



**Universitat de les
Illes Balears**

Facultat de Turisme

Memòria del Treball de Fi de Grau

Analysing the factors of guests' hotel choice on the island of Mallorca

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Any acadèmic 2018-19

DNI de l'alumne: Y6451791Y

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Paraules clau del treball:

choice factor, hotel guest, questionnaire, Mallorca

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Abstract

Island tourism is a kind of tourism form closely related to seashore tourism. Its tourism activities are similar to those of seaside tourism. However, because islands are more geographically separated, it can make tourists more relaxed and immersed in the atmosphere of local culture and it develops very rapidly. In particular, Europe as one of the first region to develop tourism has many islands known for its island tourism, one of which is the main island of the Spanish Balearic Islands, Mallorca. Based on the spss-based data analysis of the questionnaires for Mallorca tourists, this paper determines five common factors, namely, objectively received hotel information, subjectively received hotel information, hotel hardware, restaurant quality and hotel service quality as crucial in the guests' hotel choice. At the same time, under the premise of sustainable development, this paper compared the current situation of the hotels in Mallorca and the questionnaires' analysis result, discussing the changes that should be made in the hotel business in Mallorca .Therefore it has a strong practical significance for the sustainable development of the hotel industry in Mallorca.

Introduction

1.1 Research background

Located in the Balearic Islands, Spain's Mallorca is one of the three main islands of the Balearic Islands, with seaside tourism as the main tourist attraction. Due to its strategic location, the climate in Mallorca is very good, with an average annual temperature of 18 °C. Thanks to its good aircraft and cruise routes, visitors can easily reach the island. The island of Mallorca also has a first-class hotel choice, all of which make it an ideal choice for holidays all year round.

Especially in summer, in 2015, a total of 11 million tourists arrived in Mallorca by plane, and in 2016 it quickly increased to 13 million, excluding tourists arriving by boat. This means that in summer, nearly 2 million tourists visit the island every month for tourism, while the island of Mallorca has a land area of 3,640 square kilometers and the number of residents is less than 1 million, far less than the number of tourists in the peak season. The over-inflated number of visitors has contributed to the hotel development in Mallorca and has also created challenges, such as how to share the biggest part of target market and how to make best profit in long-run.

With the continued growth in the number of tourists and annual tourism revenues, the tourism-related industries in Mallorca continue to face challenges. Especially in the hotel industry, in the face of the growing number of tourists in the peak season, whether it is an international hotel chain or a small business hotel, whether it is a five-star hotel in the high-end market or an affordable one-star hotel, it will hope to share a piece of it. Especially in recent years, the emerging hotel industry has brought impact to the traditional hotel industry.

1.2 Research significance

As mentioned in the research background, the factors of tourists' choice are directly promoting the hotel to attract customers, and the questionnaire survey is the most direct tool to grasp the psychology of tourists. Through the analysis of the questionnaire, it can be concluded what factors tourists would consider for the selection of the hotel. And combined with the reality of the hotel industry in Mallorca, I want to propose suggestions for improvement, which has practical significance for the development of the hotel industry in Mallorca.

1.3 Research content

The content of this article divides into four parts:

The first chapter explains the definition of island tourism and its development process. The article also covers the academic research process of islands in two different periods. For the hotel selection factor, the author mentions the factors that tourists might consider when choosing a hotel, especially when choosing for the first time.

The second section is concerned with the methodology employed for this study, i.e. design of questionnaire, distribution of the questionnaire and factor analysis

The third part presents the findings of the research, analyzing the five common factors.

The final section compares the reality of Mallorca with the analysis result and gives some suggestions for the Mallorca hospitality sector, meanwhile includes its limitations and some suggestions for further research on this topic.

Literature review

2.1 Island Tourism Development and Status Quo

There are more than 100,000 islands in the world, which can be roughly divided into two categories. The first one has a short distance from the mainland, such as the United Kingdom, Japan and other island countries. It has a high degree of development and is closely related to other mainland countries. The particularity of geographical location can prevent the aggression of foreign forces to a certain extent, and can also serve as a maritime transportation hub; the other is far from the mainland, and the island area is small, and the exchanges with other mainland plates are limited, and social development is backward. In other countries, and have their own special cultural characteristics, such as the Maldives, Phuket and the Hawaiian Islands (Liang, Liu, 2014).

