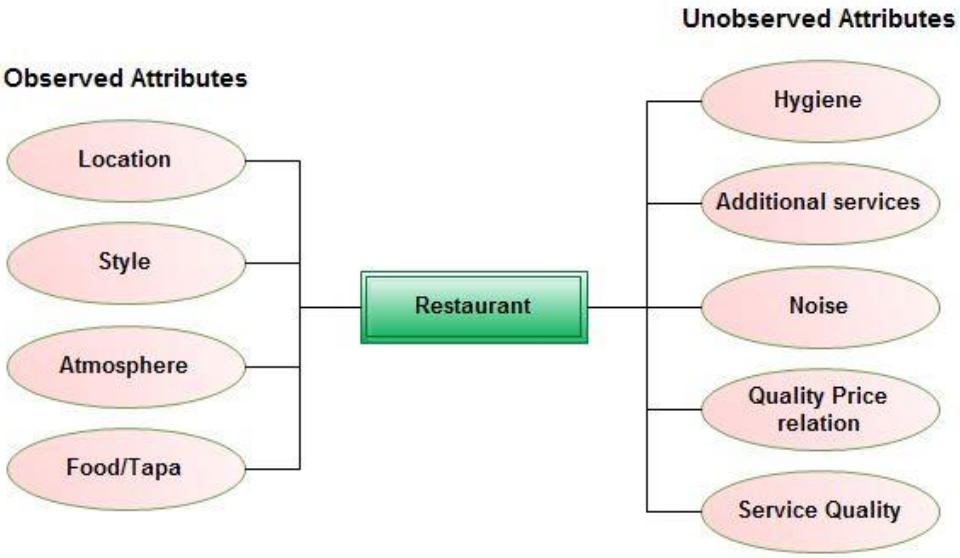


Figure 5.1. Restaurant entity attributes.

The restaurant atmosphere describes the environment and the people who visit the restaurant. The expert at the Santiago de Compostela Turismo office identified three possible values of this attribute: young, adult and indifferent. This grouping defines the main age type of people visiting the restaurant. Young, meaning mostly visited by young aged people; adult, meaning mostly visited by adult people; and indifferent, meaning that no age preference seems to exist for the location.

Finally, the attribute of the restaurant zone has been classified under restaurant location. Correspondingly, Santiago has already identified three zones: old, new and outlying areas. In Santiago the old zone is the tourism centre and part of the city where most of the cultural and historical monuments are; the new zone is a territory covering mainly the new and modern buildings; and the outlying area is the outer territory of the city.

For these reasons, we have determined three observed attributes of the restaurant entity and identified the possible values of each attribute (see Table 5.1).

Table 5.1. Possible Values of Observed Restaurant Attributes.

Restaurant Attributes	Possible Values		
Style	Traditional	Modern	-
Atmosphere	Young	Adult	Indifferent
Location	Old zone	New zone	Outlying area

The observed restaurant attributes and their possible values (Table 5.1) can be used to identify possible restaurant profiles. Taking into account the number of attribute values, 18 restaurant profiles could be found. These profiles, along with their attribute values, are shown in Table 5.2.

Table 5.2. Restaurant Profiles by Combining Restaurant Attribute Values.

Restaurant Profiles	Location Value	Atmosphere Value	Style Value
Profile 1	Old zone	Adult	Modern
Profile 2	Old zone	Young	Modern
Profile 3	Old zone	Indifferent	Modern
Profile 4	Old zone	Adult	Traditional
Profile 5	Old zone	Young	Traditional
Profile 6	Old zone	Indifferent	Traditional
Profile 7	New zone	Adult	Modern
Profile 8	New zone	Young	Modern
Profile 9	New zone	Indifferent	Modern
Profile 10	New zone	Adult	Traditional
Profile 11	New zone	Young	Traditional
Profile 12	New zone	Indifferent	Traditional
Profile 13	Outlying area	Adult	Modern

Profile 14	Outlying area	Indifferent	Modern
Profile 15	Outlying area	Adult	Traditional
Profile 16	Outlying area	Young	Modern
Profile 17	Outlying area	Young	Traditional
Profile 18	Outlying area	Indifferent	Traditional

5.2.2. Participants' sample

The stated preferences for restaurant attributes and profiles were analysed through a questionnaire experiment. In the questionnaire, both international and domestic tourists were asked about their preferences according to the previously mentioned restaurant attributes.

The participants were chosen at random. The sample consisted of 114 people: 51 international tourists and 63 domestic tourists. Domestic tourists were those whose country of origin was Spain. International tourists came from foreign countries.

Participants filled in the questionnaire, giving information about their preferences on each attribute, as well as their basic information. The demographic information about both international and domestic tourists is given in Table 5.3.

Table 5.3. Demographic Characteristics of Stated Preferences of International and Domestic Tourists.

Variable	International Tourists		Domestic Tourists	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender				
Male	**21**	41.2	**12**	19.0
Female	**30**	58.8	**51**	81.0
Age range (years)				
<20	**4**	7.8	**3**	4.8
21–30	**33**	64.7	**27**	42.9
31–40	**12**	23.5	**26**	41.3
41–50	**2**	3.9	**7**	11.1

As can be seen from Table 5.3, gender is more balanced in the case of international tourists, whereas female participants are much higher among domestic tourists. More than 80% of the participants are in the age range of 21–40 years, and thus it is expected to have a bias toward young environments in this sample.

5.2.3. Participants' preferences

After gathering all the questionnaires, the data was stored in the database. From the user's preference on each restaurant attribute, the aggregated preference of international and domestic tourists on each restaurant profile was established.

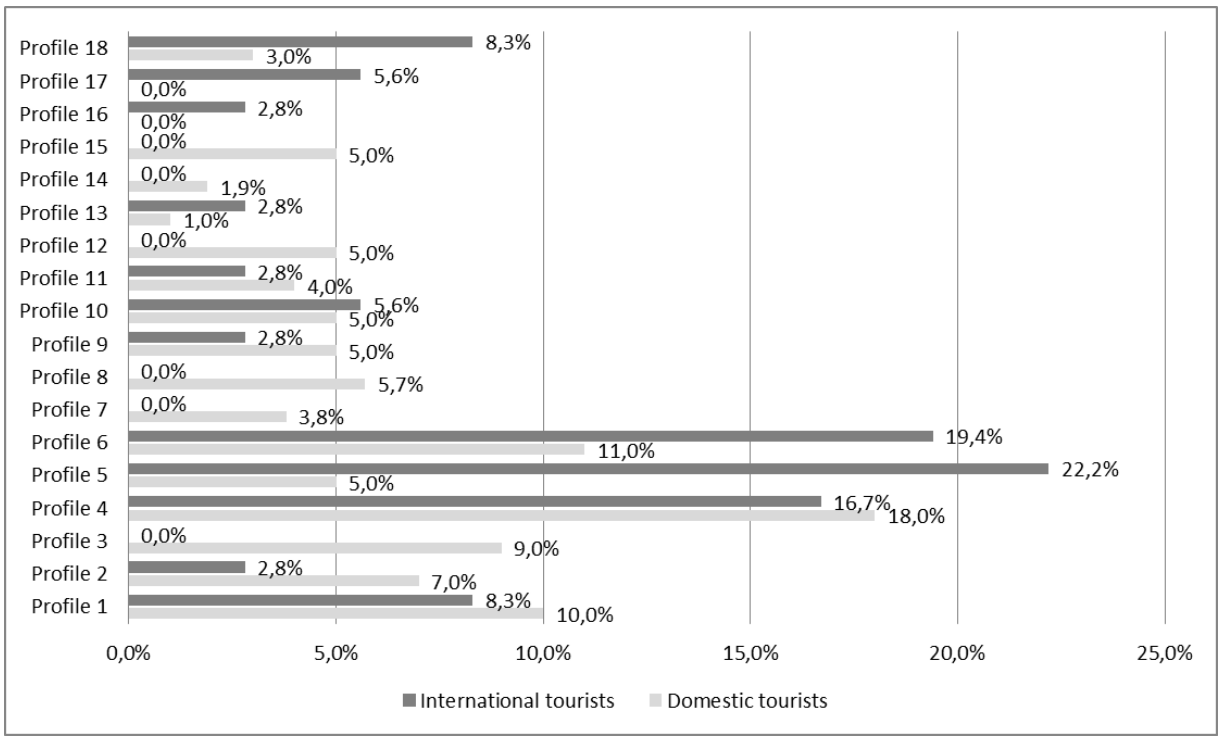


Figure 5.2. Probability distribution of domestic and international tourist preference for restaurant profiles.

Figure 5.2 shows the preferences of both domestic and international tourists on restaurant profiles. The result shows the aggregated preference for international tourists is concentrated

on restaurant profiles 4, 6, 5, 1 and 18. The distribution is more diverse in the case of domestic tourists. However, the combined preferences of domestic and international tourists are concentrated in the old zone, with young, adult and indifferent atmosphere, and traditional-style.

According to the stated preferences, the highest preferred restaurant profile by both tourist groups is restaurant profile 4, which represents an: old zone, adult environment, and traditional-style restaurant.

Table 5.2 shows clearly that both groups have major preferences on the restaurants located in the old zone. International tourists prefer mostly the adult, young and indifferent environment with traditional-style, whereas domestic tourists prefer adult and indifferent atmosphere, with both traditional- and modern-style restaurants.

5.2.4. Tourist clustering based on stated preferences

The next step will be to cluster tourists by their stated preferences.

We have clustered both domestic and international tourists using the *x*-means and the EM-clustering techniques. The outcome will give us a clear picture of the structure of preferences. It can also be compared with the results obtained with the same clustering techniques applied to the revealed choices.

The statistics in relation to the three attributes, which were evaluated by 114 users (51 international and 63 domestic), were used for the grouping purpose, applying *x*-means clustering techniques

With regard to data preparation, when users preferred more than one value, the preference of that user was entered as two instances. For example, if an international user would prefer both

old and new zones, traditional-style, and adult atmosphere, the data was then entered as two instances with values (old, traditional, adult) and (new, traditional, adult). The number of instances of international tourists increased from 51 to 66 instances and for domestic tourists from 63 to 90 instances.

In *x*-means clustering, the centres of the data are split in its region, and the decision between the children of each centre and the centre itself is made comparing the BIC-value (Bayesian Information Criterion) of the two structures. *X*-means automatically defines the number of clusters comparing the BIC-value of the structures.

Using the Weka tool to execute the *x*-means clustering, we could set up the minimum and a maximum number of clusters, and also change the seed value, which yields different results. After different trials, we have chosen the clustering with lowest distortion value, which gives a higher quality result, and the biggest BIC-value. The result of the *x*-means clustering technique is presented in Table 5.4, describing the number of clusters as groups, a number of instances, percentage share; attribute values and their mean values; as well as, distortion and BIC values for each tourist group.

If we compare this clustering with the classification of Cohen (1972) on institutionalised and non-institutionalised, we need to clarify the difference between these two groups. The key aspect is whether tourists are open for new food or not.

Domestic tourists are familiar with tapas, and thus it is hard to presume that their preferences on traditional-style restaurants are being institutionalised, as they might be open for modern-style restaurants because of their age for example. But, when it comes to international tourists, those preferring the modern-style, any zone, and new zone restaurants are more likely to be

classified as institutionalised, and the other ones choosing traditional-style, adult or young atmosphere and old zone restaurants, are probably close to non-institutionalised tourists.

Table 5.4. *X*-means Clustering Applied to Questionnaire Data.

Groups	Attributes	*X*-means	Values (Mean)
Domestic Tourists (Distortion: 96; BIC-Value: -272)			
Group 1 (47 instances, 52%)	Restaurant / bar style	Traditional	1
	Restaurant / bar atmosphere	Adult	0.48
	Restaurant / bar zone	Old zone	0.61
Group 2 (43 instances, 48%)	Restaurant / bar style	Modern	1
	Restaurant / bar atmosphere	Adult	0.34
		Indifferent	0.34
	Restaurant / bar zone	Old zone	0.6
International Tourists (Distortion: 70; BIC-Value: -201)			
Group 1 (44 instances, 67%)	Restaurant / bar style	Traditional	0.72
	Restaurant / bar atmosphere	Young	0.4
	Restaurant / bar zone	Old zone	0.88
Group 2 (22 instances, 33%)	Restaurant / bar style	Traditional	0.54
		Modern	0.45
	Restaurant / bar atmosphere	Indifferent	0.72
	Restaurant / bar zone	Any zone	0.86

If we start analysing the *x*-means clustering of domestic tourists, they have an almost equal share of instances. The first group has a preference on traditional-style restaurants, which shows their interest in culture, and the old zone, which confirms their interest into culture and authenticity. This group has a preference on adult atmosphere, which might be due to the age range of the group. The second group prefers modern-style restaurants, which presumably indicates a low interest about the culture. Yet they also prefer old zone located restaurants. This rather contradicts preferences on style and location, and might be because the old zone is

in the centre of the city; thus, the number and variety of restaurants might come into play. This could be a possible reason why this group has a preference on restaurants located in the old zone, even though they are not interested in the culture.

When it comes to the atmosphere attribute, the second group has preference equally on adult and indifferent atmosphere. As stated in the first group, it might be due to the age range of the group or that some of the domestic tourists do not pay attention to the atmosphere; in other words, they do not mind the ambience of the restaurant when it comes to the preferences.

As described above, international tourists preferring traditional-style restaurants might be compared to Cohen's (1972) non-institutionalised tourist category, while tourists preferring modern-style restaurants can be compared with his institutionalised tourists. The first group of international tourists is clearly interested in culture, as their preferences are traditional-style restaurants located in the old zone with the young atmosphere. This probably indicates they are non-institutionalised tourists. Their preference of young atmosphere can be explained by the assumption that young atmosphere restaurants have high energy, their interest in open communication with young people or their own age range.

When it comes to the second group, it is hard to make any conclusion about the group being institutionalised or non-institutionalised, because the second group has a preference on both traditional- and modern-style restaurants located in any zone with the indifferent atmosphere. This can be explained by Chang et al.'s (2011) tourist clustering, where they describe the 'Non-fastidious about food selection' tourist group. This group did not care much about gastronomy or culture at all, and this might be the case, as their preferences on location are any zone and indifference to atmosphere. The rationale behind having preferences on both

modern- and traditional-style restaurants could be due to the existence of Fischler's (1988) neophobia and neophilia tendencies in the same group.

In conclusion, clustering groups of both domestic and international tourists using *x*-means technique seemed too broad to discriminate and clarify the structure of preferences. This is why we have resorted to the EM-algorithm.

Using EM-algorithm, domestic tourists are divided into seven groups, and international tourists are divided into six groups (Table 5.5). This algorithm is driven by a log-likelihood factor. When changing certain parameters of clustering technique, like a number of clusters or maximum iterations, etc., the log-likelihood value changes. The higher the log-likelihood, the higher the reliability of the clusters. For the sake of the research, the number of clusters was increased until the log-likelihood reached a maximum; after a certain point, the increase in number of clusters decreased the log-likelihood. Therefore, the number of clusters in Table 5.5 was constructed based on the maximum log-likelihood criteria.

As for the *x*-means technique, we have increased the number of instances in those cases where the users prefer more than one value of the restaurant attribute. Thus, the number of instances increased for international tourists from 51 to 66 instances, and for domestic tourists from 63 to 90 instances.

Applying this clustering method, we can easily recognise every group on the basis of the attributes and describe the type of users in each group. Through this, means of the group can be observed by corresponding the values and attributes.

Table 5.5. EM-Algorithm Tourist Clustering Using Questionnaire Data.

Groups	# of Instances	% Share	Each Attributes Value with Highest Mean			Restaurant Profiles by Attribute Values
			Style	Atmosphere	Location	
Domestic Tourists (Log-likelihood: 15.8)						
Group 1	13	14	Modern (1)	Young (0.97)	Old (0.5) & New (0.4) zone	Profiles 2 & 8
Group 2	9	10	Traditional (1)	Young (1)	Old (0.5) & New (0.4) zone	Profiles 5 & 11
Group 3	2	2	Traditional (1)	Indifferent (1)	Old zone (0.65)	Profile 6
Group 4	20	22	Traditional (1)	Adult (0.99)	Old zone (0.66)	Profile 4
Group 5	15	17	Modern (1)	Adult (0.97)	Old zone (0.66)	Profile 1
Group 6	28	31	Modern (1)	Indifferent (0.98)	Old zone (0.59)	Profile 3
Group 7	3	3	Traditional (1)	Adult (1)	New zone (0.99)	Profile 10
International Tourists (Log-likelihood: 16.2)						
Group 1	29	44	Traditional (0.65)	Indifferent (1)	Old (0.4) & Any (0.4) zone	Profiles 6, 12 & 18
Group 2	2	3	Traditional (0.66)	Young (1)	New zone (1)	Profile 11
Group 3	4	6	Modern (0.99)	Adult (0.66)	Any zone (1)	Profiles 1, 7 & 13
Group 4	3	5	Traditional (1)	Adult (1)	Old zone (0.7)	Profile 4
Group 5	26	39	Modern (1)	Adult (0.5) & Young (0.5)	Old zone (1)	Profiles 1 & 2
Group 6	2	3	Traditional (1)	Young (1)	Old zone (0.84)	Profile 5

When split into several groups using EM-algorithm, each group has its own central point where the other instances refer to as a core; in other words, each group's instances are closer to each other and to their central core rather than other group centres. These centre values are shown with their highest mean values in Table 5.5. For example, Group 7 of domestic tourists has a centre point with values of restaurant style being traditional, atmosphere value being the adult and, lastly, location value being the new zone. With this information, we can say the group has a preference for restaurant profile 10.

Domestic tourists are divided into seven groups Group 1 of domestic tourists consists of 13 users with a share of 14%. The group members prefer modern-style restaurants and bars, and they seek young environments. They prefer restaurants and bars situated in the old and new zones. It seems clear, though, that the group members are of a younger age, and thus prefer modernity. They are probably not interested in cultural tourism, but on having fun. This group can be categorised as non-institutionalised tourists because for them 'traditional' is from their own culture. Modernity and young environment, new or outlying area are to be out of their bubble, and as they seek these new experiences, they can be categorised under non-institutionalised tourists. According to restaurant profiles, this group has preference on profiles 2 and 8.

Group 2 of domestic tourists consists of nine users with a share of 10%. The group members prefer traditional-style restaurants and bars; however, like Group 1, they seek young environments. Group 2 prefer restaurants and bars located in the old and new zones. This group prefers restaurant profiles 5 and 11. The group members are somehow interested in cultural tourism. We can see that the only difference between this group and Group 1 is preference on the style of restaurant, so we can conclude this group is almost same as Group 1 but more institutionalised.

Group 3 of domestic tourists is the smallest group with only two users and a share of 2%. This group prefers traditional and old zone restaurant with indifferent atmosphere. When it comes to restaurant profiles, this group has preference on restaurant profile 6. This group seems to be of an older age and seeks traditionalism; as traditionalism in the culture of domestic tourists, we can conclude this group is institutionalised tourists, and it is clear they seek cultural tourism, but are not specific on atmosphere attribute of the restaurant and thus have indifferent atmosphere as their preference. This group is either open to anyone or closed to

everyone. In the first case, they would mind having people around, while in the second case, they look for quietness, not taking care of the environment.

Group 4 of domestic tourists is the second biggest group with 20 users. The group members have preference on traditional-style restaurants with an adult environment and located in the old zone. Based on preferences for restaurant attribute values, this group has preference on restaurant profile 4. Clearly, this group consists of institutionalised tourists in accordance with the domestic tourists. These users seek cultural tourism and familiarity. They can be of an older age as they seek an adult environment.

Group 5 of domestic tourists consists of 15 users with a share of 17%. The group members prefer modern-style restaurants located in the old zone with an adult environment. Because this group has preference on adult atmosphere, we could assume they are of adult age. As they prefer the old zone location, we could conclude that they are institutionalised tourists seeking cultural tourism, but they prefer modern-style instead of traditional-style, which refers to non-institutionalised tourists from a style perspective. We know from Fischler (1988), however, that both neophobia and neophilia tendencies can be found in the same user, which could be the case for this group. By seeking modernity, Group 5 prefers the location to be the old zone as they are closer to culture (their own culture). These types of tourists use their bubble but occasionally seek new experiences. This group has preference on restaurant profile 1.

Group 6 of domestic tourists is the biggest group with a share of 31%. This group has preference on modern-style restaurants located in the old zone, but are indifferent to atmosphere. According to this data, we can state they have preference on restaurant profile 3.

Group 7 of domestic tourists, the last group, is the second-smallest with three users. Members of this group prefer traditional-style restaurants located in the new zone with an adult

atmosphere; thus, they have preference for restaurant profile 10. This group is institutionalised from the perspective of restaurant style but non-institutionalised from the perspective of location attribute. Just like Group 6, this group seeks culture (their own culture) as they seek traditional-style, but on some level they seek new experiences; thus, they prefer new zone restaurants. The group members are of adult age and they seek an adult environment.