Island tourism was launched in the 1970s, relying on the specific island space, with the island's unique natural and humanistic tourism resources to meet the needs of tourists, while promoting tourism activities for the overall healthy development of the island's regional economy, culture and society (Lin, Lu, 2007). The development history of island tourism is closely related to seashore tourism, and tourism activities are largely the same (Jiaming, Liu, 2000). According to Knafou (2000), through the study of the paintings of the Dutch painters of the "Golden Century", it was discovered that in the eighteenth century that European seaside walks began to rise. At the end of the 19th century, activities such as water polo, tennis, diving and sandcasting were carried out (Urbain, J.D., 1994). And the "3s" tourism that laid the concept of contemporary tourism—sea, sun, and sand were developed in the twentieth century. European tourists chased the sun and sunburned. The dark skin is a manifestation of healthy beauty, which is also reflected in the island tourism. After the Second World War, the global economy recovered, tourism was accepted as a leisure activity by all sectors of society, and mass tourism developed. Coupled with the island tourism relative to other tourism, its destination is generally rich in local culture, not only allows visitors to stay away from the usual place of residence, but also creates a dream image for tourists, allowing visitors to get rid of the regular intense life, into the exotic island living atmosphere (Lockhart, D., & Drakakis-Smith, D. W. (Eds.), 1997). Island tourism as a special tourist attraction attracts tourists to travel because of political, social and emotional factors.

Because the island has smaller geographical area and less natural resources than other large land floor blocks, most of them can only develop a single economy. When local governments and residents realize that the development of tourism effectively improves the situation, provides employment and income

for residents, and introduces a large amount of foreign exchange, they will actively develop island tourism resources (Jiaming, Liu, 2000). Under the dual promotion of tourists and destinations, the island tourism industry has developed rapidly, becoming the leading industry of the island's tertiary industry, and even becoming the pillar industry of the island.

2.1.1 Research on the influence of foreign countries on island tourism and local culture

Research on island tourism began in the 1970s. Due to the involvement of tourism, the impact on the island's human-land relationship has been affected. The changes brought about by this tourism development have attracted the attention of scholars, especially the island culture phenomena triggered by various tourism activities and how to pass on, change and protect the island culture (Gao, Chen, & Li, 2015). Ron Ayres once pointed out that local residents have strong advantages in their unique local culture, which has benefited a lot from the development of island tourism. The article was also prescient to point out that island tourism should adjust its strategy and develop cultural tourism to increase diversification of tourism products and improvement of competitiveness (Ayres, R., 2002). Many examples show that the development of island tourism is very helpful to increase local economic income and create employment, and the living standards of residents have been greatly improved (Ryan, C., 2002).

However, while the island attracts tourists with its own unique culture, the arrival of tourists has also impacted the local humanities and ecological environment. Various tourist activities have destroyed the island's original calm and conservative life, and many local residents have produced the mood of anxiety and even panic, especially the invasion and utilization of island resources by tourists, and the impact of foreign culture on local culture (Walker, J. L., Mitchell, B., & Wismer, S., 2000; Kousis, M., 1989).

2.1.2 Research on the Sustainable Development of Island Tourism

With the development of tourism, the island tourism research in the industry has also shifted from cultural studies to the issue of "sustainability". The focus of tourism development on the island is mainly on the economic aspect, not on the social and human aspects. Several examples of tourism failures caused by over exploitation and encouragement of mass tourism (Ghina, F., 2003), have made different organizations and countries all over the world aware of the importance of sustainable development and began to intervene (eg the Rio Declaration of 1992 and Millennium Development Goals of 2000).

Due to the unique characteristics of the island: vulnerability, isolation and peripherality, the sustainability of island tourism is closely related to carrying capacity, community participation, local political environment and special interest activities.