International tourists are divided into six groups. Group 1 of international tourists is the largest group consisting of 29 users with a share of 44%. These group members prefer traditional-style restaurants located in the old zone or any zone with an indifferent environment. This broadens the preferences on restaurant profiles to profiles 6, 18 and 12. As traditionalism is not the international tourist's culture, seeking traditional restaurants located in the old zone points them as non-institutionalised tourists. Seeking an indifferent environment means members of this group tend not to care about environment because they do not like interacting with other people (they keep their bubble) or because they are open to any environment (they go out of their bubble).

Groups 2 and 6 of international tourists have the smallest number of users with two each. Both groups seek traditional-style restaurants with a young environment. Group 2 prefers restaurants located in the new zone, whereas Group 6 prefers restaurants located in the old zone. Group 2 has preference on restaurant profile 11 and Group 6 has preference on restaurant profile 5. Both groups tend to seek cultural tourism (not their own culture). Thus, Group 2 members prefer the new zone, tending to keep their own bubble and not get involved too much in culture of the destination, whereas Group 6 tends to seek culture even in the location, leaving their bubble totally. Both groups prefer a young environment, which refers to either their age being young or they seek fun and joy in their experience.

Group 3 of international tourists consists of four users and a share of 6%. Members of this group prefer modern-style restaurants with adult environment and located in any zone, which means they have preference on restaurant profiles 1, 7 and 13. The group members are highly institutionalised tourists, not much interested in cultural tourism. They should seek another type of tourism rather than cultural or gastronomy tourism.

Group 4 of international tourists has three users and a share of 5%. These group members have preference on traditional-style restaurants with adult environment and located in the old zone, which means they have preference on restaurant profile 4. The group members are highly non-institutionalised tourists, with adult age range. Members of this group seek cultural tourism both in location and the style of the destination.

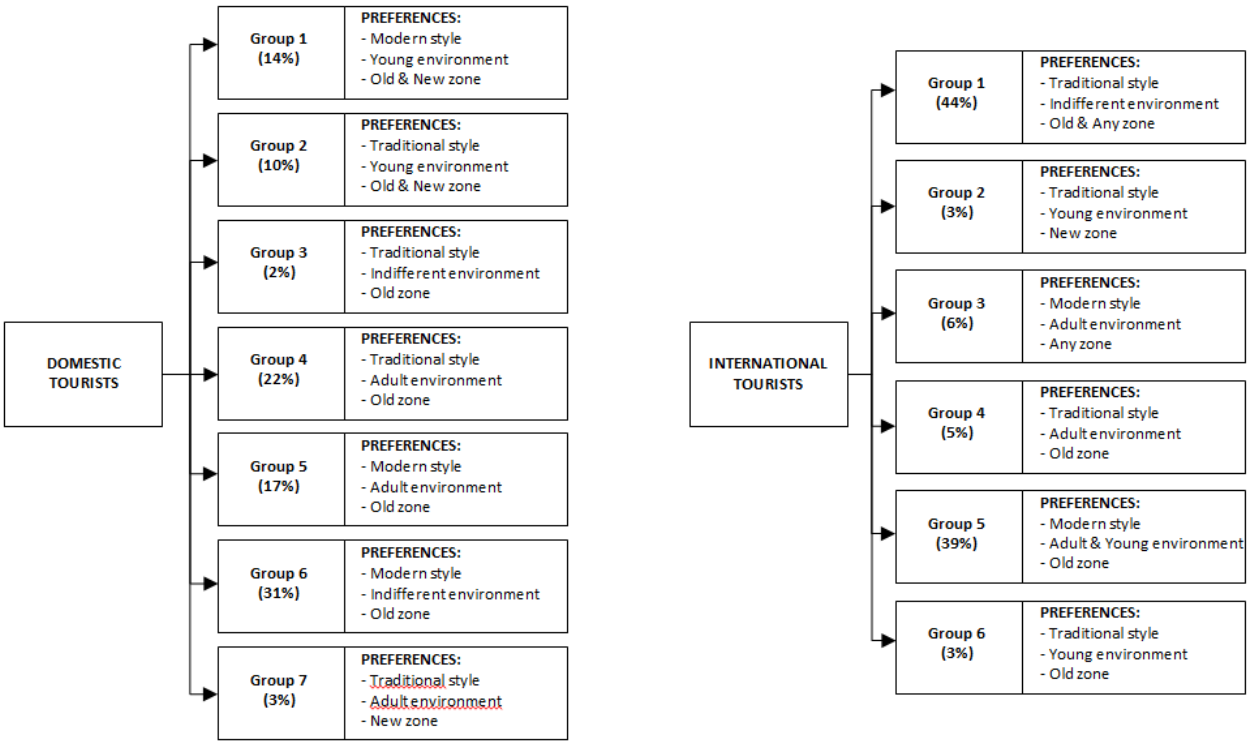


Figure 5.3. EM-algorithm clustering of stated preferences of domestic and international tourists on restaurant attributes of Santiago de Compostela.

Group 5 of international tourists consists of 26 users and a share of 39%. Members of this group prefers the modern-style restaurant located in the old zone; half prefer an adult environment and the other half prefer a young environment. This means they have preferences on restaurant profiles 1 and 2. This group has both tendencies of neophobia and neophilia, thus they seek modernity and the old zone location, which refers to seeking cultural tourism but at the same time being institutionalised (inside the bubble).

It is hard to relate the two groupings provided by *x*-means clustering with the six and seven groupings of the EM-algorithm. The percentage shares are different, and the attribute values cannot be aggregated for this purpose. This is why the EM-algorithm provides more precise clustering results (see Figure 5.3). We will use its results as the basis for further discussions.

5.3. Revealed Preferences on Restaurant Profiles

5.3.1. Restaurant profiles within the contest

Having the data about the values of the three main attributes, each restaurant participating in the contest has been categorised into one of 18 profiles, as described in Chapter 5.2.1. The distribution of participating restaurants in percentage scale under the possible 18 profiles is shown in Figure 5.4. As can be seen from this figure, profiles 16–18 have a value of zero, which means, there are no such profiles in the context. Of course, it does not mean there is no demand for these non-existing restaurants with stated attributes.

This distribution is important when we talk about real choices, as the decision-making process of both domestic and international tourists might have been influenced by the restaurant distribution.

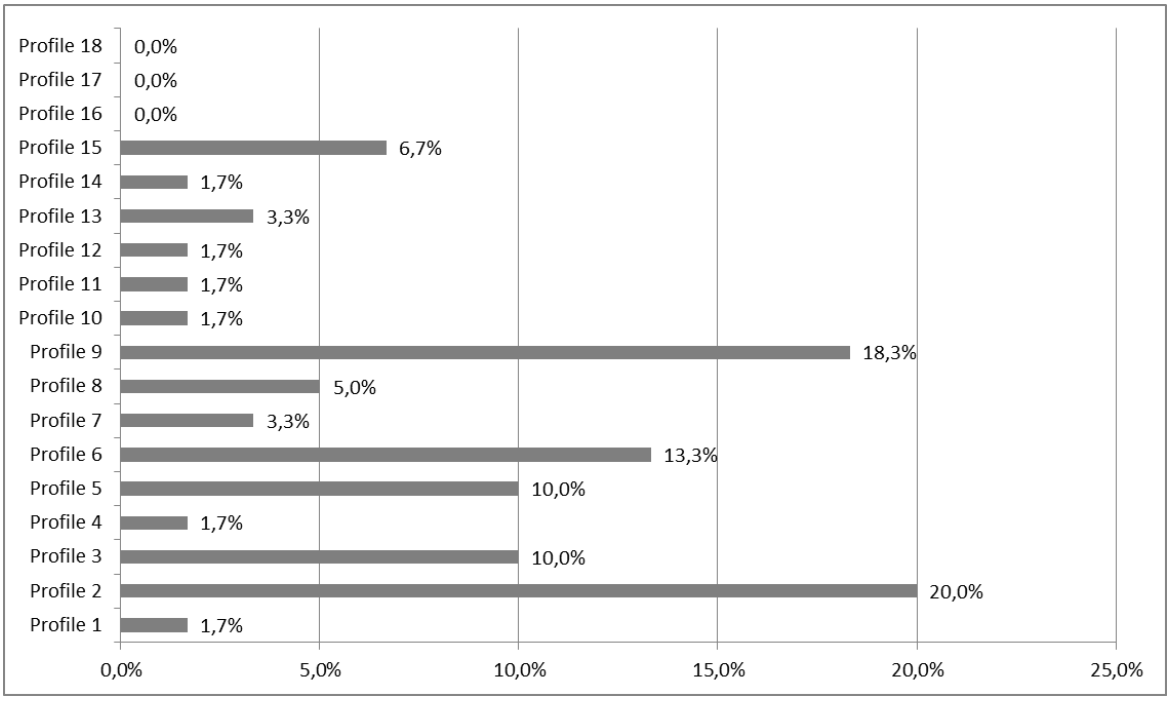


Figure 5.4. Probability distribution of restaurant profiles participating in the contest.

5.3.2. Participants' sample

Apart from the stated preferences, both international and domestic tourists have tasted and evaluated different tapas within the contest. From these experiences, we have gathered data about the choices of both international and domestic tourists.

Table 5.6. Demographic Characteristics of Revealed Choices by International and Domestic Tourists.

Variable	Frequency	Percentage (%)
Number of Users	**5,478**	
International	333	6.1
Domestic	5,145	93.9
Number of Evaluations	**14,760**	
International	756	5.1
Domestic	14,004	94.9

There is no detailed data about the population who have tasted tapas and evaluated them. The only data stated is the personal id (DNI) and nationality (due to space constraints on the coaster voting forms), which enables differentiation of the evaluations by various users. The statistics of the total number of evaluations and number of users are stated in Table 5.6.

5.3.3. Participants' choices

Considering the experiences of users from the Santiago(é)Tapas contest as choices, its distribution into 18 possible restaurant profiles is shown in

Figure 5.5 and Figure 5.6. Additionally, the choice distribution is compared with the restaurant profile distribution.

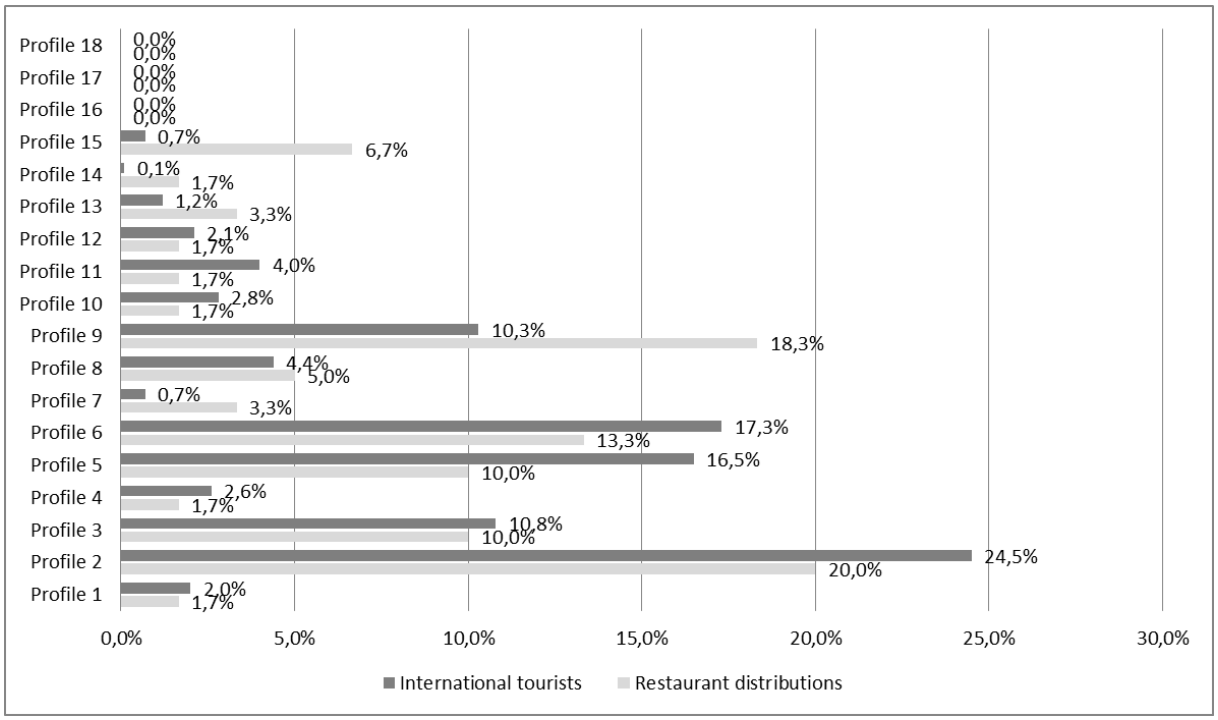


Figure 5.5. **Probability distribution of international tourist choices against restaurant distributions.**

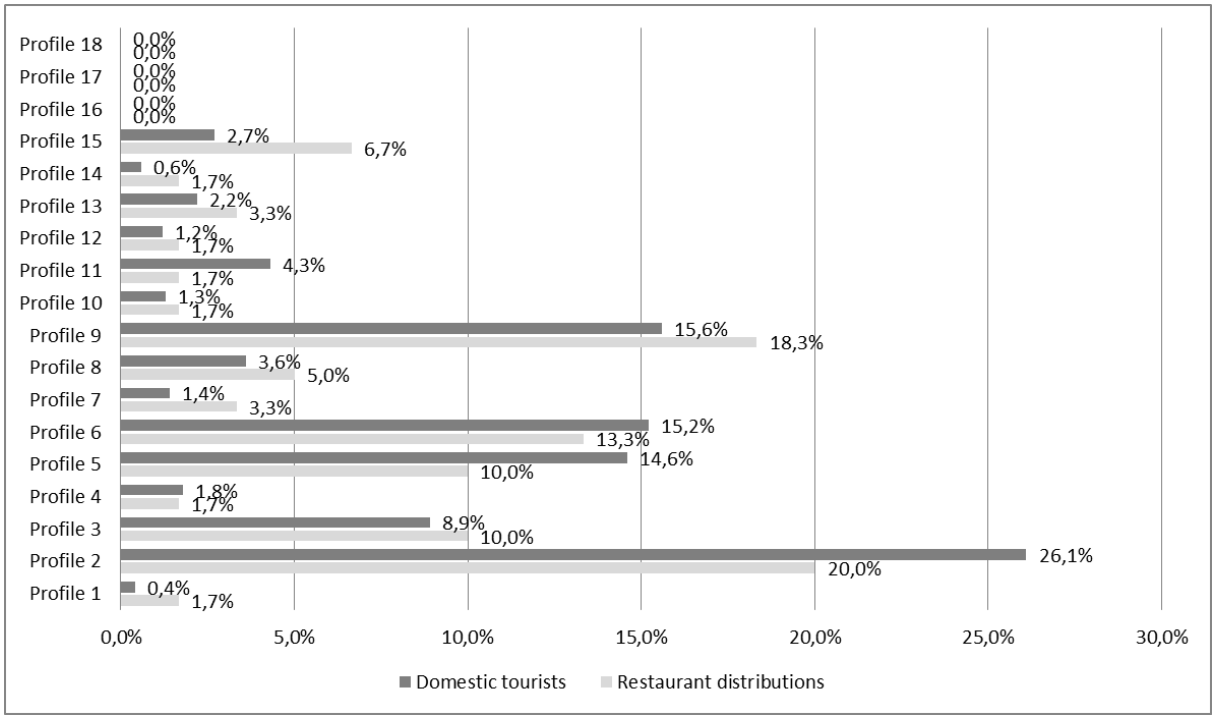


Figure 5.6. Probability distribution of domestic tourist choices against restaurant distributions.

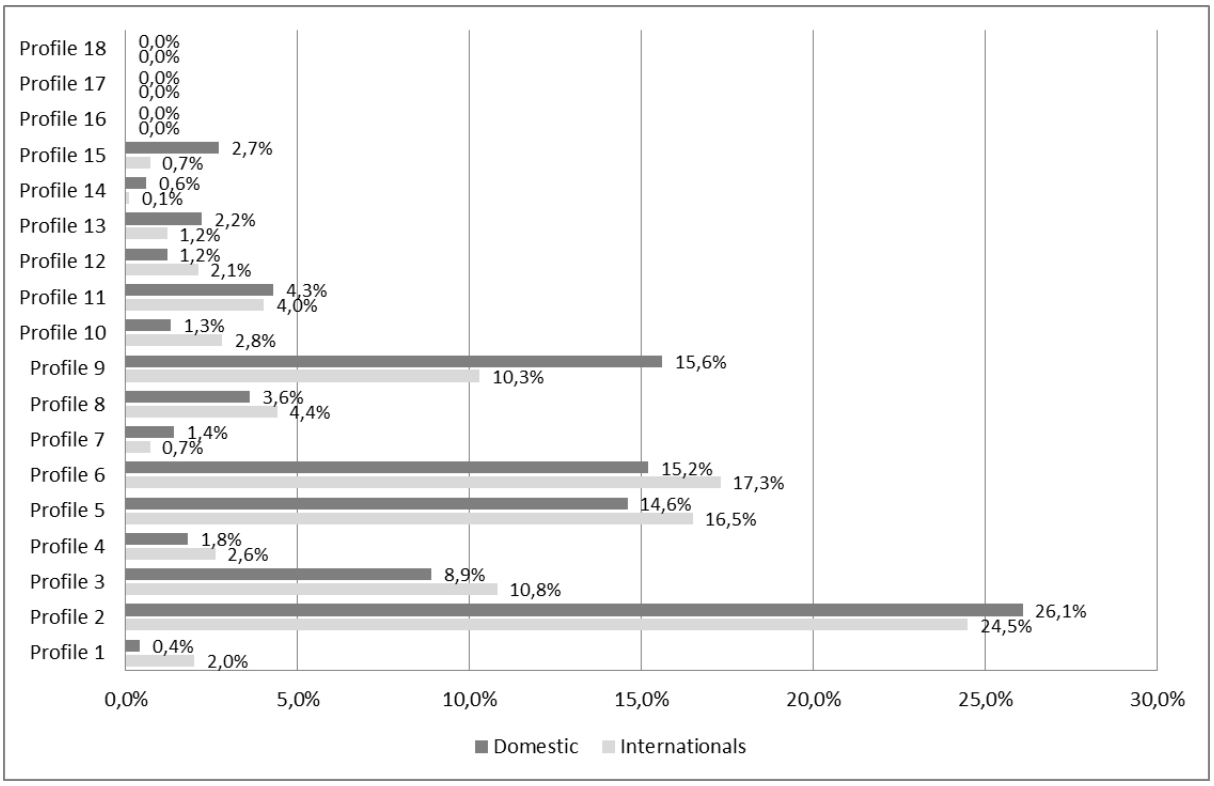


Figure 5.7. Probability distribution of domestic and international tourist choices about restaurant profiles. In both groups, the preferences are mainly concentrated on restaurant profiles 2, 3, 5, 6 and 9.

As can be seen in

Figure 5.5, the majority of choices of international tourists are on restaurant profiles 2, 6 and 5. The highest chosen restaurant profile is 2, whose values are the old zone, a young environment and the modern-style. This is also the highest restaurant profile of the distribution. The second highest chosen restaurant profile is 6, whose values are the old zone, an indifferent atmosphere and the traditional-style. It is the third highest offered restaurant profile.

The same analysis has been done with domestic tourists and the results are shown in Figure 5.6. In this figure, the restaurant profile distribution has been compared against the choice distribution of domestic tourists. According to this figure, the highest chosen restaurant profile is 2, which coincides with the highest offered restaurant profile.

As in Figure 5.7, the comparison of both domestic and international tourist choices show that the most chosen 5 restaurant profiles are same for both tourist types, where these restaurants are restaurant profiles 2, 3, 5, 6, and 9.

By considering the attributes of restaurant profiles listed in Table 5.2, the preferences are concentrated on the old zone mainly, with young and indifferent atmospheres, and with both modern- and traditional- style restaurants. We will analyse each attribute separately in further sub-chapters for both domestic and international tourists, using both stated preferences and revealed choices.

5.3.4. Tourist clustering based on revealed choices

We have executed the EM-algorithm using the choices of both domestic and international tourists (Table 5.7). As it has been explained with the stated preferences, these clustered groups were the result of applying the maximum log-likelihood approach.

Group 1 of domestic tourists consists of 3,660 users and with a share of 26%. It is the second largest group. Its members have chosen modern-style restaurants located in the old zone with a young environment. According to this, we can state the group has the preference on restaurant profile 2. As these are domestic tourists, choosing restaurants in the old zone can indicate that this group is institutionalised, but the modern-style and young environment preferences may represent this group is non-institutionalised.

Table 5.7. EM-Algorithm Tourist Clustering Using Choices.