First of all, in terms of island carrying capacity, environmental resources have a certain capacity to adapt to activities, that is, environmental carrying capacity. Once the damage caused by economic development exceeds the maximum environmental carrying capacity, it will cause irreversible damage to natural resources. Therefore, operational carrying capacity poses considerable challenges (University of Surrey. Dept. of Management Studies for Tourism, & Hotel Industries. ,1991)/ Academic research is limited to measurable dimensions in which empirical evidence and theory must be filtered and continuously observed and adjusted during trial and error processes and supplemented with qualitative values (Apostolopoulos, Y., Apostolopoulos, Y., & Gayle, D. J. (Eds.). , 2002).

Secondly, local residents are very important factors in tourism development and land development on the island. They may have negative effects, such as case of Mykonos, Rhode Island, Crete and Cyprus in the eastern Mediterranean, where locals build illegal buildings; they may also have positive effects, such as Mallorca and two Pacific islands of Hawaii , as well as the Solomon Islands have successfully applied development theories (Prescott, V. , 2003).

Thirdly, small islands are considered politically and economically vulnerable and unstable, and many islands have lost political and economic status for historical reasons. Many examples show that there is a clear link between the island's past colonization and its current dependence on foreign countries (Harrison, D. , 2003). The development of sustainable tourism, whether for independent islands or subnational islands, needs to be built on the success of eliminating these sociopolitical issues. Finally, the growing and popularization of special interest activities such as natural tourism and cultural tourism poses special challenges to the sustainability of the island (Apostolopoulos, Y., Apostolopoulos, Y., & Gayle, D. J. (Eds.). , 2002).

2.2 Tourist Hotel Selection Factors

The tourist hotel selection factor refers to the hotel-related factors related to price, geographical location, etc., which are considered by tourists in the tourist

destination in order to find a place suitable for their short-term residence, in the face of multiple hotels of the same type.

The customer's choice behavior in the catering industry, banking industry, film industry, animation industry and art market was systematically studied, and the relationship between customer trust and choice in various service industries was obtained. This relationship is expressed as: customer retention (loyalty), conversion, complaints, and positive word of mouth. It is concluded that the voice from customers is very important, whether it is the traditional service industry, the modern service industry or the emerging cultural industry (Bin,Zhao, 2011). Therefore, the grasp of the factors of tourists' selection is an urgent task for service companies.

Cornell University of the United States has analyzed the factors of hotel housing, catering, price and location, and proposed the top ten factors driving customer purchase decisions: location, brand and reputation, external and public areas, price, service efficiency, room design, interpersonal services, marketing, catering services, standards quality (Hong, Pu, 2010).

Zhao Shengwen and Tang Wenjing verified the results of Cornell University's research in the form of a questionnaire survey in 2018. They found that when customers choose hotels that they have never stayed in, they pay more attention to the non-internal factors, like location, price, brand reputation, etc. of the hotel. Due to the small amount of literature in this part and the inability to provide more detailed background information, the questionnaire was designed based on the actual situation of Mallorca and tourism resources.

Methodology

3.1 Participants

The participants of the survey are chosen among the Mallorca visitors who accord with the following restrictions.

Tourists who visit Mallorca for overnight: Some tourists only spend a day on the island's upper reaches, and they will leave by plane and cruise ship. This part of the tourists has no research significance for this survey. Therefore, in the selection of participants, I choose the tourists who will spend the night on the island.

Adult who can choose hotel by him/herself: The focus of this article is on the considerations of visitors when choosing a hotel, so the respondents should be able to decide which hotel they want to live in. Therefore, the participants should be people who are over the age of 18 and have income.

English speaker: Due to language restrictions, I used English when designing the questionnaire. Therefore, the target population of this survey is tourists who are English speakers.

3.2 Data Analysis

In order to have a clearer understanding of the composition of tourists in Mallorca and the hotel selection factors of tourists, and to ensure the timeliness and authenticity of the analyzed data, I randomly select places to distribute questionnaires and mainly uses questionnaires and data analysis methods. In the place where the traffic of tourists from Mallorca Island was relatively large (Spain Square, British company, beach, etc.). In March 2019, a total of 200 questionnaires were distributed, and a total of 173 copies were collected, of which 159 were valid.

The data analysis of the questionnaire consists of two parts, one is the data analysis of the personal information of the tourists, the percentage method is used to classify the tourists; the second part is the analysis of the tourists' selection factors, using the factor analysis method for the dimensionality analysis, 18 possible existence impact factors are integrated into five common factors.