Groups	# of Instances	% Share	Attributes Values with Highest Mean			Restaurant Profiles by Attribute Values
			Style	Atmosphere	Location	
Domestic Tourists (Log-likelihood: 22.37)						
Group 1	3,660	26	Modern (1)	Young (1)	Old zone (1)	Profile 2
Group 2	4,590	33	Modern (1)	Indifferent (1)	Old zone (1)	Profile 3
Group 3	339	2	Modern (1)	Indifferent (1)	New zone (0.9)	Profile 9
Group 4	2,653	19	Traditional (1)	Young (1)	Old zone (1)	Profile 5
Group 5	2,129	15	Traditional (1)	Indifferent (1)	Old zone (0.9)	Profile 6
Group 6	633	5	Traditional (0.58) & Modern (0.41)	Adult (1)	Outlying area (0.49)	Profile 13 & 15
International Tourists (Log-likelihood: 17.12)						
Group 1	63	8	Traditional (0.6)	Young (0.6)	New zone (1)	Profile 11
Group 2	75	10	Traditional (0.51) & Modern (0.48)	Adult (1)	Old zone (0.7)	Profile 1 & 4
Group 3	95	13	Modern (0.92)	Indifferent (1)	New zone (1)	Profile 9
Group 4	82	11	Modern (1)	Indifferent (1)	Old zone (0.98)	Profile 3
Group 5	441	58	Traditional (1)	Indifferent (1)	Old zone (1)	Profile 6

Group 2 of domestic tourists is the biggest group with 4,590 users and a share of 33%. Its members have chosen modern-style restaurants located in the old zone as in Group 1, but with an indifferent environment, which means for this group the environment is not important as in the case of Group 1. Group 2 has a preference on restaurant profile 3. Groups 1 and 2 comprise 59% of the overall sample.

Group 3 of domestic tourists is the smallest group and comprises 339 users with a share of 2%. Its members have chosen modern-style restaurants located in the new zone with an indifferent environment. This reveals their preference on restaurant profile 9. Group 4 of domestic tourists comprises 2,653 users with a share of 19%. The members have chosen traditional restaurants located in the old zone with a young environment, which indicates they prefer restaurant profile 5.

Group 5 of domestic tourists comprises 2,129 users and a share of 15%. Its members have chosen traditional-style restaurants located in the old zone with an indifferent environment. This group prefers restaurant profile 6. Group 6 of domestic tourists, the second-smallest group, comprises 633 users with a share of 5%, being the second smallest group. Its members have chosen traditional- and modern-style restaurants located in the outlying area with an adult environment. This indicates the group prefers restaurant profiles 13 and 15.

When it comes to international tourists, they are clustered into five groups using the EM-algorithm method. As we have stated before, international tourists can be classified by their preferences as Cohen's (1972) institutionalised and non-institutionalised tourists.

Group 1 of international tourists is the smallest group comprising 63 users and a share of up 8%. This group prefers traditional-style restaurants with a young atmosphere and located in

the new zone. The ambience and location preferences are somehow similar because young can be correlated with the new zone, but by traditional-style preferences, we could state them as non-institutionalised interested in the culture. At the same time, preferring the new zone leads us to group them as institutionalised. They have preferences on profile 11.

Group 2 of international tourists is the second-smallest group with 75 users and a share of 10%. We could relate them to having both of Fischler's (1988) neophobia and neophilia tendencies; thus, they prefer both modern- and traditional-style restaurants located in the old zone with an adult atmosphere. This means its members prefer profiles 1 and 4.

Group 3 of international tourists is the most institutionalised group comprising 96 users and a share of 13%. Its members prefer modern-style restaurants with an indifferent atmosphere and located in the new zone. In the same way, Group 5 of international tourists is the largest and most non-institutionalised group with 441 users and a share of 58%. Its members prefer traditional-style restaurants with an indifferent atmosphere and located in the old zone. This clearly highlights their interest in the local culture and cuisine.

Group 4 of international tourists comprises 82 users and a share of 11%, and it can be related to Group 1 of international tourists. The members prefer modern-style restaurants with an indifferent atmosphere and located in the new zone.

Interestingly, most of the international tourists prefer an indifferent atmosphere, which can be explained by not knowing the destination and culture. It is not that important what ages are the surrounding people, as the most important for these tourists is to see the culture by location, which is the old zone, and by feeling, which is the traditional-style of the restaurant. Using the EM-algorithm, we have identified the highest log-likelihood and clustered the

domestic tourists into six groups and the international tourists into five groups, each with their core preferences (see Figure 5.8).

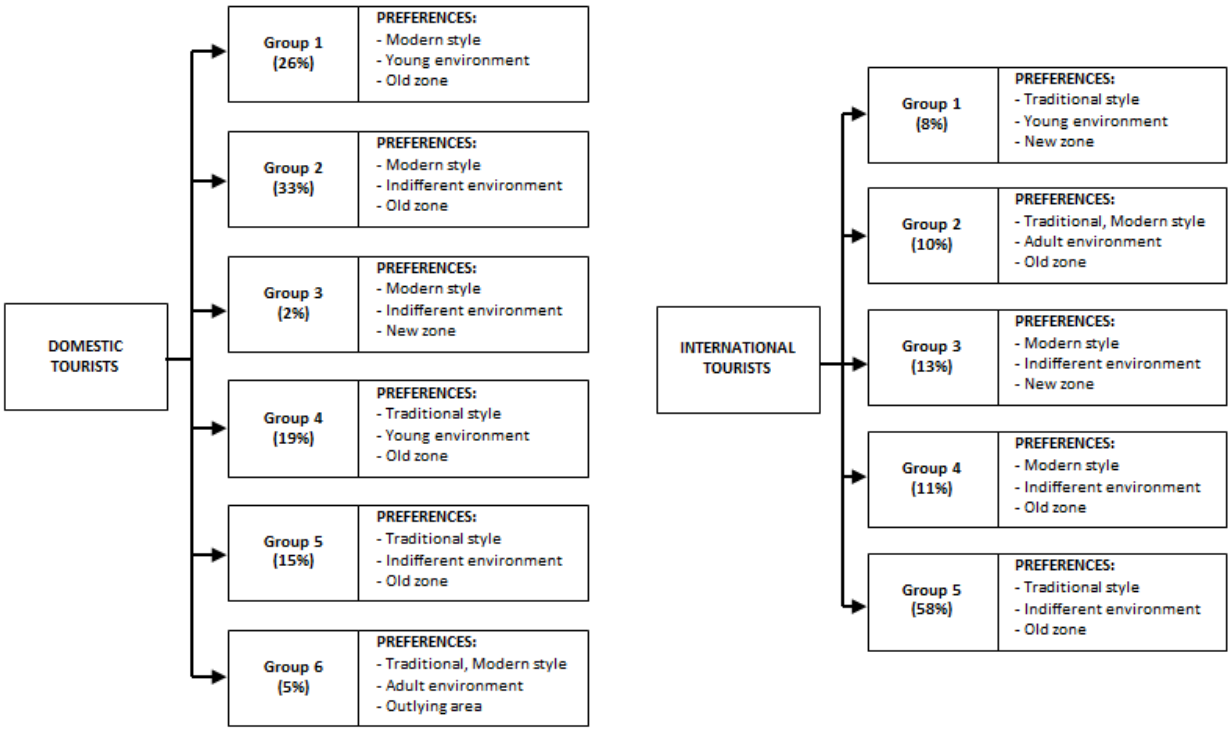


Figure 5.8. EM-algorithm clustering of revealed choices of domestic and international tourists on restaurant attributes of Santiago de Compostela.

5.3.5. Choices and revealed preferences

In this sub-chapter, we will check whether the gathered choices reveal tourist preferences. We then need to test whether the market offer influences the choices. If the answer is positive, this will mean the choices were driven by the offer, not preferences.

A hypothesis test has been applied to check if the probability of domestic and international tourist choices is coherent with the probability distribution of restaurant profiles and restaurant attribute values. By applying this statistical test, we verify whether international

and domestic tourists are influenced by the real restaurant distribution rather than their preferences on these attribute values.

The null hypothesis stated in this case was that 'the probability distribution of choices are the same as the probability distribution of restaurant profiles and restaurant attributes. If the null hypothesis is confirmed, then the choices of international and domestic tourists are not based on their preferences but on the distribution of the restaurant profiles and restaurant attributes.

Table 5.8. International tourists. Hypothesis testing comparing choice distribution with restaurant profile and restaurant attribute distributions.

Attributes	Test Statistic	Critical Point	*p*-value
Restaurant Profile	104.4	17.5	< 0.01
Location	144.6	7.4	< 0.01
Atmosphere	66.9	7.4	< 0.01
Style	27.6	5	< 0.01

In Table 5.8 and Table 5.9, we can see the hypothesis testing results for international and domestic tourist choices. According to the *p*-value, the null hypothesis is rejected in all cases, which means the choice of restaurants by their attributes are not affected by the probability distribution of the real restaurants within the contest.

The results of the test indicate the probability distribution of restaurant profiles and attributes are not the same as the distribution of international and domestic tourist choices. This means the difference between the initial preferences and the real choice of restaurants by restaurant attributes is not due to the offered restaurants but due to other factors.

Table 5.9. Domestic tourists. Hypothesis testing comparing choice distribution with restaurant profile and restaurant attribute distributions.

Attributes	Test Statistic	Critical Point	*p*-value
Restaurant Profile	2140.6	26.1	< 0.01

Location	142.6	7.4	< 0.01
Atmosphere	129	7.4	< 0.01
Style	39.7	5	< 0.01

5.3.6. Quantifying revealed preferences

Now that we have tested and confirmed that choices are a means to derive the revealed preferences, in this sub-chapter we have quantified the differences between restaurant distribution, which is the market offer, and the choices. For this purpose, we have introduced the preference index (see Table 5.10), where we have highlighted the restaurant attributes and their values. For each attribute value, we have defined the prior probability, which is the restaurant distribution probability for each attribute value. For example, the old zone has a prior probability of 0.567, which means 56.7% of the restaurants in the contest are located in the old zone.

Table 5.10. Preference Index of International and Domestic Tourists for Restaurant Attributes.

Restaurant Attributes	Attribute Values	Prior Probability	Posterior Probability		Preference Index	
			International Tourists	Domestic Tourists	International Tourists	Domestic Tourists
Location	Old zone	0.567	0.738	0.671	0.171	0.104
	New zone	0.317	0.242	0.274	-0.075	-0.043
	Outlying area	0.117	0.02	0.055	-0.09	-0.062
Atmosphere	Adult	0.183	0.0993	0.098	-0.0837	-0.085
	Young	0.367	0.4933	0.487	0.1263	0.12
	Indifferent	0.45	0.4074	0.415	-0.0426	-0.035
Style	Traditional	0.367	0.54	0.589	0.093	0.044
	Modern	0.633	0.46	0.411	-0.093	-0.044

Afterwards, we have defined the posterior probability, which is the choices probability for each attribute value. Finally, we have checked the difference between the prior and the posterior probability. The outcome, which is the preference index, measures the difference between the posterior (choice) probability and the prior (restaurant attribute) probability.

As can be seen from Table 5.10, both international and domestic tourists prefer restaurants located in the old zone most, continuing by the new zone and outlying area ultimately; as of atmosphere attribute, the higher preference is on the young atmosphere continued by the indifferent atmosphere and adult atmosphere; lastly of style attribute, the higher preference is in the traditional restaurants rather than the modern. Interestingly the preference structure derived by choice is the same for international and for domestic tourists.

By this we have quantified the difference between the market offer, that is restaurant distribution and revealed choices, which is the revealed preferences. As we have proved that revealed choices are not affected fully by the restaurant distribution, it can be declared that revealed choices are the revealed preferences of both domestic and international tourists.

5.4. Comparison between Stated and Revealed Preferences

After finding out the stated, as well as the revealed preferences of domestic and international tourists, it is crucial to see and understand the difference between the stated and revealed preferences of these tourists. Additionally, it would be interesting to understand the transition from stated to revealed preference.

To understand this change, we have applied several methods. As a first step, we have analysed each attribute on its own to see the difference between the stated and revealed

preference made on this attribute for the gastronomy experience. Additionally, we have made an overall comparison between stated and revealed preferences and checked for the differences.

5.4.1. Tourist preferences on 'location' attribute

The same procedure has been applied to each attribute of the restaurant separately as done for the restaurant profiles. Figure 5.9 and Figure 5.10 show the distribution of international and domestic tourist preferences for the location attribute, respectively.

According to Figure 5.9, international tourists' stated preferences indicate a preference on mostly the restaurants located in the old zone, then the outlying area and lastly the new zone. The choices or revealed preferences suggest a change in the preference ranking, as the new zone is now in the second position.

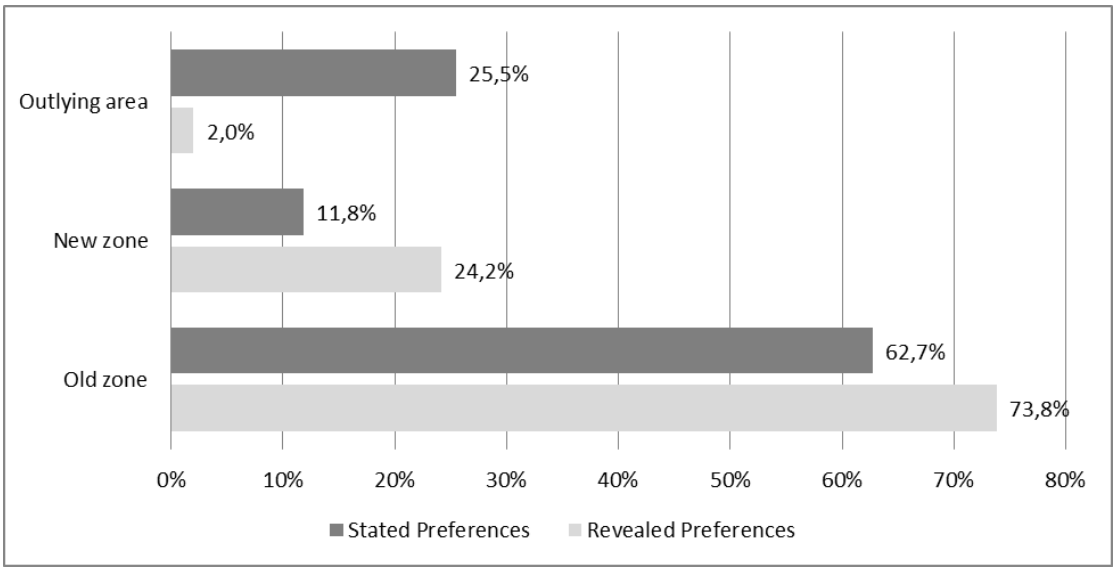


Figure 5.9. Probability distributions of international tourist preferences for 'location' attribute.

In Figure 5.10 we see the comparison with domestic tourists. According to the stated preferences, domestic tourists primarily prefer restaurants located in the old zone, then in the

new zone and lastly in the outlying area. Even though the percentage scale is slightly changed, the revealed preferences did not change the sequence of preference on attributes. When combining the attributes of restaurant distribution using Table 5.2 and the results of Figure 5.9 and Figure 5.10, we can see clearly that the restaurant distribution on location attribute values is coherent with the preferences of domestic and international tourists on that attribute. This means there is a perfect match between the offer and the demand. Both domestic and international tourist choices on 'location' attribute values are relatively similar and, additionally, they are similar to the restaurant distribution on this attribute.

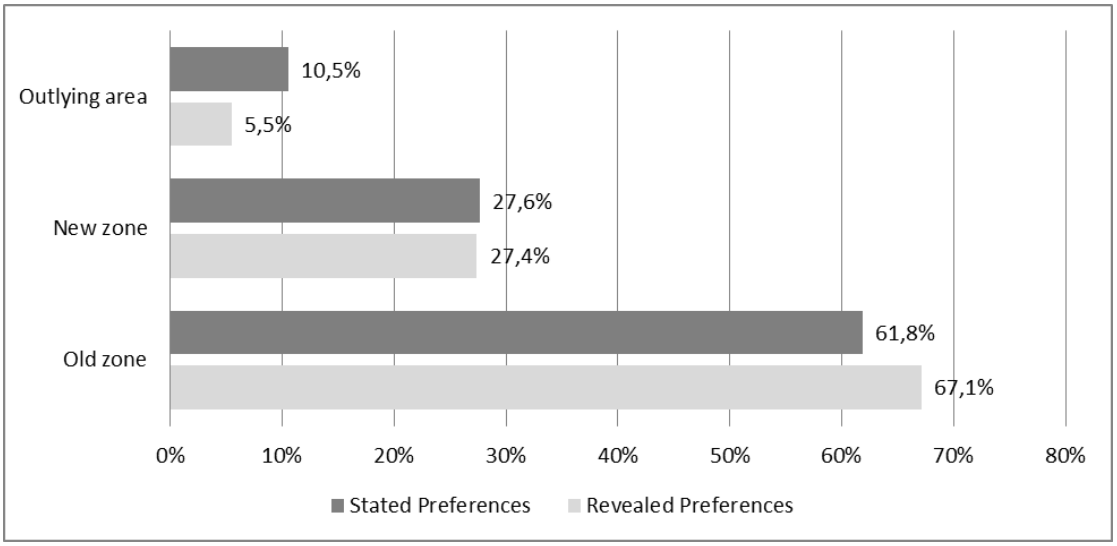


Figure 5.10. Probability distributions of domestic tourist preferences for 'location' attribute.

5.4.2. Tourist preferences on 'atmosphere' attribute

When it comes to the atmosphere attribute, Figure 5.11 shows the stated preferences of international users are mostly centred on the indifferent atmosphere. This probably means international tourists do not bother with the atmosphere of the restaurant because what they initially seek is not related to the atmosphere. When it comes to their revealed preferences,

however, they changed their preferences and selected mostly the young atmosphere restaurants.

However, according to Figure 5.12, the domestic tourist's stated preferences are on the adult environment in the majority and then evenly distributed among young and indifferent values. On the other hand, domestic tourists seek a more adult environment either due to communication purposes, because it is easier and more cultural in the adult environment, or the age requirement of questionnaire evaluators.

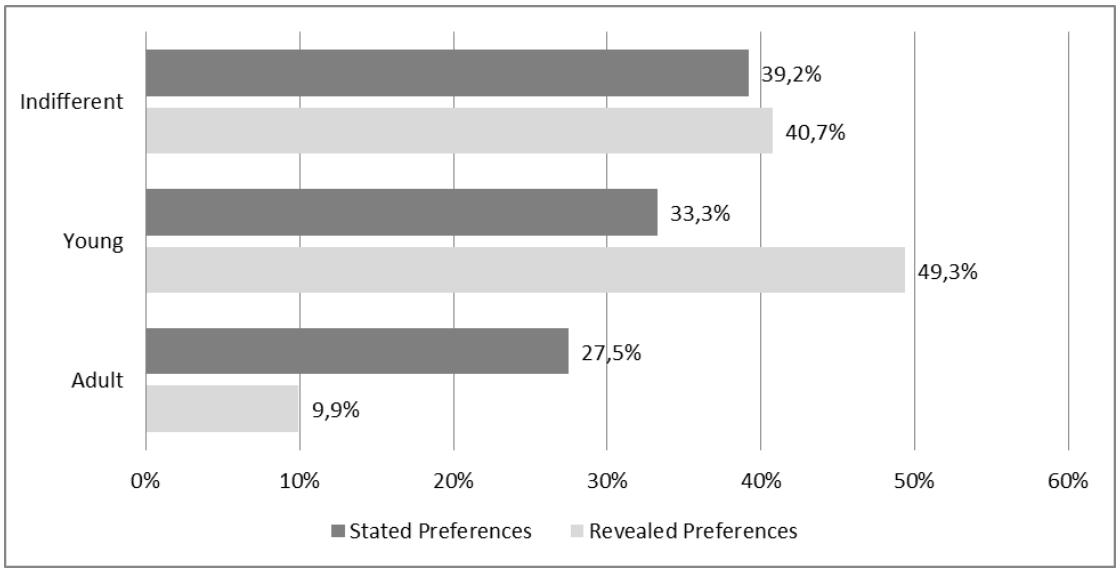


Figure 5.11. Probability distributions of international tourist preferences for 'atmosphere' attribute.

Interestingly, both domestic and international tourists have the young atmosphere as their first revealed preferences, then indifferent atmosphere and lastly adult atmosphere. The revealed preferences are different from the stated ones, as international and domestic tourists' choice on atmosphere attribute are very close to each other. This implies that when going out for tapas in these restaurants, both groups have the same tendency of preferring first the young atmosphere restaurants, then the indifferent atmosphere (which refers to an atmosphere that is

either mixed or is not important) and lastly the adult atmosphere. When compared with the restaurant distribution on atmosphere attribute, where the offered restaurants are ranked with indifferent first, then young and lastly adult, the revealed preferences of both domestic and international tourists are not coherent in this case.

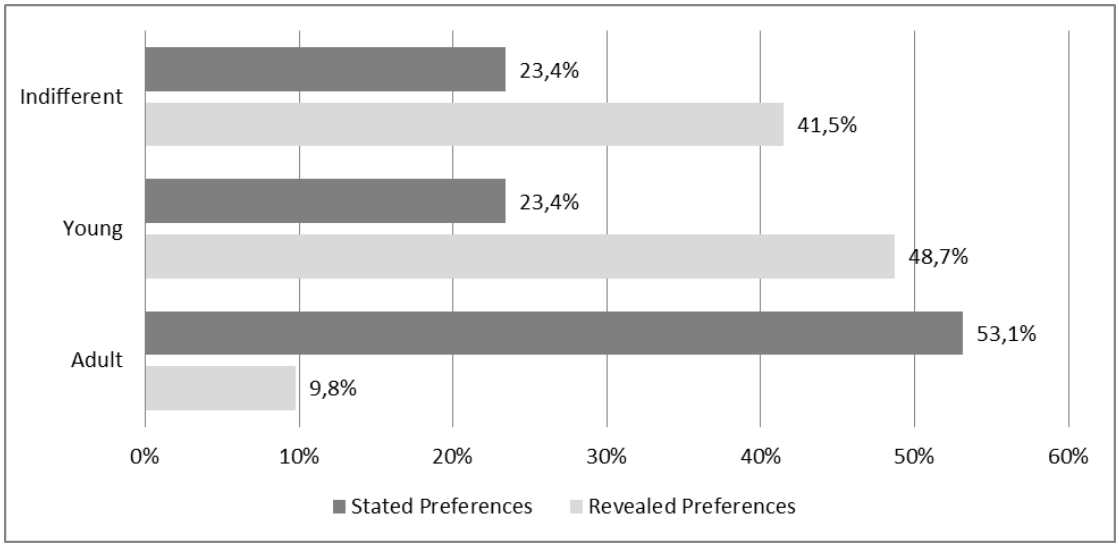


Figure 5.12. Probability distributions of domestic tourist choices for 'atmosphere' attribute.

5.4.3. Tourist preferences on 'style' attribute

As shown in Figure 5.13, the stated preferences of international tourists are mostly on the traditional-style restaurants rather than the modern-style. However, the stated preferences of domestic tourists are evenly divided between the two attributes, which means they prefer traditional and modern-style restaurants (Figure 5.14). The difference in the international tourist stated preference is clear. International tourists are looking for culture, thus preferring traditional-style restaurants. Domestic tourists, in turn, seek both modernity and traditionalism in the restaurants by their stated preferences.

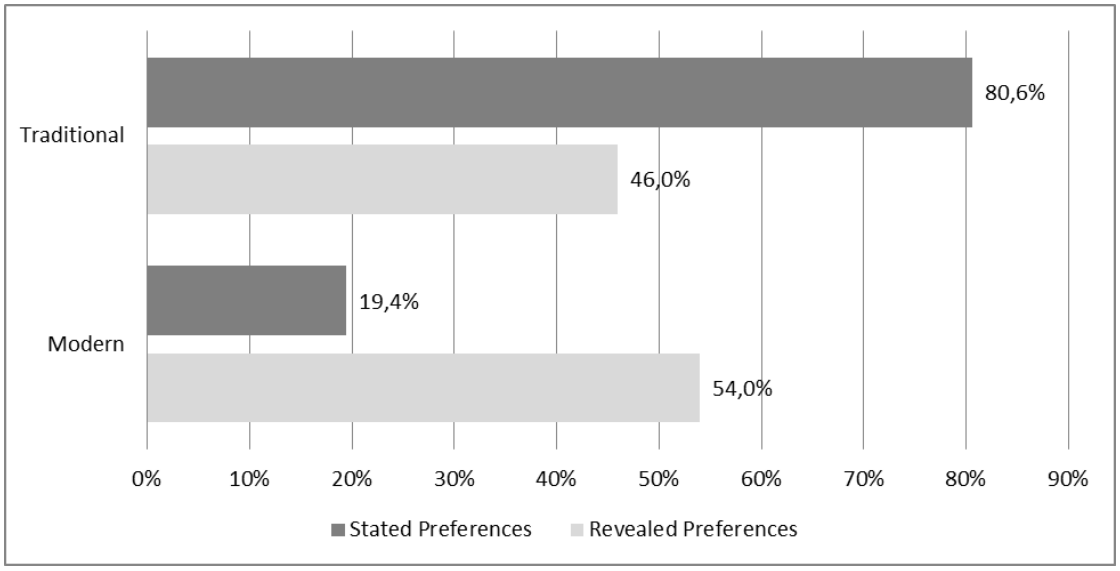


Figure 5.13. Probability distributions of international tourist preferences for 'style' attribute.

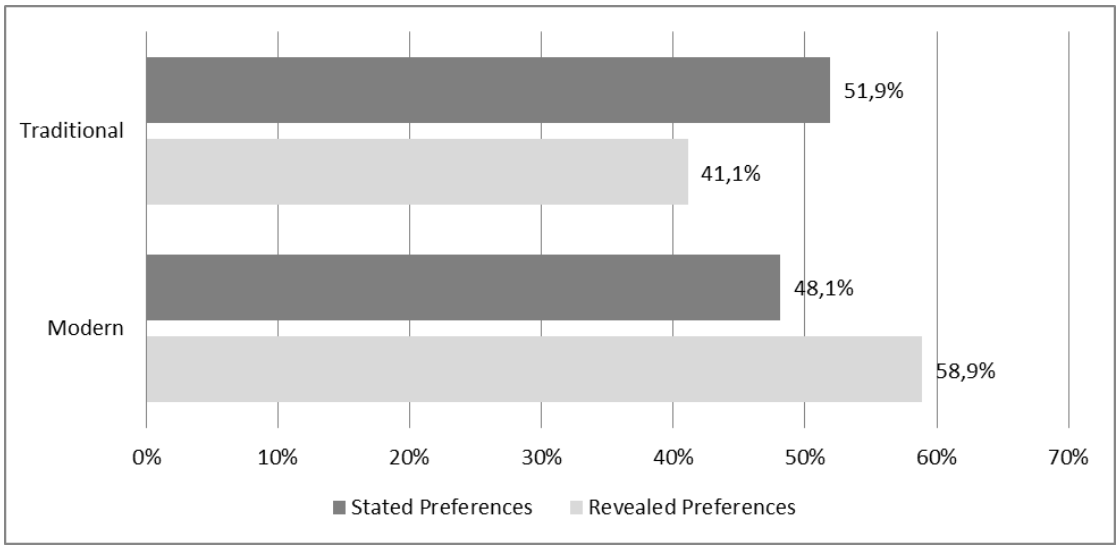


Figure 5.14. Probability distributions of domestic tourist preferences for 'style' attribute.

While checked on the revealed preferences of international and domestic tourists, they are relatively evenly divided. The difference is higher in the case of domestic tourists; that is, domestic tourists have a higher preference for the modern-style restaurants rather than the

traditional-style restaurants. International tourists prefer the modern-style restaurants, but it is not so different from their preference for the traditional-style restaurants.

5.4.4. Stated and revealed preferences are statistically different

We have performed the following comparisons between stated and revealed preferences and checked statistically for significant changes in the preferences:

- Difference on Preferences on Restaurant 'Location' Attribute: International and Domestic Tourists (Chapter 5.4.1).
- Difference on Preferences on Restaurant 'Atmosphere' Attribute: International and Domestic Tourists (Chapter 5.4.2).
- Difference on Preferences on Restaurant 'Style' Attribute: International and Domestic Tourists (Chapter 5.4.3).

A homogeneous hypothesis test has been used to check the difference between stated and revealed preference of both international and domestic tourists. The aim of this test is to prove the difference between stated and revealed preferences statistically.

Table 5.11. Chi-Square Test of Restaurant Attributes.

Attributes	International			Domestic		
	Test Statistic	Critical Point	*p*-value	Test Statistic	Critical Point	*p*-value
Location	73.37	7.37	< 0.01	16.15	7.37	< 0.01
Atmosphere	15.2	7.37	< 0.01	129.5	7.37	< 0.01
Style	16.4	5.02	< 0.01	3.79	5.02	< 0.05

According to Table 5.11, only the style attribute for the domestic tourists is below the critical point. That is, the difference between the stated and revealed preference is not significant on style attribute for domestic tourists only. By their stated preferences, domestic tourists prefer

first traditional-style rather than modern-style, but the difference is not significant. The same applies for the revealed preferences of domestic tourists, but the sequence is different than in the stated preference.

According to Figure 5.2 and Figure 5.7, the difference in the stated and revealed preferences of both international and domestic tourists on restaurant profile selection is clear. For the international tourists according to the stated preferences, the majority of the preferences are on profiles 5, 6, 4 and 1 consecutively; and according to the revealed preferences, the majority of the preferences are on profiles 2, 6, 5, 3 and 9 consecutively. For the domestic tourists, according to the stated preferences, the majority of the preferences are on profiles 4, 6, 1 and 3 consecutively; and according to the revealed preferences, the majority of the preferences are on profiles 2, 9, 6 and 5 consecutively.

Apart from restaurant profiles, each restaurant attribute has been used for comparing the stated and revealed preferences of international and domestic tourists for these attributes. Starting from the location attribute, according to the stated preference, international tourists prefer first the old zone, then the outlying area and lastly the new zone. According to the revealed preferences, international tourists prefer first the old zone, then the new zone and lastly the outlying area. Domestic tourists have the same sequence for the stated and revealed preferences. That is, they prefer first the old zone, then the new zone and lastly the outlying area. This implies their stated preference did not change when going out for the tapas.

When it comes to the atmosphere attribute, the stated preferences of international tourists are first indifferent environment, then the young environment and lastly the adult environment. According to their revealed preferences, they prefer first the young environment, then the indifferent environment and lastly the adult environment. As for domestic tourists, their stated

preferences are first the adult environment, then the young environment and lastly the indifferent environment. According to their revealed preferences, they prefer first young environment, then the indifferent environment and lastly the adult environment.

For the style attribute, international tourists' stated preferences are mostly traditional, whereas their revealed preferences are more or less equally divided between traditional- and modern-style.

5.4.5. Stated and revealed preferences on restaurant profiles and attributes

The en mostly old zone restaurants.

Table 5.12 sums up the analysis presented so far, presenting the preferences and choices of each tourist type. For the restaurant attributes, the values are scaled according to dominance; that is, for example, international tourists prefer restaurants located firstly in the old zone, and then their preference goes to restaurants located in the outlying area and lastly they least prefer restaurants located in the new zone. In the restaurant profiles, the first three highest preferred restaurant profiles have been taken into account, and their ranking is shown in the 'number' column. The common attribute values are stated as well.

The results in Table 5.2 mean international tourists prefer restaurants located in the old zone with a traditional-style, young and indifferent atmosphere. Domestic tourists prefer restaurants located mostly in the old zone, with a traditional style mostly and a modern style, and with an adult atmosphere mainly. The same information has been set in revealed preferences of tourist types as well. According to revealed preferences, international and domestic tourists have the same order preferences on attributes, when taken separately. When it comes to most selected restaurants, the attribute values are slightly different. For example,

domestic tourists have chosen both old and new zones, whereas international tourists have chosen mostly old zone restaurants.

Table 5.12. International and Domestic Tourist's Stated and Revealed Preference Structure.

Tourist Type	Restaurant Profile		Location	Atmosphere	Style
	Number	Common Preferred Attribute Values			
International Tourists					
Stated Preferences	5 > 6 > 4	Old zone, Trad., Adult, Young & Indif.	Old > Out .> New	Indif .> Young > Adult	Trad. > Mod.
Revealed Preferences	2 > 6 > 5	Old zone, Trad. & Modern, Young & Indif.	Old > New > Out.	Young > Indif. > Adult	Mod. > Trad.
Domestic Tourists					
Stated Preferences	4 > 6 > 1	Old zone, Trad. & Modern, Adult & Indif.	Old > New > Out.	Adult > Young > Indif.	Trad. > Mod.
Revealed Preferences	2 > 9 > 6	Old & New zone, Mod. & Trad., Young & Indif.	Old > New > Out.	Young > Indif. > Adult	Mod. > Trad.

5.5. Discussion

5.5.1. Stated restaurant preferences

Comparison with overall classification and segmentation of gastronomy tourists in Cohen (1972) and construction of a hierarchical structure of different groups analysed in Chapter 2 within the categorisation of the methods 1 and 2 would be performed when we explain about starting up with domestic tourists.

It is hard to relate the classification of *x*-means with EM-algorithm classification in both international and domestic tourists' cases. Therefore, we have investigated them separately. The segmentation of tourists based on *x*-means does not explain much because it cannot be even comparable with Cohen's (1972) classification of institutionalisation and non-institutionalisation typologies. Because if taken the international tourists, one group has a

preference in the old zone and the other in any zone. This means one seeks culture and authenticity, and the other has priorities other than culture. Both have at least a traditional-style preference, which makes them more interested in the culture of the destination.

Likewise, both groups of domestic tourists prefer the old zone, which shows their interest in culture as well. If we compare these preferences with individual attribute preferences presented in the previous sub-chapter, it is hard to relate them to the outcome of the *x*-means clustering.

For that reason, we have taken the EM-algorithm for analysis purposes. According to EM-algorithm, there are six groups of international tourists and seven groups of domestic tourists. They can be consistent with several other classifications from the state-of-the-art. However, one main classification of Cohen (1979) by level of interest in authenticity and culture is a good basis for correlation purposes.

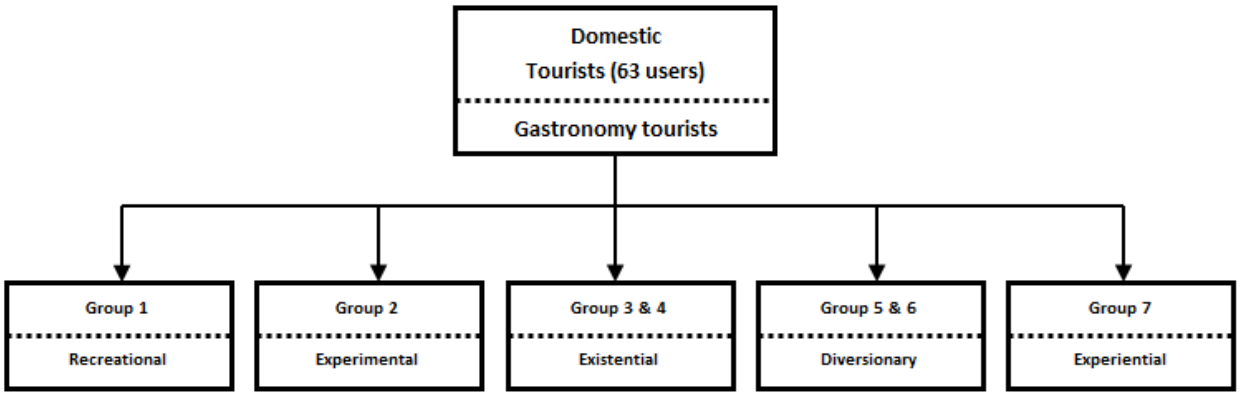


Figure 5.15. Detailed tourist typology of domestic tourists by their stated restaurant preferences in Santiago de Compostela compared with the Cohen (1979) gastronomy tourist typology.

In Figure 5.15, the EM-algorithm groupings of domestic tourists are compared with the groupings provided by Cohen (1972). In the same way, in Figure 5.16, EM-algorithm

groupings of international tourists are compared with the groupings of Cohen (1972). As we know, Cohen (1972) has established two types of tourists: institutionalised and non-institutionalised tourists. Institutionalised tourists like to avoid risks, and they prefer to travel and experience destination while keeping their bubble, which protects them from external affairs. They are always suspicious toward unknown and foreign culture. They tend to go places already known and explored. Non-institutionalised tourists try to seek new experiences, get into the foreign culture and tend not to have their own bubble.

Furthermore, Cohen (1979) has established a wider split of these two groupings. Institutionalised tourists like to avoid or mitigate risks. They can be split into groups such as divisionary and recreational tourists. Non-institutionalised tourists try to seek new food for creativity. For this reason, they can be split into experiential, existential and experimental tourists.

The same grouping by the level of interest and interference to culture and authenticity can be applied to the EM-algorithm groupings of both international and domestic tourists. If we start analysing the groupings of domestic tourists, the Group 1 prefers modern-style restaurants located in old and new zones, and with a young atmosphere. This shows they are more passive on the search for authenticity, thus they prefer modern, and as they are young, their interest is more for joy and leisure. By zone preference, it seems they are somehow interested in culture. This group has the least level of interest in authenticity, which makes them more similar to recreational tourist grouping. Recreational tourists are more passive in involving a quest for authenticity, and they only look for leisure, which is more similar to our first group.

Groups 5 and 6 also prefer modern-style restaurants, which makes them more passive, but they prefer restaurants located in the old zone, which creates some interest in culture, maybe

not being involved in authenticity but more of enjoying the culture. Group 5 prefers the adult environment and Group 6 prefers the indifferent environment. Both groups can be classified under diversionary tourist types. Diversionary tourists are somehow similar with recreational tourists, thus they are passive in the quest for authenticity as well, but they seek a mere escape from the boredom and the meaningless of routine. This can be interpreted from the preferences of these groups, as they are not interested in culture but maybe slightly seeing the old zone as an escape from boredom.

Groups 3 and 4 are more active than others, thus they prefer the traditional-style restaurants located in the old zone. Group 3 prefers the indifferent environment and Group 4 prefers the adult environment. Both groups can be interpreted as having a high interest in culture and authenticity, as well as participating in the authenticity. This makes them similar to the existential tourist types. Existential tourists seek authenticity in some fashion. They seek some sort of life-changing experience in culture, which can be interpreted from the preferences of these groups.

Group 2 prefers culture and authenticity in the form of traditional-style restaurants. Its members prefer both the old and new zones, as well as a young atmosphere. They are more engaged in authenticity than the last group and they prefer a younger age, which makes them more of a ‘try at least once’ tourists; thus, they could be classified as an experimental tourist group. Experimental tourists seek alternative lifestyles and perhaps try out many. This type of tourists actually engages in another authentic life rather than simply taking joy in observing it. Drifters and hippies are probably good examples of this type (Cohen, 1979), which emphasises this group should have a preference for the young atmosphere, which is confirmed by Group 2’s preference on atmosphere attribute.

Group 7 prefers the traditional-style restaurants located in the new zone and with the adult environment. This group, even though it has an interest in culture and authenticity, prefers to be in the new zone, which can indicate its interest in authenticity but avoidance of trying to be authentic. This makes them perfectly matching as experiential tourists. Experiential tourists prefer to experience the authenticity of the life of others, but do not prefer to be involved directly. The same can be interpreted from the preferences of this group.

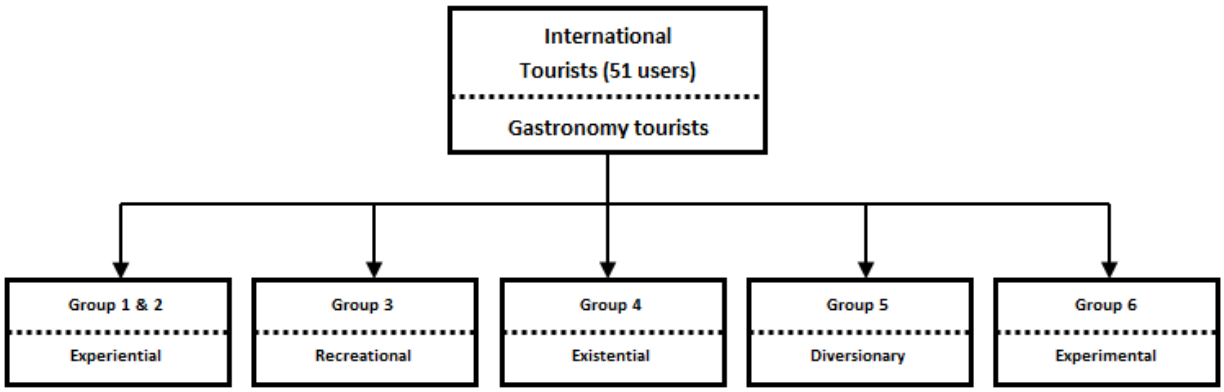


Figure 5.16. Detailed tourist typology of international tourists by their stated restaurant preferences in Santiago de Compostela compared to other gastronomy tourist typologies.

When we look into international tourists, the *x*-means and *k*-means clustering methods divided the international tourists into two similar groups. However, as stated early, it is difficult to classify them into groups that are non-institutionalised and institutionalised. It is evident that in both groups the attention of the tourist was toward traditional restaurants in the old zone. This shows that both groups want to experience the culture of a nation, especially a cuisine that is an important part of the culture, specifically tapas. The only difference found between the two groups of non-institutionalised and institutionalised is that the second group (institutionalised) looks for the traditional pubs and restaurants in the old zone, and prefers both the young and adult environment. This indicates that these tourists, in particular, look for

culture, and they comprise various age groups. The second group is looking for culture; however, they do not mind if the restaurant or pub is modern or any other type. The second group does not look for a particular environment.

The third group of international tourists prefers modern-style restaurants located in any zone. It indicates this group is not much interested in culture or authenticity, but is looking for leisure as recreational tourist group. They do not care about location and are of an older age; thus, they prefer the adult environment. This again emphasises their similarity with the recreational tourist group.

The fourth group also prefers modern-style restaurants as the previous group, but prefers restaurants located in the old zone with adult and young environments. This group is not much interested in authenticity but less than the previous group; thus, it is relevant to relate them to the diversionary tourist group. This group seeks to escape from boredom and meaningless of routine. Normally, routine establishes on older age group rather than the young age.

First and second groups prefer traditional-style restaurants but located in the old, any and the new zones. This signifies they are more interested in culture and authenticity than previously mentioned groups, but they are more into experiencing the authenticity of the life of others, rather than being directly involved in this culture. This group can in some form be correlated to the experiential tourist group; thus, experiential tourists are the lowest level within the non-institutionalised tourists and have the lowest level of activity in regard to authenticity and involvement in culture.