3.2.1 Percentage method

The percentage method can intuitively express the proportion of one selection in the sample being studied, but it cannot represent the sample and the specific quantity of the thing.

This method can be used to analyze first part of questionnaire—respondent's personal information, in order to summarize the characteristics of the main tourist sources received by Mallorca.

3.2.2 Factor analysis

The basic purpose of factor analysis is to use a few factors to describe the relationship between many indicators or factors, that is, to classify several closely related variables into the same class, each type of variable becomes a factor, with a few factors reflecting the most of the information in the original data. Using this research technique, we can easily identify the main factors that influence consumer purchases, consumption, and satisfaction, as well as their impact. Using this research technique, we can also do a pre-analysis for market segmentation (Ruifei, Yin & Jianpin, Zhu, 2005) .

According to Diyi, Yu(1993), factor analysis is divided into exploratory factor analysis and confirmatory factor analysis. Exploratory factor analysis is based on the analysis of the data and statistical software, without knowing the influencing factors. The confirmatory factor analysis is based on the a priori information that factors have be realized, to verify whether the collected data is the same as expected. In general, the exploratory factor analysis can be used to sort out the data, obtain an internal framework, and then verify with the confirmatory factor analysis method to prove the scientific credibility of the conclusion. However, due to the limitations of this survey, it is not possible to separate two sets of independent data for two analyses. If using the same set of data for full analysis, we can't verify it. Therefore, for the 18 possible factors that influence the tourists' selection of hotels in this study, the optimal factor analysis method is exploratory factor analysis.

Factor analysis requires a Bartlett Test of Sphericity and a KMO (Kaiser-Meyer-Olkin) test to verify suitability for factor analysis before performing data analysis. The criterion proposed by KMO is [14]: when $KMO > 0.9$, it is very suitable for factor analysis; when $0.9 > KMO > 0.8$, it is suitable for factor analysis; when $0.8 > KMO > 0.7$, factor analysis can be done; when $0.7 > KMO > 0.6$, it is not very

suitable for factor analysis; when $KMO < 0.6$, it is totally not suitable for factor analysis. Bartlett sphericity test value, usually compared with 0.01, if less than 0.01, it means that the variables are not independent of each other, therefore suitable for factor analysis (Xicang, Zhao , 2005) .

After determining that the questionnaire is suitable for factor analysis, the total variance interpretation table and the rotated component matrix need to be calculated to determine the common factor and its associated impact factors. After the removal of the less relevant impact factor, the second verification is performed. Then the result is discussed and the conclusion is given.

Results and discussion

4.1 Tourist personal information analysis

Through the analysis of the data collected in the first part of the questionnaire, we can get the personal information about the age, sex, nationality and other information of the tourists. See Table 1-Sample Description Table for details:

Tourists personal information	Selection	Frequency	Percentage (%)
Age	18-30	48	30.2
	31-50	55	34.6
	51-70	37	23.3
	older than 70	19	11.9
Gender	Male	82	51.6
	Female	77	48.4
Nationality	Germany	91	57.2
	England	33	20.8
	France	17	10.7
	Italy	13	8.2
	Other country	5	3.1
Net salary per month	0-1000	21	13.2
	1001-4000	134	84.3
	over 4000	4	2.5
The reason come to Mallorca	Business	20	12.6
	Leisure	90	56.6
	MICE	29	18.2
	Other reasons	20	12.6
tourism attraction of Mallorca interests you most	3s	92	57.9
	Culture	30	18.9
	Shopping	8	5.0
	Hiking	24	15.1

	Other attraction	5	3.1
The hotel you live in	Zone 1	109	68.6
	Zone 2	11	6.9
	Zone 3	9	5.7
	Zone 4	5	3.1
	Zone 5	25	15.7
The way you book this hotel	Travel agencies	25	15.7
	Online travel agencies	113	71.1
	Directly reserve with hotel	21	13.2
	Other ways	0	0