The fourth and sixth groups prefer traditional-style restaurants located in the old zone. Both groups are interested in culture and authenticity, and they can be referred as the most active

tourist groups. The fourth group prefers the adult environment, whereas the last group prefers the young environment.

The fourth group can be referred to as an existential tourist group. Existential tourists seek new 'centre' and become part of new society. They seek authenticity for a complete change in a person's life on a more permanent basis (Cohen, 1979). As the last group prefers the young environment, they can be referred to as the experimental group as stated in domestic tourists; experimental tourists seek alternative lifestyles and perhaps try out many. This is expected, though mostly from younger aged tourists rather than older aged tourists.

Of course, these are assumptions from stated preferences, and references might not fully be accurate because the preferences selected are not always what people mean to prefer. There might be other external influences for the selection of certain attribute values rather than interest or ignorance. As we do not know about these external influence attributes and values, we cannot certainly classify them according to the clusters used by Cohen (1979). As stated earlier in this chapter, they can be classified by their interest in culture on different levels by their preference selection on different attributes, which we have done here.

For further analysis, it is recommended to take into consideration the interpretation of each attribute by each user, meaning, we must understand how each user interprets the attribute and what is meant when a certain value is selected. This will help in clustering and classifying the tourists by their interest in culture and authenticity.

5.5.2. Revealed restaurant preferences

Everything is described in a complete manner when it is concerned with the preference of restaurants for domestic tourists. It is important to note the fact that preferences that have been revealed are the true preferences of individuals and stated preferences are merely the

most important preferences in this regard. It shows the technique through which tourists can make their selection decisions in practical scenarios. When following this pattern, interesting cases can be revealed.

Using the same methodology of comparing EM-algorithm tourist groups on stated preferences with Cohen's (1979) five tourists grouping, we have split into groups by revealed preferences of both domestic and international tourists. As stated early, Cohen's (1979) five tourist groupings are based on how much tourists are interested in culture and authenticity.

International tourists based on origin are counted as 333 different users with 756 evaluations. Using the EM-algorithm, we have divided these tourists into five different groups just as Cohen's (1979) five tourist grouping.

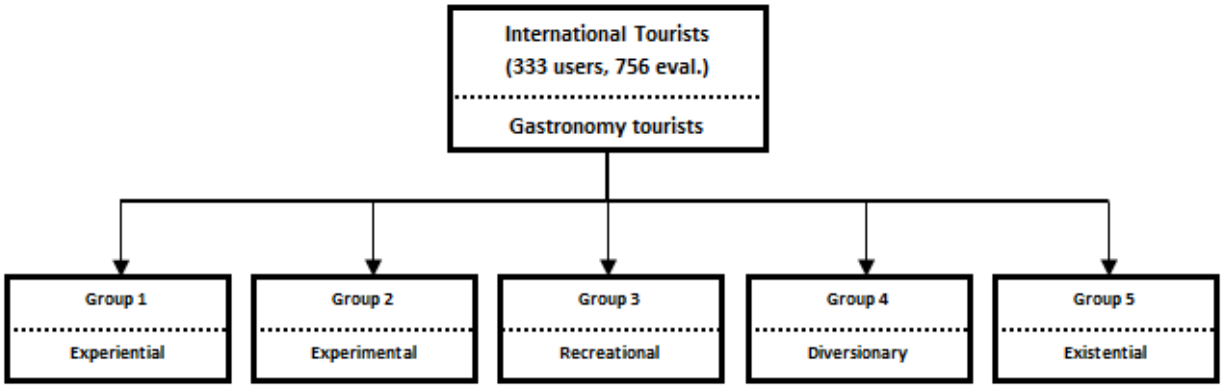


Figure 5.17. Detailed tourist typology of international tourists based on their revealed restaurant preferences in Santiago de Compostela compared with Cohen's (1979) typology.

For this coherence match, we have assumed tourists who have preferences on traditional-style restaurants located in the old zone are active tourists eager to try and experience the culture and the authenticity of Santiago de Compostela city cuisine. Respectively, we have categorised tourists with preferences on modern-style restaurants located in the new zone and

outlying area as passive tourists not interested in culture or authenticity of the cuisine. As can be seen from Figure 5.17, the passive tourists are Groups 3 and 4, which are recreational and diversionary tourists.

Group 3 of international tourists by the EM-algorithm is the most passive group based on their interest and willingness to try authentic food or interest in culture. They prefer modern-style restaurants with an indifferent environment and located in the new zone. Group 4 of international tourists is the second level of passive groups. This group prefers restaurants with modern-style with an indifferent environment and located in the old zone. The location preference could be because of their being nearest to the old zone.

The rest of the groups are more active as they prefer traditional-style restaurants, and almost all are located in the old zone. The least active level of tourist groups is the experiential group, and coherent with Group 1. This group prefers traditional-style restaurants with a young environment and located in the new zone.

The next level is Group 2 of international tourists, which is coherent with the experimental tourist group. This group prefers traditional-style restaurants located in the old zone with the adult environment. Adult environment tells us about more stability rather than changing the centre and becoming part of a new society.

The most active tourist group is existential and its equivalent to the last group of international tourists. Group 5 prefers traditional restaurants with an indifferent environment and located in the old zone. Preference for indifferent environment tells us this group either is ready to interact with any kind of environment or is not open to any environment. Looking into the preference for traditional-style and old zone location, we assume they are open to any environment, and thus they are the most active group of international tourists.

In the evaluation of revealed preferences, there were many more domestic tourists (5.145 users) and evaluations (14.004 evaluations). Using the EM-algorithm, domestic tourists have been divided into six groups. These groupings have been matched with Cohen's (1979) five tourist typologies, the same as international tourists above.

Group 3 of domestic tourists consists of the most passive; thus, they are the equivalent of recreational tourists of Cohen's (1979) tourist grouping. They prefer restaurants with modern-style with the indifferent environment and located in the new zone. This means they have chosen restaurant profile 9 as a centre.

Groups 1 and 2 of domestic tourists are passive tourists groups too, but less passive than Group 3; thus, they are comparable with diversionary tourist groups. They prefer restaurants with a modern-style located in the old zone. Group 1 prefers the young environment and Group 2 prefers an indifferent environment. These groups prefer restaurants from restaurant profiles 2 and 3. They comprise the biggest portion of the domestic tourists.

Group 6 of domestic tourists is active tourists but less active than Groups 4 and 5; thus, they are comparable with the experimental tourist group. This group preference centre is restaurant profiles 13 and 15. The restaurants preferred by this group have traditional- and modern-style with the adult environment and located in the outlying area.

Groups 4 and 5 of domestic tourists are more active than any other groups. These groups prefer restaurants with traditional-style, located in the old zone. Group 4 prefers the young environment, and Group 5 prefers an indifferent environment. We have compared them with Cohen's (1979) existential tourist groups. These groups have chosen restaurant profiles 5 and 6.

Figure 5.17 and Figure 5.18 show the coherent matching of international and domestic tourist choice's using EM-algorithm groupings compared to Cohen's (1979) typology.

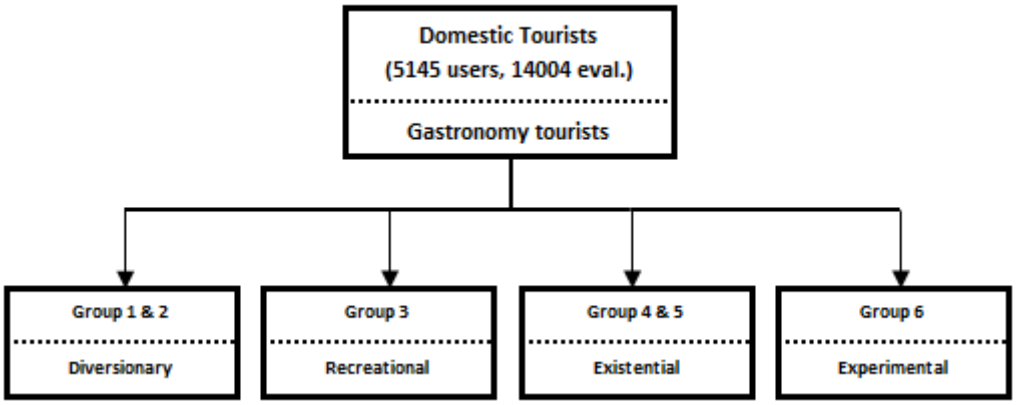


Figure 5.18. Detailed tourist typology of domestic tourists based on their revealed restaurant preferences in Santiago de Compostela compared with Cohen's (1979) typology.

As a conclusion, the overall research reveals the most crucial location for restaurants and hotels is the old zone. It does prove the fact that whenever tourists go out for breakfast, lunch or dinner, they tend to select restaurant locations nearest to the mature zone and the historical landmarks or monuments. It is certainly evident from the stated preferences that some domestic tourists prefer to go to new zones and at times do not bother to differentiate zones. However, it also proves that primary preferences cannot always be stated as the core preferences. Apart from that, the regression model shows that the old zone value model is the core trait when pressed. However, there are certain users who do prefer to go to the new zone for a different experience.

When local tourists first visit the restaurants, their core preference for the approach of the restaurant is the conventional style. When it comes to the environment, the core emphasis is on the young surroundings. However, it should be taken into consideration, regarding the

value and results of the multiple R-square, discussing the local tourists and the level of confidence in this regard is an estimated 24%. This means the regression model can explain that merely 24% of domestic tourist preferences depend on restaurants when they prefer to dine out for food. The other factors that can have an impact on the option are not taken directly into an account. Service quality, location cleanliness, pollution, additional perks, customer expectation and satisfaction, group companions, climate and weather, state of mind, tapa (food), view of tapa, taste of tapa and quality of tapa are some of the factors that substantially impact customer choice and preferences. For this reason, to have similar desired sequence, it is very important and recommended for future studies to have all the potential traits explained above.

The primary preference of international tourists prior to the experiment conducted is nearer to the preference style and location of the restaurant that we see in the real situation. It is evident in Figure 5.19 that the primary preference stated by the international travellers on style and location is the old zone and the traditional-style. However, when we see revealed preferences of the international tourists on the attributes of style and location in the same figure, they are the old zone and traditional-style. Thus, it can be established that preferences showed by the international tourists before the experiment did not change after the experiment was conducted.

On the other hand, if we examine the significance of restaurant features for the international tourists, it is evident the location is the most important attribute, followed by the style and the environment features, and lastly the quality attribute whose significance is close to zero. A lack of quality feature can be clarified by a lack of knowledge regarding tapas and restaurants in Santiago de Compostela city; international tourists cannot differentiate superiority of the restaurant due to insufficient knowledge. However, when it comes to the feature of location,

international tourists prefer proximity to the monuments in the old zone of the city as having an easy admission to the culture is much more important to them compared to the environment. Style is another important factor for the international tourist as they see traditional-style as a part of the culture.

It also must be taken into account that prior to the experiment, both domestic and international tourists stated their preferences, which means, it is their core preference before going out to dine, but when they are out for a dining experience, many external factors influence the selection process of the restaurant. For example, a tourist is closer to the zone that is out of his or her preference, or the companion or people surrounding the tourist have preferences different from the tourist's core preferences. For this reason, we have done a hypothesis test to check whether the offered restaurants influenced the revealed preferences of the tourists somehow and, in our case, the restaurant profiles in the experiment.

5.5.3. General comparison of classifications

The Santiago(é)Tapas experiment is not similar to the other classifications for three major reasons: (1) due to the attributes concerned, (2) the market's scale taken into account only Santiago de Compostela city and (3) it is confined within the constraint of Santiago(é)Tapas contest. As explained earlier, the different attributes were taken for the purpose of grouping. Within Table 5.13, it is evident different typologies consist of dissimilar attributes, which have been explained previously. Coincidently, the table has the classifications from the Santiago(é)Tapas experiment, and it also discusses the distinction that shows the individuality the experiment has received from other classifications.

Cohen's tourist typology (1979) can help with the classification of both the stated and revealed preference of domestic and international tourists EM-algorithm clustering. The

correlation of these tourist groupings has been discussed in previous sub-chapters. The revealed and stated preferences of the international and domestic tourists within restaurants have been compared to various kinds of gastronomy tourist classifications in Table 5.13.

Table 5.13. Different Gastronomy Tourist Classifications Compared with Stated and Revealed Restaurant Preferences of Domestic and International Tourists (SP – Stated Preferences, RP – Revealed Preferences).

Name	Attributes	Gastronomy Tourist Classification	Matching with Other Classifications
Cohen E.	1.Strangeness / familiarity	1.Institutionalised 2.Non-institutionalised	
	1.Strangeness / familiarity 2. Tourist preferences	1. Recreational 2. Diversionary 3. Experiential 4. Experimental 5. Existential	SET's classification: 1. A1 / B3 / C3 / D3 2. A5 & A6 / B1 & B2 / C5 / D4 3. A7 / - / C1 & C2 / D1 4. A2 / B6 / C6 / D2 5. A3 & A4 / B4 & B5 / C4 / D5
Chang et al. (2011)	1. Interest to local food 2. Strangeness / familiarity	1. Chinese food 2. Local food 3. Non-fastidious about food	
Fischler	1. Tendency for familiar / strange food	1. Neophobia 2. Neophilia	
Finkelstein	1. Interest to local food; 2. Strangeness / familiarity	1. Experiential 2. Experimental 3. Existential	SET's classification: 1. A7 / - / C1 & C2 / D1 2. A2 / B6 / C6 / D2 3. A3 & A4 / B4 & B5 / C4 / D5
Plog	1. Level of search for new destination 2. Openness / closeness to host destination	1. Allocentric 2. Near allocentric 3. Mid-centric 4. Near psychocentric 5. Psychocentric	
Domestic tourists (SET experiment)	1. Restaurant Style 2. Restaurant Atmosphere 3. Restaurant Placement, Zone	A1. Group 1 (SP) A2. Group 2 (SP) A3. Group 3 (SP) A4. Group 4 (SP)	Cohen's Classification: 1. Recreational 2. Experimental 3. Existential 4. Existential

		A5. Group 5 (SP) A6. Group 6 (SP) A7. Group 7 (SP)	5. Diversionary 6. Diversionary 7. Experiential
		B1. Group 1 (RC) B2. Group 2 (RC) B3. Group 3 (RC) B4. Group 4 (RC) B5. Group 5 (RC) B6. Group 6 (RC)	Cohen's Classification: 1. Diversionary 2. Diversionary 3. Recreational 4. Existential 5. Existential 6. Experimental
International tourists (SET experiment)	1. Restaurant Style 2. Restaurant Atmosphere 3. Restaurant Placement, Zone	C1. Group 1 (SP) C2. Group 2 (SP) C3. Group 3 (SP) C4. Group 4 (SP) C5. Group 5 (SP) C6. Group 6 (SP)	Cohen's Classification: 1. Experiential 2. Experiential 3. Recreational 4. Existential 5. Diversionary 6. Experimental
		D1. Group 1 (RC) D2. Group 2 (RC) D3. Group 3 (RC) D4. Group 4 (RC) D5. Group 5 (RC)	Cohen's Classification: 1. Experiential 2. Experimental 3. Recreational 4. Diversionary 5. Existential

With the help of the group preference hierarchy, it is possible to state the kind of tourist and the group user is part of. There is a clear idea of the preferences of the tourist for each group. This information can be used for several other purposes, such as providing a recommendation system for Santiago. Based on the demand, it is possible to state the reasons for the clarifications of the Santiago de Compostela gastronomy supply.

The attributes must be further extended, and the context attributes must also be broadened as part of the future studies. By gathering this information, it would be possible to present answers that are detailed and in accordance with the group's preferences.

5.5.4. Gap between stated preferences and restaurant distribution

Here, we will analyse the stated preferences and restaurant distribution to see the gap between the demand and supply of the restaurants in Santiago de Compostela city. We also will analyse the revealed preferences and restaurant distribution to see the gap between the selection and supply of the restaurants.

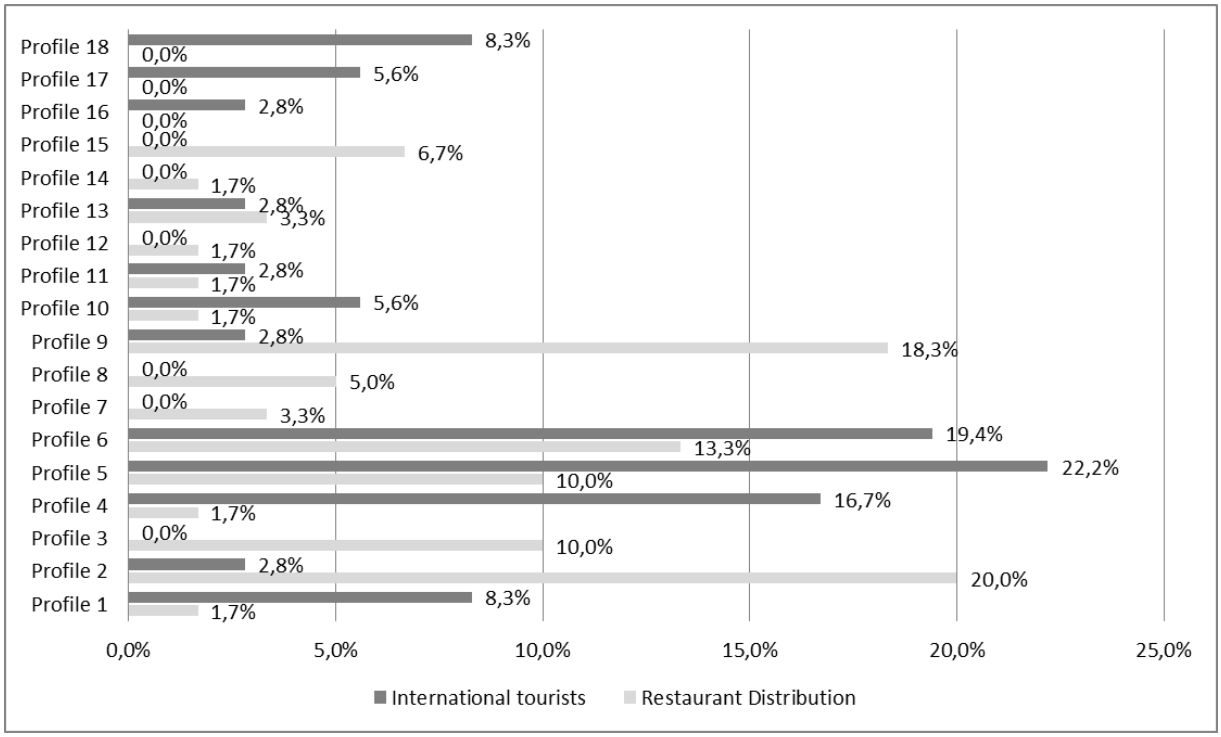


Figure 5.19. Probability distribution of international tourist preference for restaurant profiles and restaurant distribution (stated preferences).

According to international tourist's preference distribution, the highest preferences are on profiles 5, 6 and 4 consequently, whereas the restaurant distribution on profile 4 is one of the lowest (Figure 5.19). Additionally, on profiles 16–18, where there is no restaurant distribution at all, the international tourists' preferences exist. This means there is a demand for these profiled restaurants, but there is no restaurant offer in the market with the same attribute

values. Furthermore, one of the highest offered restaurant profiles are lowly demanded (restaurant profile 4).

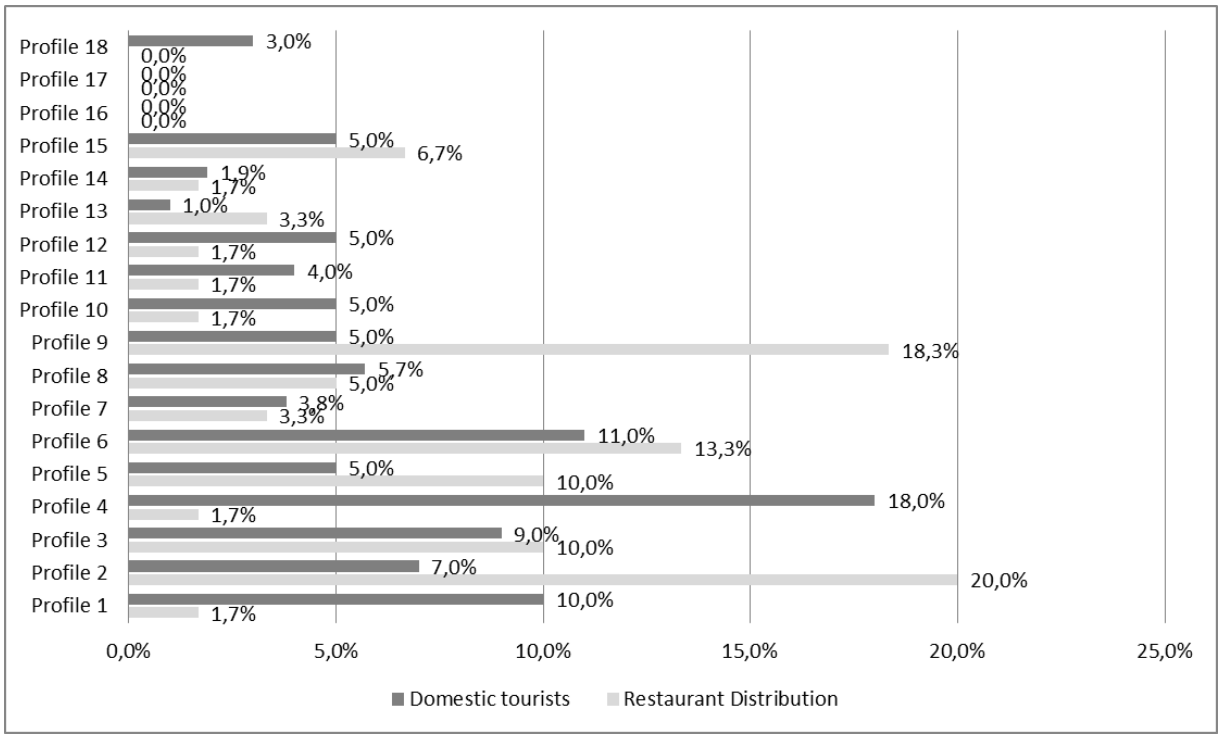


Figure 5.20. Probability distribution of domestic tourist preference for restaurant profiles and restaurant distribution (stated preferences).

The same sequence can be seen in Figure 5.20 with the data of the domestic tourists' preferences on restaurant profiles. According to the graph, the highest demanded restaurant profile by domestic tourists is one of the least offered (restaurant profile 4). Whereas, the second and third preferred restaurant profiles by domestic tourists are the first and third highest offered restaurant profiles.

There also is a demand on restaurant profile 18 by domestic tourists, which has no offer. Interestingly, international tourists have the highest preference on this profile among the three restaurant profiles that have no offer. This restaurant profile has attributes as outlying area,

traditional-style and indifferent atmosphere. Two other restaurant profiles that do not have any offer have no demand by domestic tourists either.

It is noticeable that the stated preferences of international users are mostly in the first six restaurant profiles. They comprise the majority of preferences. For the domestic tourists, the majority is on the restaurant profiles 1, 4, 5, 6 and 18.

After comparing the stated preferences of both domestic and international tourists with restaurant profiles, it is clear that preferences are not influenced by the restaurants offered, as there are mismatching restaurant profile offers compared to preferred restaurant profiles; additionally, the statistical inference proves this.

5.5.5. Hypothesis revisited

H1. The difference between stated and revealed preferences of domestic tourists on restaurants attributes should be insignificant because they have prior knowledge of the restaurant and therefore have a bias. It can be assumed that their final preferences do not change quickly.

This hypothesis can be entirely true for only the 'location' attribute (see Figure 5.9 and Figure 5.10), where other restaurant attributes changed from stated to revealed preferences. As it is not confirmed for all attributes, this hypothesis is rejected.

H2. The difference between stated and revealed preferences of international tourists on restaurant attributes should be significant because they have no knowledge about the restaurant and pubs of the destination, thus the probability of opening new food to them is higher, and the risk of preference evolution is higher, as compared to that of the local tourists.

According to the preferences of international tourists prior to the consumption of tapas, we can clearly see they preferred the old zone, outlying area, and new zone, respectively (see Figure 5.9). When we check the revealed preferences of international tourists, however, their choices have changed to the old zone, new zone, and outlying area (see Figure 5.10). The same can be concluded regarding the atmosphere and style attributes. This means the hypothesis is proven and accepted.

H3. For international tourists, restaurants located in the old zone are more popular than restaurants located in the new zone and outlying area.

This hypothesis is true not only for international but also for domestic tourists as well. Both tourists prefer the old zone restaurants and even have chosen mostly old zone restaurants. This might be due to the offer given by the destination, meaning that most of the restaurants are located in the old zone; thus, the selection made is old zone restaurants mainly, which was checked in the statistical inference testing. It was proven that restaurant distribution did not influence the selection of the restaurants; thus, this hypothesis can be accepted too.

6. CHAPTER 6: TAPA PREFERENCES

This chapter includes an analysis of the revealed preferences of both domestic and international tourists for tapas. Using the tapa's attributes, we have clustered tapas into different groupings just as we did with tourists and restaurants. Using these clustering groups, we have identified the revealed preferences for each tourist group.

In this chapter we also have tested the impact of context attributes on the revealed tapa choices of the tourists. The analysis of the research will show whether the context attributes had any effect on the revealed preferences of the tourists.

6.1. Hypothesis of the Chapter

In this chapter, the following hypotheses of the study will be added and analysed:

H4. International tourists prefer 'traditional' tapas to 'modern' tapas. It is assumed they are interested in the culture and tend to seek traditional food.

H5. Domestic tourists prefer more 'modern' tapas to 'traditional' tapas. The rationale behind this is that they already know traditional tapas and tend to seek food nuance; thus, they prefer modern tapas.

H6. Context attributes have a high impact on the prior preferences and choices of both domestic and international tourists.

6.2. Revealed Choices on Tapa Authenticity

It is important to divide tapas into certain groupings to analyse the revealed choices of domestic and international tourists. For this purpose, using the recommendation of the

Santiago de Compostela Turismo office gastronomy tourism expert, we have divided the tapas into traditional and contemporary groups on the basis of the tapas' degree of authenticity. *Traditional tapas* are tapas of Galicia that are famous and well-known in the culture of Spain. They are prepared in an old-fashioned way, which means in an authentic cooking method. *Contemporary tapas* or original tapas are non-typical or new tapas created by chefs of restaurants participating in the Santiago(é)Tapas contest. Using knowledge of tapas by the tourism expert, we have classified 113 tapas that participated in the Santiago(é)Tapas contest: 60 traditional and 53 contemporary.

After allocating tapas into tapa authenticity types, we started analysing the coaster votes, which provide the revealed choices of tourists. In the coaster votes, personal information included name, passport or DNI, place of origin, email address and telephone number. Additionally, as the main question, the tapa experience evaluation included the tapa rating and the overall experience rating. For both ratings, the Likert scale has been applied. The evaluations were scored from 0–5, where 0 is very bad, and 5 is very good experience.

Furthermore, as stated in previous chapters, tourists have been divided into categories of domestic and international tourists using the information regarding the place of origin. The international tourists have experienced or chosen a total of 408 traditional (54%) and 348 contemporary (46%) tapas, respectively (Figure 6.1). The international tourists consumed more traditional tapas than contemporary or original tapas. This difference can be justified on the basis that when international tourists go out for tapas, their interest leans more toward traditional tapas rather than contemporary tapas. Another factor could be the prior recommendations or experiences of other surrounding people, which is likely to be more traditional tapas than contemporary tapas, as well as the low level of knowledge about tapas.

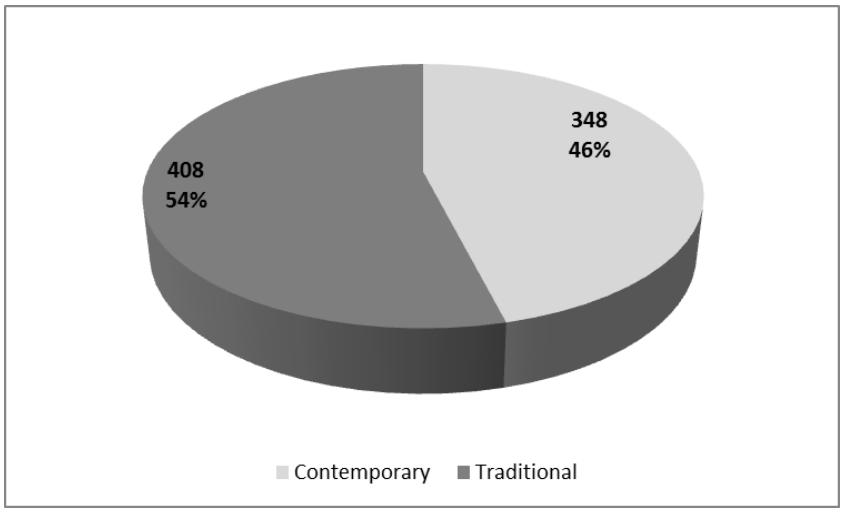


Figure 6.1. Tapa choices of international tourists based on tapa authenticity type.

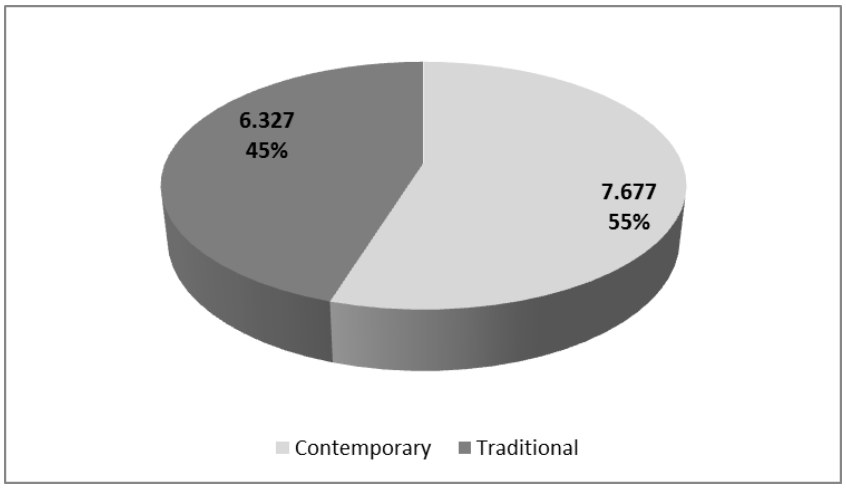


Figure 6.2. Tapa consumption of domestic tourists based on tapa authenticity type.

The choices of domestic tourists reveal preferences opposite of international tourists. Domestic tourists have experienced or chosen a total of 6,327 contemporary (55%) and 7,677 traditional (45%) tapas (Figure 6.2). This can be explained by the tapa knowledge of domestic tourists. As they already know about traditional tapas and have experienced them, their

interest for new and contemporary tapas increases, which explains their behaviour in the content.

Apart from choices, we should look into their evaluations of the experiences. As stated before, the coaster voting includes the evaluation of the tapa and overall experience on a Likert scale of 0–5. Figure 6.3 shows the tapa ratings of international tourists by tapa authenticity type. In the figure, the ratings are shown on the x-axis, where 5 means liked the tapa a lot, and 0 means did not like the tapa at all. The bar numbers represent the number of tapa authenticity type experiences rated, and their respective percentage in relation to the total number of tapa experiences for each tapa authenticity type.

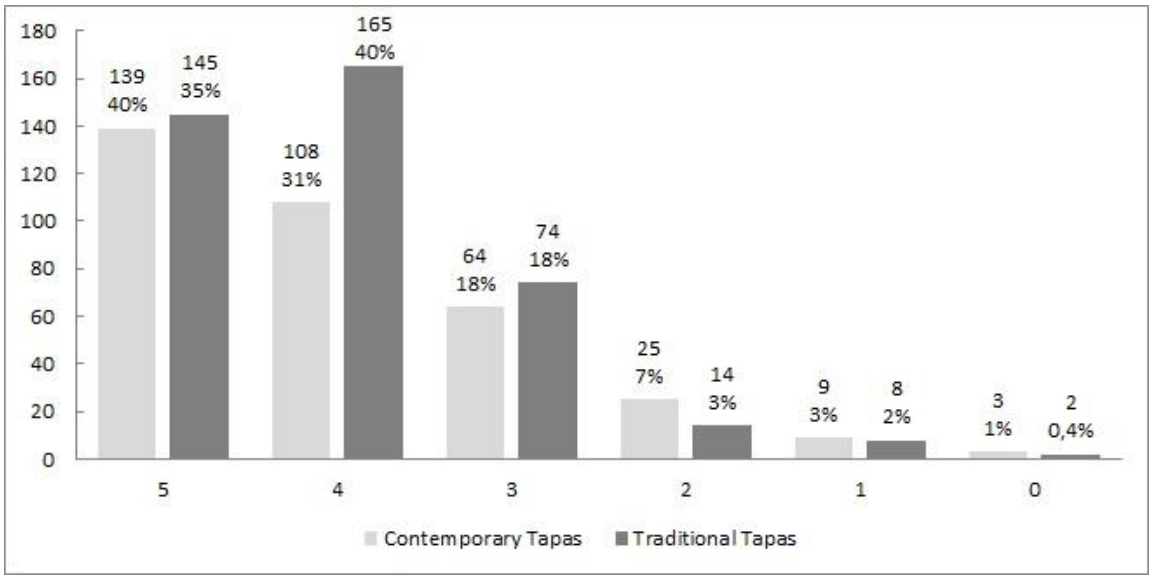


Figure 6.3. Tapa ratings of international tourists by Tapa authenticity type (0 means did not like it, 5 means like it a lot).

If we check the tapa experience of international tourists by their tapa ratings, we can see different fluctuations. On a rating of 5, there are more contemporary tapas experienced rather than traditional tapas, but with a rating of 4 the traditional tapas are much higher in proportion than contemporary tapas. There are an equal amount of tapas rated by 3. From ratings 3 to 0,

there are much less traditional tapas experienced rather than contemporary. In summary, if we assume a high rating as 5 and 4, normal rating as 3, and low rating as 2, 1 and 0, then we can easily see from Figure 6.4 that most of the traditional tapa experiences are rated high in comparison to contemporary tapa experiences. The number of low ratings are far less than in contemporary tapa experiences. The findings show that international tourists not only have experienced more traditional tapas than contemporary ones but also rated the traditional tapas higher than contemporary ones.

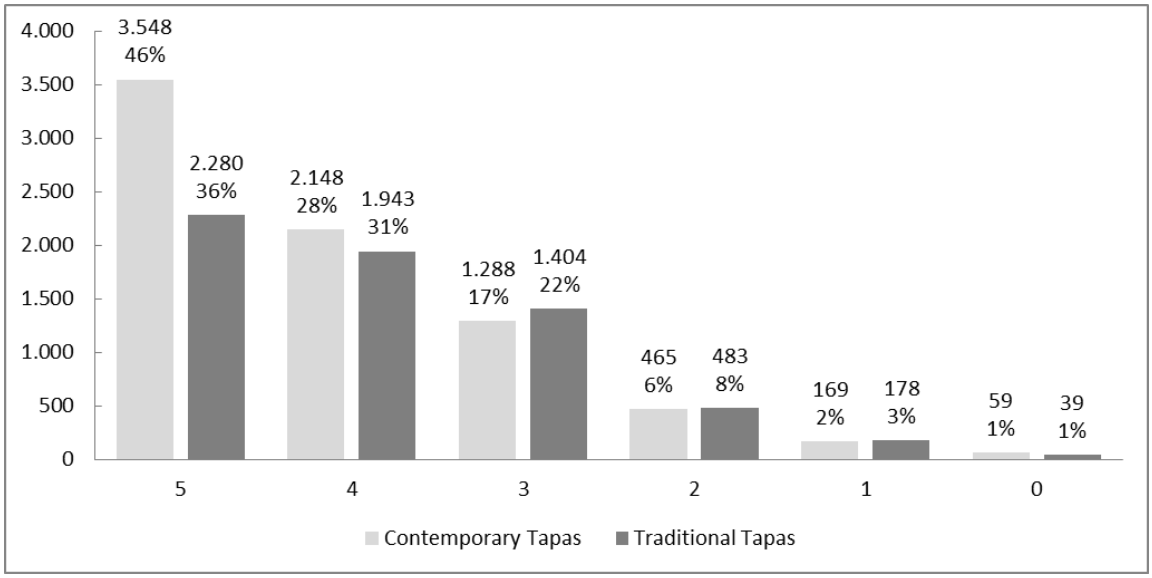


Figure 6.4. Tapa ratings of domestic tourists by tapa authenticity type (0 means did not like it, 5 means like it a lot).

In Figure 6.5 we have highlighted the tapa ratings of both domestic and international tourists by tapa authenticity type, and have grouped the ratings into three levels: high rated, neutral rated and low rated. A high rating includes ratings of 5 and 4, a neutral rating includes a rating of 3, and a low rating includes ratings of 2, 1 and 0. This way, it is clearer which tapa authenticity type is rated higher by which tourist group.

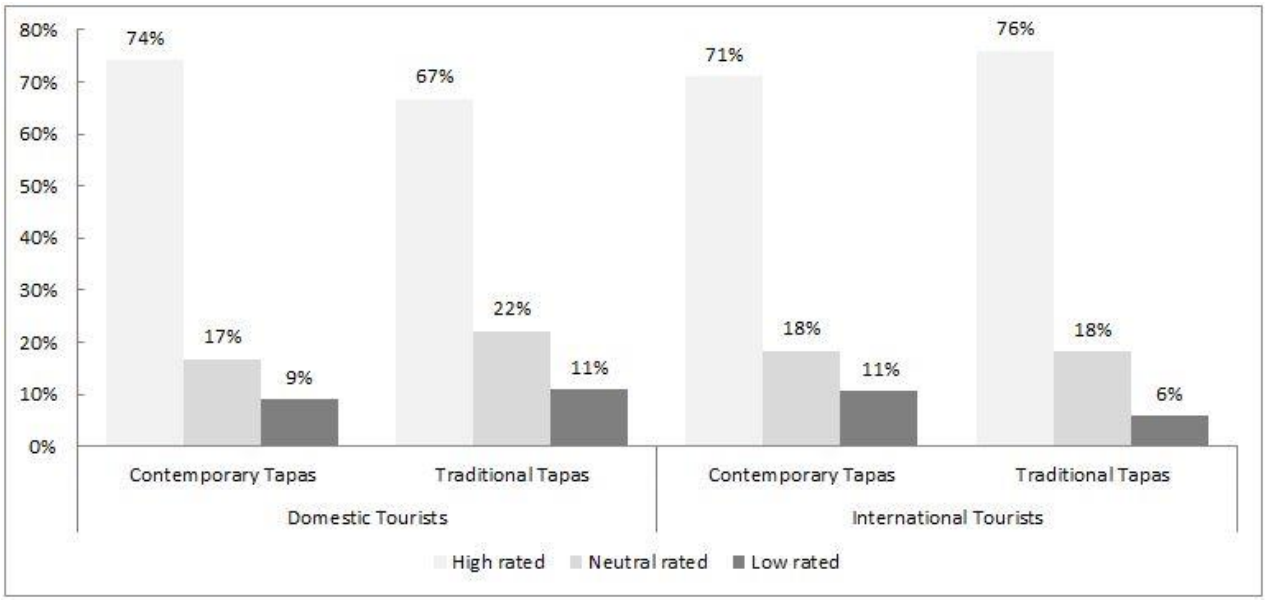


Figure 6.5. Tapa Ratings of domestic and international tourists by tapa authenticity type (% share by rating clusters).

6.3. Choices and Tourist Context

In the previous sub-chapter, we have analysed the revealed choices of domestic and international tourists on tapa authenticity types, as well as their ratings on tapa experience. Now, we will analyse the impact of the tourist context on their choices. As explained in the previous sub-chapter, we have classified 113 tapas into contemporary and traditional tapas with the help of the Santiago de Compostela Turismo office tourism specialist. For context impact, we will not only consider tapa authenticity type but also the tapa cluster based on its key ingredient.

Using tapa ingredients, we have clustered the tapas into different groups. The main ingredient used in the tapa creation has been taken as the grouping label. Local tourists with knowledge about the tapas supported for this clustering. As a result, we identified 8 ingredient-based clusters: Fish (Pescado), Seafood (Marisco), Meat (Carne), Sweet (Dulce), Vegetable

(Vegetal), Cheese (Queso), Egg (Huevo) and Other . The classification of 113 tapas into tapa authenticity type and tapa key ingredient clustering is shown in Figure 6.6.

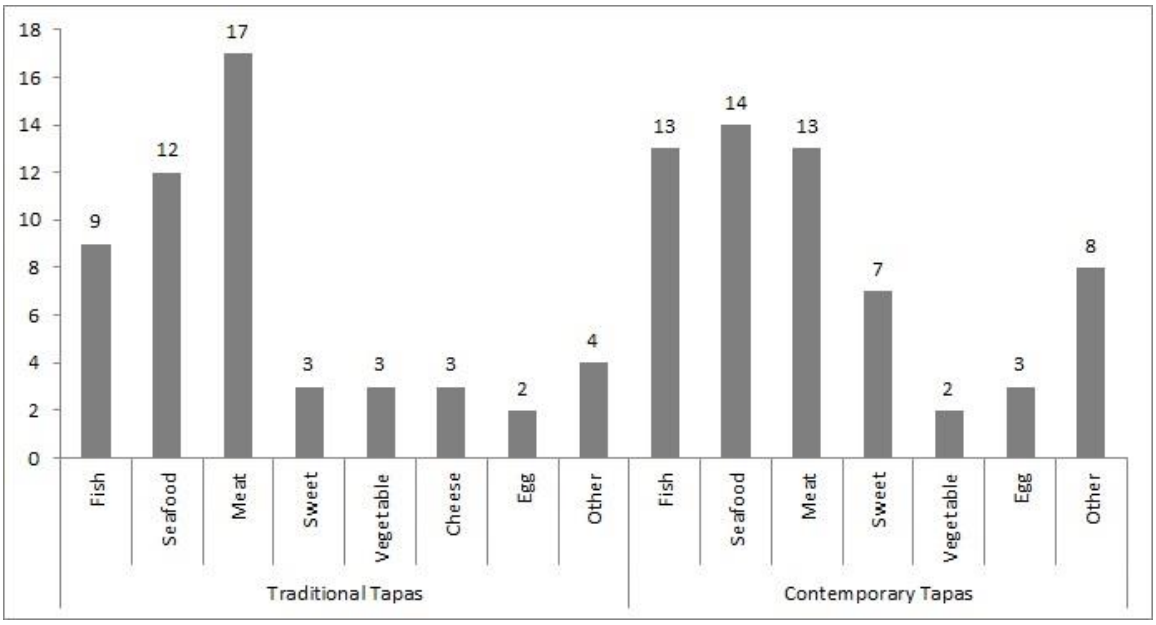


Figure 6.6. Contest tapas by tapa authenticity type and tapa key ingredient clustering.

As discussed in Chapter 4, different context attributes may impact the real choice and the initial preferences of both domestic and international tourists. We observed three major context attributes in this research: 'weekday', 'company' and 'hour'. The weekday variable has two values: working day and weekend. The company variable has three values: alone, partner, and group. The hour variable has two values: during day and evening (night).

The impact of the weekday on this experiment might not be relevant, because of the contest conditions. The reason lies in the time period when the coaster votes were collected. It is limited, thus the number of available weekends is low. This means the sample of weekday experiences is not enough for statistical purposes. The same can be pointed out for the hour attribute. Some restaurants have an offer only in the evening, which will exclude them from the 'during day' value. That is why, for the purpose of the context impact, we will analyse the

company context. It is clear that having three different values will facilitate to demonstrate whether the context has an impact on the real choice of the tourist.

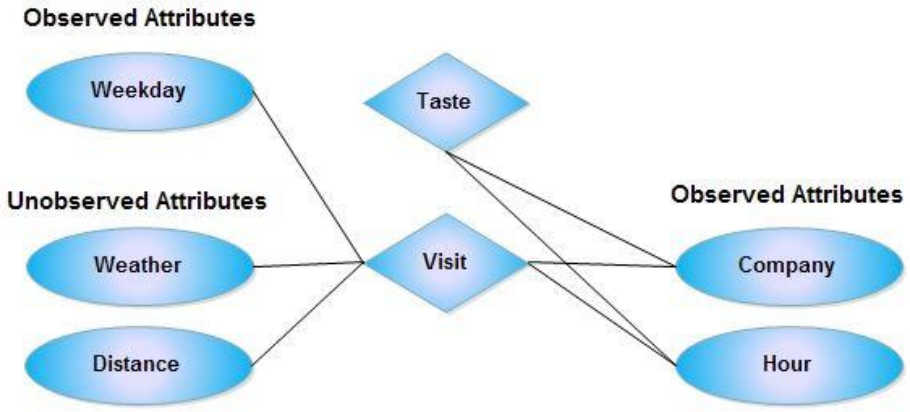


Figure 6.7. Context attributes.

To check the company context impact on the tourist's choices, we picked some users from the sample and used following criteria:

1. User must have experienced tapas in at least two different contexts;
2. User must have tried at least 15 tapas within the context; and
3. The experience within each context should be significant.

Applying these constraints, we have identified 16 users from the overall sample. The justification for applying such a criteria is to make the test more relevant to the topic of tourist company context impact on revealed choices of tourists. For this reason, the first criteria ensure the tourists have experienced tapas in different company contexts; hence, if the tourist had tapa experiences only in one company context, this could not be used for checking the impact of the company context on the revealed choice of the tourist. The second filter ensures there are enough tapa experiences for the test to give more realistic results. Lastly, we make

sure the experiences with different company context should be significant when compared from one to second company context; otherwise they would provide irrelevant and wrong conclusions. The data from the tourists should be as reliable as possible for the purpose of testing. As a result, all chosen 16 users are from the domestic tourist group (see Table 6.1).

Table 6.1. Selected Tourists for Testing Company Context Impact on Revealed Choices.

Tourist Number	Company Context (# of Experiences)			Total
	Alone	Partner	Group	
3		9	8	**17**
31		9	9	**18**
88	30	9	1	**40**
96	17	45		**62**
98	38	3	8	**49**
204		8	35	**43**
209	19	18	34	**71**
402		12	13	**25**
576	1	8	8	**17**
916		16	11	**27**
958	1	9	9	**19**
1,025		12	15	**27**
1,460		9	10	**19**
1,872	1	9	10	**20**
2,966	2	24	9	**35**
3,050		**32**	**8**	**40**
Total	**109**	**232**	**188**	**529**

We will use two methods to understand if the prior hypothesis regarding the context impact on the tourist tapa selection process is appropriate. The Associate Rule Learning is the first method used. As an example (see Table 6.2), we have taken tourist number 3 and applied

Associate Rule Learning method to check if the confidence of selecting certain tapa authenticity type stays same when changed from one company (social) context to another.

The results illustrate that when Tourist Number 3 changed from partner to group company context, the percentage of experiencing contemporary or traditional tapa changed as well. When the subject was with a partner, the confidence of choosing a traditional tapa is 77.7%. This changes in a group context, where the confidence of choosing a traditional tapa decreased to 50%. These figures show the impact of company (social) context on choosing a certain tapa authenticity type.

The same procedure has been applied to all other 15 users to check if the context change has impacted the confidence of choosing certain tapa authenticity type and tapa key ingredient clustering (Table 6.3). In the data, the digit '1' means the tourist's confidence of selecting a specific tapa authenticity type and tapa key ingredient cluster changes when the company context changes. The digit '0' indicates the tourist's confidence does not change.

Table 6.2. Associate Rule Learning Applied to Tourist N.3 As an Example.

Company Context	Tapa Authenticity Type	# of Experiences				Result
		Supp(X)		Supp(XUY)		
		# of Instances	Value	# of Instances	Value	
Partner	Contemporary	2	0.1176	9	0.5294	22.2%
Partner	Traditional	7	0.4118	9	0.5294	77.7%
Group	Contemporary	4	0.2353	8	0.4706	50.0%
Group	Traditional	4	0.2353	8	0.4706	50.0%

Table 6.2 shows that nearly all users change the confidence of specific tapa selection when the context changes. This means that 87.5% of the observed users are impacted by the company context when going out for tapas. Therefore, we could conclude that by using

Associate Rule Learning method, in most cases, the tourist's confidence on selecting certain tapa authenticity type or tapa key ingredient cluster changes when the company (social) context type changes.

Table 6.3. Change of Confidence on Tapa Selection When Context Changes (Associate Rule Learning Method Applied on 16 Selected Tourists; 1 – Confidence Changes and 0 – Confidence Does Not Change).

User N	Context Change from Alone to Partner		Context Change from Partner to Group		Context Change from Alone to Group	
	Tapa Authority Type	Tapa Ingr. Cluster	Tapa Authority Type	Tapa Ingr. Cluster	Tapa Authority Type	Tapa Ingr. Cluster
3	-	-	1	1	-	-
31	-	-	1	0	-	-
88	0	1	-	-	-	-
96	1	1	-	-	-	-
98	0	1	1	1	0	1
204	-	-	1	1	-	-
209	0	1	1	1	1	1
402	-	-	1	0	-	-
576	-	-	0	0	-	-
916	-	-	0	0	-	-
958	-	-	1	1	-	-
1,025	-	-	0	1	-	-
1,460	-	-	1	1	-	-
1,872	-	-	0	1	-	-
2,966	-	-	1	1	-	-
3,050	-	-	0	1	-	-
TOTAL	**1**	**4**	**9**	**10**	**1**	**2**

The chi-square test is the second method used where the tapa preferences of selected number of tourists were analysed and checked if tapa authenticity type or tapa key ingredient cluster selection has been affected by company (social) context. For all previously selected tourists, the null hypothesis was stated as follows: 'Changes in company (social) context does not affect the choice of the tapas by the tourists'. The alternative hypothesis was stated like this: 'Company (social) context changes the choice of the tapas change'. Using the

recommendations given for the chi-square test, we have included only the positive frequencies, the records for each category is supposed to have at least two records, and finally, the sample size is larger than twenty observations. A 0.05 (5%) level of significance has been set for this test.

Table 6.4. Each User's Discrepancies and Critical Values Based on Chi-Square Method.

N	User Number	Tapa Auth. Type		Tapa Ingr. Cluster	
		D	Critical Point	D	Critical Point
1	**3**	1.95	3.9	6.3	5.99
2	**31**	1.92	3.9	2.7	5.99
3	**88**	12.47	3.9	32.5	7.81
4	**96**	11.60	3.9	65.3	9.49
5	**98 ap**	27.00	5.99	18.4	3.84
5	**98 pg**	1.12	5.99	-	-
5	**98 ag**	17.10	5.99	21.8	5.99
6	**204**	22.09	3.9	28.5	5.99
7	**209 ap**	0.90	5.99	33.0	9.49
7	**209 pg**	6.87	5.99	52.6	12.59
7	**209 ag**	7.35	5.99	59.7	12.59
8	**402**	6.13	3.9	6.6	7.81
9	**576**	0.07	3.9	2.5	5.99
10	**916**	1.85	3.9	4.0	5.99
11	**958**	10.68	3.9	3.5	7.81
12	**1,025**	3.11	3.9	16.1	7.81
13	**1,460**	4.30	3.9	7.7	7.81
14	**1,872**	0.05	3.9	6.0	7.81
15	**2,966**	9.14	3.9	28.9	9.49
16	**3,050**	12.38	3.9	27.4	5.99

After executing the hypothesis test, Table 6.4 was formed with the discrepancy value (D) and a critical point depending on the number of categories for the tapa grouping. The null

hypothesis is rejected if the critical point is lower than the discrepancy value. In this case, it can be stated that as the context changes, the user preference on tapa authenticity type changes. However, if vice versa, with the change in the context, the tapa preference would not change.

A similar table (see Table 6.5) like the Associate Rule Learning table is formed using the chi-square test information. The data from the result of chi-square test has been used, where the critical point is lower than the discrepancy value. That is, the null hypothesis testing is rejected as shown by '1' and the null hypothesis is accepted as shown by '0'.

Table 6.5. Based on the User Context, the Change of User Preferences.

User N	Alone to Partner		Partner to Group		Alone to Group	
	Tapa Auth. Type	Tapa Ing. Cluster	Tapa Auth. Type	Tapa Ing. Cluster	Tapa Auth. Type	Tapa Ing. Cluster
3			0	1		
31			0	0		
88	1	1				
96	1	1				
98	1	1	0	1	1	1
204			1	1		
209	0	1	1	1	1	1
402			1	0		
576			0	0		
916			0	0		
958			1	0		
1,025			0	1		
1,460			1	0		
1,872			0	0		
2,966			1	1		
3,050			1	1		
	3	**4**	**7**	**7**	**2**	**2**

Within this test, it is observed that the preferences of all users other than four users (31, 576, 916, 1872) change for at least one tapa group type if there is a change in context.

6.4. Discussion

6.4.1. Tapa choices

From a general perspective, classification of tourists is highly critical as it can help in forming the basis or structure of an in-depth analysis and can help in the overall understanding of the demand of a target market related to a specific product of tourism. One should first study the demand and offer for selling gastronomy as a product for tourism. Typically, domestic, international, direct gastronomy and indirect gastronomy tourists are an important part of the tourist's plan. To have a better idea of their demand, tourists must be classified into specific groups depending on various important factors. This phenomenon can help in better analysing and directing the core supply of products or services.

Within the framework of this article, various ideas and methodologies have been used for highlighting the gastronomy tourists and their choices regarding consuming Santiago de Compostela city tapas. First and foremost, these tapas have been classified into two very important and specific groups through the knowledge that tourists have regarding the gastronomy of Santiago and their tapas. After grouping both tapas and tourists, we have identified whether context variables impact tourist groups' choices on tapa groups, as these context variables are an inevitable part of tourists' gastronomy experience.

To have an idea of the overall hypothesis made, the total data regarding analysis and evaluations of Santiago(é)Tapas contest should be taken into consideration. The analysis suggests that domestic tourists prefer contemporary tapas to traditional tapas. This concept

can further be evaluated and analysed by the tourists' ability to distinguish and differentiate between tapas. Due to lack of knowledge, skill and acceptance of the local cuisine part of the tradition and culture, the controversy of the hypothesis may not work in an effective manner.

It is also evident from this work that factors such as the tapa, its service and the overall restaurant itself are the three core elements that have an impact on the cuisine of Santiago and also have a substantial influence on the evaluation of the tapas and gastronomy experience by the tourist. Tapas include attributes such as flavour, smell, temperature, price, quality, ingredients and temperature, which impact the gastronomy experience, while the restaurant includes attributes such as zone or location, environment, products offered, noise, service, hygiene, decoration, and the relation of price and quality.

Besides that, user and item contexts are two other elements that influence tourist preferences regarding their culinary experiences. This includes the time when a tourist experiences the tapa and the experience felt after visiting the place. There are specific attributes like age, origin or sex for each user and their preferences are also based on aspects such as fish products, expensive restaurants or traditional cuisines and etc. These attributes must remain stable, but some attributes are not at all times, which include tourist context attributes such as time, weather, day within the week, people surrounding tourist, etc. These attributes have a strong influence on the experience moment. For the item, which in this case is tapas, there are attributes which have been stated beforehand. The context of the tapa includes popularity, style, taste, etc., which may affect the evaluations of the tourist regarding the destination of the cuisine.

In our experiment, there are three main attributes included that are observed to be feasible and significant when keeping tourists in mind. This experiment has been carried out by the

Santiago Tourism office and Santiago de Compostela University and is limited to the Santiago(é)Tapas contest.

The hypothesis regarding the context influence upon the tapas selection process has been confirmed on the basis of the findings. A tourist initially had some preferences regarding gastronomy, which allows the preference for a specific tapa and to eventually experience it. The choice of the tourist is influenced by several other factors aside from preference. The tourist's environment is one essential factor that includes the people surrounding him or her and their influence on his or her choice and preferences. For instance, a tourist may prefer fish tapas among the several kinds of tapas. However, when out with friends, this tourist (or the friends) may not prefer seafood and his final choice may change. The rest of the partners may push her or him to move away from seafood and toward chicken in their company. There exists a push and pull structure where the company affects the final choice of the tourist. The preference of the tourist may pass on to the partner, or vice versa. Hence, in both cases, there is an influence of the individuals in the surrounding.

Keeping this aspect in mind, the study would take into account the impact of context on the choice of the tourist. Two methods have been chosen: Associate Rule Learning and chi-square test. Table 6.3 and Table 6.5 present the data.

In Table 6.3, the first method, Associate Rule Learning, is stated and the tapa ingredients cluster and tapa character have been used separately to calculate the user confidence. Different contexts have been used to group the tapa experiences. The contexts are alone, partner and group. Two clustering methods have been applied to each group within which the first is the tapa character and the second is the tapa ingredients' cluster. The calculation for the confidence of each of the group of tapas was calculated as the last step. The hypothesis

was confirmed with some exceptions. Influence has been observed for all users except two, users 576 and 916, upon the context within at least one of the groupings of tapa. This includes the tapa ingredient cluster, tapa character or both.

Table 6.5 shows the second test, chi-square test, where a null hypothesis has been established. This has been stated as controversy toward the present hypothesis. For each tourist, tapa character, tapa ingredient cluster and tapa grouping, a discrepancy value is stated as part of this test. A critical point also has been assessed within each grouping of tapa based on the used characters. The null hypothesis will be rejected if the D value has a higher significance than the critical point. This aspect confirms the hypothesis stated initially. The chi-square tests were conclusive for all selected tourists except four users: 31, 576, 916 and 1872.

Users 576 and 916 are same exceptions as in the first test. The other two users, 31 and 1872, are exceptions for the second test only. There might be various interpretations for why these users' preferences' have not been influenced by the company context.

When user 576 was analysed, it was observed that he or she was in two company contexts: group and partner. In both contexts, the tapa ingredients clustering and tapa character type remained the same according to the research. The analysis can be further explained using the qualitative data extracted from a personal survey or interview that is not present. This unchanged user decision-making may be present due to several other factors which cannot be proven or analysed. One of the possible explanations would be that the user has a strong preference or character and even has a push effect on other people. This does mean that the people who gather around the user often tend to accept choices of this user and do not focus on their own preferences. Another possible reason is that both partner and group surrounding

the user had the same preference as the user, or even that partner and group surrounding the user had the same tapa authenticity type and cluster preferences.

Another user, whose choices are not affected directly by company context, is 916. The same explanation for user 576 can be applied to this user. User 916 had experienced tapas with a partner and in a group, which is same as in the case of user 576.

Other users who have shown some change in a partner and in group contexts are users 31 and 1872. When analysed, user 31's selections on tapa character clearly show that he or she had higher confidence in choosing traditional tapas with a partner. In a group, however, his or her confidence of choosing traditional tapas decreased significantly. In the case of tapa key ingredient clusters, the change in confidence for tapa key ingredient clusters 4, 5 and 8 are significant and not highly significant for tapa key ingredient clusters 1, 2 and 3. According to chi-square test, the discrepancy value is lower than the critical point for this user, which confirms the null hypothesis.

In the case of user 1872, the confidence of selecting traditional tapa when with a partner was lower but increased slightly when in a group. This increase might have been counted low for the chi-square test, thus the discrepancy value is lower than the critical point.

Therefore, we can conclude some important exceptional instances, which can represent different evidence for any level of occurrence. However, the study does not focus on qualitative data and analyses only the quantitative data. It should be noted that the significance of both techniques has been confirmed in this regard.

6.4.2. Hypotheses revisited

H4. International tourists prefer 'traditional' tapas to 'modern' tapas. It is assumed they are interested in the culture and tend to seek traditional food.

This hypothesis is confirmed according to Figure 6.4. Findings show that international tourists have experienced more traditional tapas rather than contemporary. Additionally, they have rated the traditional tapas higher than contemporary ones.

H5. Domestic tourists prefer more 'modern' tapas to 'traditional' tapas. They already know traditional tapas and tend to seek nuance; thus, they prefer modern tapas.

This hypothesis is confirmed by the higher number of contemporary tapas experienced by domestic tourists compared to traditional tapas experiences. Furthermore, the ratings given after the experience are much higher on contemporary tapas (see Figure 6.5).

H6. Context attributes have a high impact on the prior preferences and choices of both domestic and international tourists.

In the results of Associate Rule Learning in Table 6.3, we have seen that 87.5% of the population's tapa preferences have been affected by the company context attribute. In the Chi-square test results shown in Table 6.5, we have seen that the share is 75% of the population. The results of both indicate this hypothesis is confirmed.

7. CHAPTER 7: LESSONS LEARNED AND RECOMMENDATIONS

In this chapter, we summarise the results of all the previous chapters. The outcome regarding preferences and choices of tourists on restaurants and tapas are concluded. We provide lessons learned and recommendations regarding the choices and preferences of restaurants and tapas of both domestic and international tourists. We also make recommendations for further research in this area.

7.1. Findings on Restaurant Marketing

Lesson 1. *Stated preferences do not determine the restaurant choice.* Stated preferences are preferences declared prior to the gastronomy experience. In the selection of a restaurant, these preferences are compromised by market offerings and other context attributes.

> *Evidence:* It can be seen by the results of the difference of stated and revealed preferences in Chapter 5.4, as well as in structure view of tourist stated and revealed preferences in en mostly old zone restaurants.

Table 5.12.

Lesson 2. *Choices are conditioned on the restaurants available in the marketplace.* When choosing a restaurant for gastronomy experience, the number and type of restaurants offered in the market influence the choice of restaurant over the stated preferences, as the choice is done by available alternatives.

Evidence:

Figure 5.5 and Figure 5.6 confirm both for international and domestic tourists that the selections of restaurants correspond to the restaurant distribution in Santiago.

Lesson 3. *International tourists prefer traditional-style restaurants compared to modern-style restaurants.* Traditional-style restaurants are more attractive for international tourists, as the interest of most international tourists is destination culture.

Evidence: It is determined by EM-algorithm clustering of preferences of international tourists in Table 5.5 in style attribute column that percentage share of traditional-style restaurant preferences is the highest.

Lesson 4. *Domestic tourists prefer modern-style restaurants compared to traditional restaurants.* Domestic tourists, compared to international tourists, are less interested in culture, as the destination culture is their own; thus they have a higher preference on modern-style restaurants then to traditional-style restaurants.

Evidence: This can be confirmed by the results of the EM-algorithm clustering of preferences of domestic tourists in Table 5.5.

Lesson 5. *Both domestic and international tourists prefer the restaurants located in the old zone.* All tourists have a higher preference on the old zone restaurants, as access to culture and religious sights are located in the old zone and, additionally, most of the offered restaurants are located in the old zone.

Evidence: This can be validated by Table 5.5 and the results of the EM-algorithm clustering of preferences of both international and domestic tourists.

Lesson 6. *Both international and domestic tourists have preferences on restaurant profiles not offered in the marketplace.* There are restaurant profiles by the preferences of both international and domestic tourists not covered by the market offerings. While showing stated preferences of tourists prior to the gastronomy experience, we have identified restaurant profiles that have demand are not offered in the market of Santiago.

Evidence: In Figure 5.2, restaurant profiles 16–18 have demand not covered by the market (Figure 5.4 shows the market restaurant distribution by restaurant profiles).

Lesson 7. *The most offered restaurant profile is the most selected one both by domestic and international tourists.* As stated in Lesson 2, the restaurants in the market affect choices; thus, the most selected restaurant profile is the most offered restaurant profile for both international and domestic tourists.

Evidence: Confirmation can be seen in Figure 5.5 and Figure 5.6, where the most selected restaurant profile and most offered restaurant profile is restaurant profile 2.

Lesson 8. *Traditional-style restaurants are mostly chosen by international tourists.* As declared in Lesson 3, international tourists have higher preferences on traditional-style restaurants due to their interest in the destination culture, as they have chosen mostly the restaurants with traditional-style.

Evidence: The results of their choice can be seen in Table 5.7, the EM-algorithm results of tourist choices by restaurant attributes.

Lesson 9. *Modern-style restaurants are mostly chosen by domestic tourists.* As cited in Lesson 4, domestic tourists have higher preferences on modern-style restaurants, they have chosen mostly the modern-style restaurants.

Evidence: This can be confirmed by the EM-algorithm results of tourist choices by restaurant attributes in Table 5.7.

Lesson 10. *Even though the second most stated preferred restaurant location by international tourists is the outlying area, it is the least chosen restaurant location by international tourists.* Even though international tourists had the second most preferences in the outlying area located restaurants, they have chosen only 2% of total selections in the

outlying area due to the market having lower offerings in the outlying area, as well as the outlying area's distance from the old zone.

Evidence: This can be seen in the difference of results of preferences in Figure 5.9 and results of choices in Figure 5.10 of international tourists.

Lesson 11. *Even though the domestic tourists state the highest preferences on adult atmosphere, it is the least chosen restaurant atmosphere by domestic tourists.* Another confirmation of Lesson 2, even though domestic tourists have the highest preferences, prior to gastronomy experience, on adult atmosphere, have chosen adult atmosphere restaurants the least. As adult atmosphere restaurant are offered the least in the market.

Evidence: This can be seen in the difference between preferences in Figure 5.11 and choices in Figure 5.12 (additionally, restaurant profile distribution share is in Figure 5.4 and profile attributes in Table 5.2).

7.2. Recommendations on Restaurant Marketing

Recommendation 1. *The market should offer missing restaurant profiles that are demanded by both domestic and international tourists*.

As has been confirmed in Lesson 6, there are restaurant profiles not covered by the market yet, but already by our investigation of stated preferences prior to the gastronomy experience, we have detected that there is demand for these restaurant profiles. Thus, our recommendation is to investigate and cover these demands as new market niche.

Evidence: In Figure 5.2, restaurant profiles 16–18, that are not covered by the market, have demand both from domestic and international tourists.

Recommendation 2. *If the restaurant target market is international tourists, then they should have traditional-style decoration.* International tourists are mostly interested in the culture of the destination, thus they prefer traditional-style restaurants compared to modern restaurants.

Evidence: In Table 5.5 international tourists have the most preferences on traditional-style restaurants rather than modern-style restaurants.

Recommendation 3. *If the restaurant target market is domestic tourists, then they should have modern-style decoration, as well as young or indifferent atmospheres.* Domestic tourists are not much interested in culture, as compared to international tourists; thus, their preference toward style is modern-style restaurants. The revealed preferences of domestic tourists show interest mostly in the young atmosphere.

Evidence: In Table 5.5, it is evident that domestic tourists have more preferences on modern-style restaurants rather than traditional-style restaurants. Figure 5.12 shows that most chosen restaurants are young, followed by indifferent atmosphere restaurants.

Recommendation 4. *Do not rely solely on the stated preferences, as the revealed preferences are always different from what is said prior to the experience.* Stated and revealed preferences are different according to our findings.

Evidence: In Table 5.11 the difference between stated and revealed preferences is noticeable.

7.3. Findings on Tapa Marketing

Lesson 12. *Traditional, authentic types of tapas are mostly chosen by international tourists.*

International tourists are more interested in destination culture, even though it is expected that they are interested in traditional tapas rather than contemporary tapas. However, they are not much aware of the difference between traditional and authentic tapas.

Evidence: The findings from Figure 6.1 and Figure 6.5 show that international tourists have chosen mostly traditional, authentic types of tapas rather than contemporary tapas.

Lesson 13. *Contemporary, non-traditional types of tapas are mostly chosen by domestic tourists.*

The fact that domestic tourists know the difference between traditional and contemporary tapas, and that they have experienced traditional tapas from their culture, implies they are more interested in contemporary (non-traditional) types of tapas, as they are new to them as well.

Evidence: It is confirmed by the findings in Figure 6.2 and Figure 6.5 that domestic tourists have chosen mostly contemporary rather than traditional tapas.

Lesson 14. *Context attributes influence the initial preferences and the choice of tapas.*

Context attributes are the most uncontrollable attributes that affect at the moment when tourists are making their choice and during their gastronomy experience. For it, we have identified several context attributes impacting on the preferences and choice of the tapas and tested if these attributes had an impact on the preferences and choice of the tourists.

Evidence: It can be seen from the results of the Associate Rule Learning method in Table 6.3 and the results of chi-square method in Table 6.5 that context attributes impact the preferences and choice of tapas.

Lesson 15. *For a small number of tourists, the choice of tapas is not affected by context attributes.*

For some tourists, due to unobserved attributes as a character, degree of being influenced and experience, context attributes did not effect on the preferences and choice of tapas.

Evidence: Preferences and choice of two tourists (tourists 576 and 916) from the selected 16 tourists did not change when context attribute changed, which can be found in the results of Associate Rule Learning method in Table 6.3 and the results of chi-square method in Table 6.5.

7.4. Recommendations on Tapa Marketing

Recommendation 5. *If the restaurant target market is international tourists, then it should offer more traditional tapas than contemporary (non-traditional) ones.*

International tourists have limited information regarding the difference between traditional and contemporary tapas, but they have chosen mostly the traditional tapas. This could be due to prior knowledge about traditional tapas.

Evidence: In Figure 6.1, it is visible that international tourists have chosen mostly traditional tapas compared to contemporary, non-traditional.

Recommendation 6. *If the restaurant target market is domestic tourists, then the restaurant should offer more contemporary or non-traditional tapas.*

Domestic tourists have knowledge about the difference between traditional and contemporary tapas. As they already know traditional tapas from their culture, for them new, contemporary tapas are more interesting.

Evidence: In Figure 6.2, it is evident that domestic tourists have chosen more modern, contemporary tapas rather than traditional tapas.

7.5. Summary

In this chapter, we have outlined the lessons learned from the findings of the research and suggested the recommendations for the market and for future studies. We also have described the entity–relationship model of the research, which can be used as a domain model for the restaurant and tapa choice for future studies and be applied by the market (Figure 7.1).

As it can be seen from the entity–relationship model, different and various factors influence the choice of restaurants and tapas by a user. For any research, it is important to figure out the overall picture of the entities and main relationships among them. This way, it will be clear what is being analysed and what other attributes left outside the scope of the research might have an impact on the final results.

The entity–relationship model provided above was used to build a recommender system for the Santiago de Compostela Turismo office, in accordance to one of the deliverables. Using the recommender system, both domestic and international tourists can get a recommendation of five different restaurants and tapas of these restaurants, where prior consumptions are taken into account. Furthermore, the entity–relationship model can be used for further studies in this area by including other attributes known to influence the preferences and choice of restaurants and tapas.

We have compared our findings with popular studies in the literature, providing a link that can be used by restaurants to target their niche market. Primarily, we have made eight hypotheses, and all hypotheses proved to be correct according to the analysis of the data. With this stated, we can declare the research achieved the aimed goals and proved international

tourists tend to seek authenticity where domestic tourists tend to seek new and contemporary; choice and preferences of international tourists vary highly compared to domestic tourists, because of prior knowledge about local cuisine and restaurants; restaurants located in the old zone are more popular and visited compared to other zones because of culture and old zone being centre for most monuments; there are several context attributes that influence highly on the preferences and choice of restaurants and tapas by domestic and international tourists. Additionally, we have found there is a new market niche for restaurants that do not exist but are in demand by both domestic and international tourists.

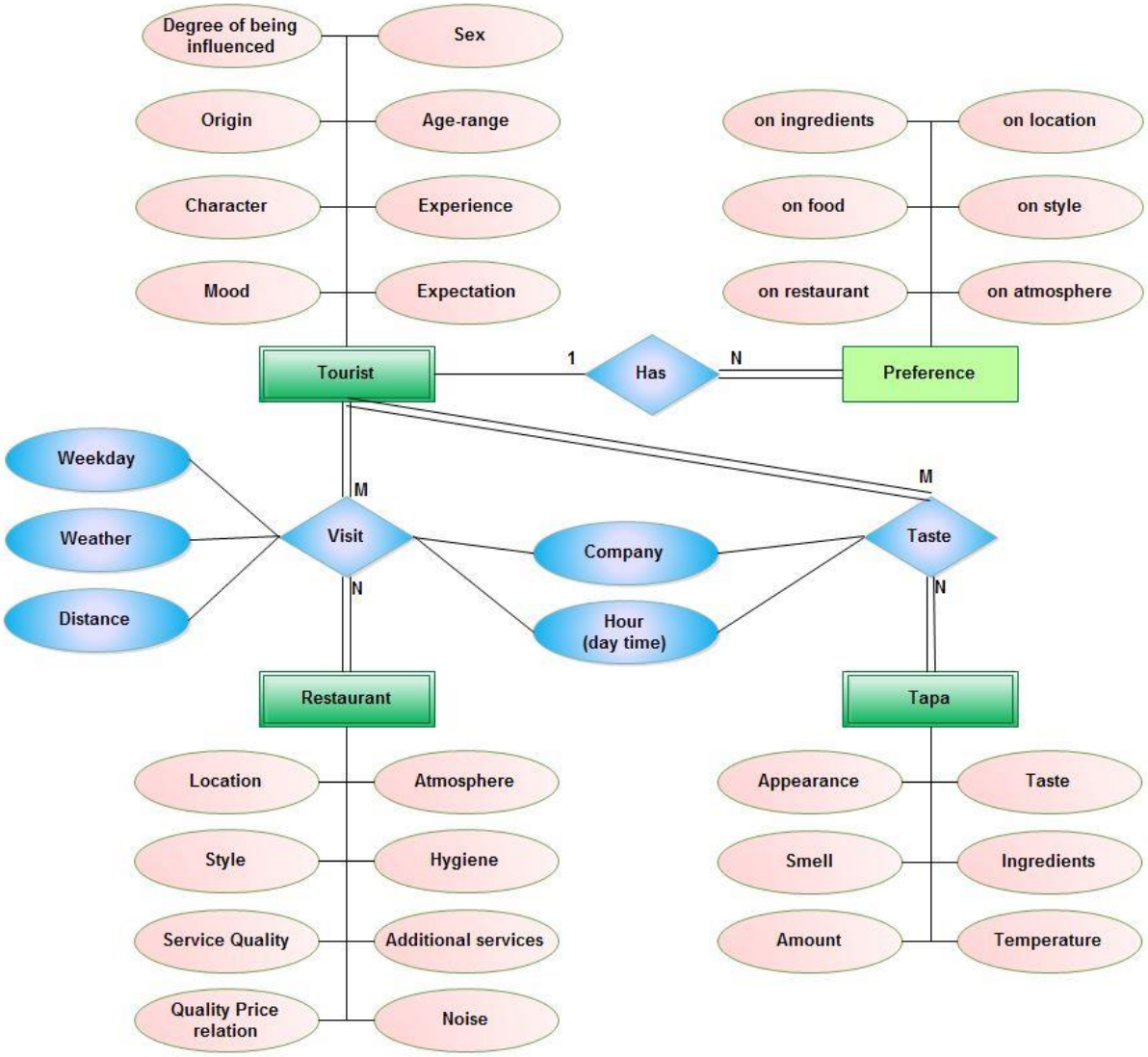


Figure 7.1. Entity-relationship model of the research.

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Annex: Resumen de la Tesis

El objetivo de esta investigación es analizar el por qué ciertos restaurantes y tapas son los preferidos por los turistas en Santiago de Compostela, cuáles son las preferencias originales de los restaurantes y tapas para estos turistas, cuáles son los factores que influyen en la preferencia y elección del turista y las diferencias En preferencias de turistas de diferentes agrupaciones. Como las tapas son auténticas de la cultura española, y también una atracción de turismo gastronómico de España, la investigación se centraliza principalmente en las preferencias de tapas de los turistas y en los restaurantes que los proporcionan.

Los objetivos específicos de la tesis son los siguientes:

1. En primer lugar, la investigación tiene como objetivo proporcionar un modelo de las tres entidades involucradas en el ámbito gastronómico, identificando la relación entre las entidades y sus atributos. El turista, o usuario, es la entidad primaria. Como objetos de la experiencia, la tapa y el restaurante que la ofrece son las segundas entidades. Las variables situacionales o de contexto son las terceras y últimas entidades. El objetivo principal del análisis es conocer los principales atributos de estas entidades, clasificarlas y analizar su relación. Por ejemplo, ciertos atributos turísticos únicos pueden agruparse en una clase. Estas agrupaciones o clases pueden utilizarse además para probar si las preferencias de los usuarios dentro de cada grupo son similares entre sí.
2. En segundo lugar, la investigación pretende conocer las preferencias turísticas de los restaurantes que ofrecen tapas. Por lo tanto, es importante conocer los principales atributos de las entidades tanto de restaurantes como de turistas. Los atributos de usuario definen la clasificación turística. Atributos de restaurante dará una idea clara

de las preferencias turísticas de los restaurantes en Santiago de Compostela, comúnmente conocido como Santiago. Con base en el primer objetivo, los restaurantes se pueden organizar en grupos dependiendo de una variedad de atributos. Al crear diferentes grupos de restaurantes basados en estos atributos, será más fácil entender las preferencias y opciones de los turistas. Estos atributos de restaurante se pueden combinar con los de los turistas para proporcionar una conexión entre las dos entidades.

3. En tercer lugar, la investigación tiene como objetivo identificar las preferencias de tapas turísticas. Como se indica en el primer objetivo, los atributos de tapa explicarán las preferencias de tipología turística para las tapas. Las tapas se pueden agrupar en diferentes agrupaciones dependiendo de sus atributos. Con estas agrupaciones de tapas, la investigación pretende conocer la relación entre las clases turísticas y sus preferencias por los grupos de tapas.
4. Por último, la investigación pretende conocer los atributos externos que influyen en la preferencia, elección y satisfacción de los turistas. Estos atributos externos son variables contextuales o situacionales. Es importante identificar si estas variables influyen en las preferencias de los turistas. Estos atributos están fuera del control directo del turista, pero dependiendo de ellos, la oferta se puede cambiar en consecuencia para lograr una mayor satisfacción. Si las variables de contexto influyen en las elecciones, entonces sería útil saber que un turista de una determinada clase puede agruparse en otra clase dependiendo del contexto. Por eso es importante identificar la influencia de los atributos del contexto en la preferencia, elección y satisfacción del turista.

El turismo es una de las industrias de más rápido crecimiento en el mundo. Según la Organización Mundial del Turismo (OMT), los ingresos por turismo internacional llegaron a 1.260 millones de dólares en 2015, un 254% más que en 2010. Los ingresos generados por el turismo receptor, incluido el transporte, superaron los 1,5 billones de euros en 2015, Para el 7% de las exportaciones mundiales de bienes y servicios (OMT, Turismo destacado, 2016).

Teniendo en cuenta estos números, se puede concluir que el turismo es una industria que crece año tras año. Una nueva división de turismo- Turismo de interés especial- ha aparecido debido a este crecimiento (Hall & Weiler, 1992). El crecimiento del turismo de interés especial se considera un reflejo de la creciente diversidad de intereses de ocio en la sociedad del siglo XXI (Douglas, Douglas & Derret, 2001). El turismo gastronómico es uno de los principales sectores de turismo de interés especial y como resultado de ello, el crecimiento económico y social, ha crecido considerablemente cada año (Hjalager & Corigliano, 2000).

El turismo gastronómico, también llamado turismo culinario, se refiere al turismo donde el principal motivador es la comida y bebida regional (Charters & Ali-Knight, 2002). El crecimiento del turismo culinario es visto como una tendencia donde la gente, gasta menos tiempo cocinando, al considerar que el interés por la alimentación forma parte de la experiencia de ocio, como por ejemplo ver espectáculos de cocina, comer fuera, etc. El término culinario abarca cocina y gastronomía; Mientras que el termino culinario se refiere a los ingredientes locales, la preparación de alimentos regionales y la etiqueta, en su lugar la gastronomía se refiere a la expresión de felicidad resultante de la alimentación, así como la alegría inherente de comer (Ignatov, 2003).

Comer fuera es una actividad en rápido crecimiento de ocio y entretenimiento, donde la comida se consume no sólo por necesidad, sino también por el placer de comer fuera. En este

último caso, la atmósfera, el contexto, el ambiente, etc., son parte de la experiencia de ocio, tanto como la propia comida. Mientras viajan, los turistas comen fuera para satisfacer sus necesidades básicas, así como para experimentar la comida local y la cocina. Esta última experiencia es la base del llamado turismo cultural.

La cocina local es vista con recelo; Por lo tanto, los viajeros transportadores de alimentos secos. Hoy en día, viajar por comida ha tomado un significado totalmente nuevo de lo que los días en que se emprendían viajes para el comercio de especias (Tannahill, 1988). Por ejemplo, en Jamaica, el gasto diario de un turista en alimentos es cinco veces mayor que el promedio jamaicano (Belisle, 1984). Entre todos los gastos, los turistas en un viaje son los que cuentan con menos probabilidad de reducir su presupuesto de la comida (Pyo, Uysal y McLellan, 1991). En algunos estudios, el paquete de consumo de viajes se identifica dentro de cinco grupos de productos: alojamiento, alimentos, transporte, compras y entretenimiento. En el análisis de los gastos dentro de estos grupos de productos básicos, está claro que la comida es una de las más influyentes (Divisekera, 2010). Por lo tanto, esta investigación trata sobre las preferencias de los turistas internacionales y nacionales en relación con los restaurantes de Santiago de Compostela, España, y las tapas que ofrecen.

Como se ha descrito, la gastronomía es uno de los principales pilares del turismo en general. Todos los turistas que viajan a un destino deben comer; Por lo tanto, la gastronomía es una parte de la vida, así como una parte de la cultura visitada. Se convierte en uno de los principales factores que influyen en la satisfacción de los turistas durante sus viajes y, por lo tanto, está directamente relacionado con la probabilidad de que el turista vuelva a visitar el destino.

Se puede suponer que el atributo principal del viaje es el alojamiento; Por lo tanto, hay muchos estudios sobre alojamientos turísticos, tanto a nivel mundial como local. Sin embargo, no existen muchos estudios realizados por las industrias de servicios de alimentos y bebidas relacionados al turismo gastronómico. Pero esto ha cambiado en los últimos años, debido al Turismo de Interés Especial.

Si examinamos los indicadores clave de las actividades de alojamiento y servicios alimentarios en Europa, podemos determinar fácilmente que las actividades de servicios de alimentos y bebidas tienen un mayor número de empleados y una mayor facturación que la industria del alojamiento. Es decir, el 84% de todas las empresas en Europa están en el servicio de alimentos y bebidas. Además, el 77% de todos los empleados en el alojamiento, así como el servicio de alimentos y bebidas están empleados a mismo tiempo en el servicio de alimentos.

Después de aclarar la importancia de la gastronomía en el turismo en general, surgió la pregunta '¿Qué se debe ofrecer a quién?'. ¿Están los restaurantes y bares ofreciéndolos productos adecuados a los consumidores correctos (en este caso, los turistas son los consumidores y las tapas son los productos)? Esta fue la principal motivación del estudio: averiguar qué producto se debe ofrecer a qué mercado turístico para lograr la mayor satisfacción turística para que el mercado turístico prospere y se pueda construir sobre la base de los resultados de este estudio.

Para responder "¿Qué se debe ofrecer a quién?", En primer lugar, se debe responder a la pregunta sobre las características generales de las variables estudiadas en esta investigación. Por ejemplo, ¿cuál es la tipología de turistas que comen en Santiago? En segundo lugar, deben determinarse las preferencias de cada tipología turística. En tercer lugar, el estudio debe

determinar cuáles son los factores clave que influyen en las preferencias de cada tipología turística antes de crear un restaurante y tapa (s) de elección y, finalmente, después de hacer una elección, ¿cuáles son los factores clave que explican su satisfacción con La experiencia gastronómica.

Una revisión detallada de la literatura revela la escasez de estudios que analizan el impacto de diferentes atributos en la selección de restaurantes y tapas turísticas y su satisfacción por esta elección. El objetivo principal de esta investigación, por lo tanto, es entender las preferencias de ciertos grupos turísticos y los motivadores que afectan su elección y su satisfacción tras una degustación de una tapa.

El estudio presentado se organiza de la siguiente manera: (1) conocer la tipología de los turistas en la gastronomía de Santiago y (2) definir las preferencias gastronómicas de cada tipo de turista por atributos claves.