Table 1-Sample Description Table

There are 48 tourists aged 18-30, accounting for 30.2% of the total number. The highest proportion is 31-50 years old, reaching 34.6%. There are 37 people aged 51-70, accounting for 23.9%. The number is more than 70 years old. 11.9%. There are 82 and 77 men and women, respectively, accounting for 51.6% and 48.4%, respectively, with a relatively balanced proportion. The nationality of tourists is mixed, and the proportion of Germany and the United Kingdom is weightiest. It is divided into Germany, Britain, France, Italy and others. Among them, Germany has the most tourists, more than the average tourists come from Germany, accounting for 57.2%, followed by the United Kingdom, accounting for 20.8%, and then France, Italy and other countries. The monthly net income of most tourists is 1001-4000, reaching 84.3%, 13.2% of visitors have a net income of less than 1000 Euro per month, and only four people above 4000 Euro.

The most important tourist activity for tourists coming to Mallorca is leisure tourism, with 90 people accounting for 56.6%, and 29 people accounting for 18.2% of the exhibition tourism, followed by business travel and other types of tourism activities, all of which are 12.6%. Visitors generally think that the most attractive tourist attraction on the Mallorca is '3s', namely sun, sea and sand. The number of people selected is 92, more than half of them, reaching 57.9%, and 18.9% chose cultural tourism resources. 15.1% chose hiking, and the least number of people selected for shopping and other tourism resources were 5.0% and 3.1% respectively. Due to the number of hotels on the island, it is not easy to count when entering, so the hotel is classified by the division of the Mallorca. The first district contains Palma and its vicinity. The larger the regional number, the more remote it is. The most concentrated area of tourist residence hotels is

Zone 1. There are 109 people in the total sample, accounting for 68.6%, and Zone 5 is 15.7%. Zones 2 and 3 are similar, with 6.9% and 5.7% respectively. The district has a minimum of 3.1%.

At the same time, the number of guests who booked hotels through online travel agencies reached a maximum of 113, accounting for 71.1% of the total; by travel agency, 25, accounting for 15.7%; 21 people directly booking with hotels, accounting for 13.2% In the sample surveyed, everyone booked the hotel room through these three methods.

From the sample description, it can be concluded that the majority of tourists are from Germany and the United Kingdom, followed by France and Italy, with a balanced male-female ratio and mostly a middle class with a net income of 1001-4000 per month. Tourists to the island's most important tourist activities are leisure tourism activities, accounting for a huge proportion. As the earliest tourist attraction on the island, '3s' still received the greatest attention. The development of tourism products such as cultural tourism attractions and fitness walking also attracted a wave of tourists. Nearly 70% of tourists stay in hotels within the 1st district of Mallorca, the farther away from the city centre, the lower the tourist selection rate.

4.2 Analysis of Tourist Hotel Selection Factors

KMO and Bartlett test		
KMO sampling suitability measure.		.845
Bartlett sphericity test	Approximate chi square	782.873
	Degree of freedom	153
	Significant	.000

Table 2-KMO and Bartlett test

It can be seen from Table 2-KMO and Bartlett test that the KMO value of this questionnaire is 0.845, between 0.8 and 0.9, which is suitable for factor analysis. Bartlett's sphericity test value is 0, less than 0.01, which proves the non-independent relationship between the variables and is suitable for factor analysis.

According to the different component eigenvalues displayed by the spss data, five common factors with eigenvalues greater than 1.0 and cumulative explanatory variables greater than 60% can be selected from the 18 components.

From Table 3 - Total variance interpretation, it can be seen that after the principal component analysis, the five factors that are qualified are extracted. The characteristic root of the first principal component is 5.138, which explains 28.545% of the total sample; the characteristic root of the second principal component is 2.824, which explains 15.690% of the total sample; the characteristic root of the third principal component is 1.833, which explains the total 10.183% of the sample; the characteristic root of the fourth principal component is 1.632, which explains 9.066% of the total sample; the characteristic root of the fifth principal component is 1.486, which explains 8.255% of the total sample. The cumulative contribution of these five factors is 71.739%.

Total variance interpretation						
Constituent	Initial eigenvalue			Extract square sum loading		
	Total	Percentage variance	Cumulative %	Total	Percentage variance	Cumulative %
1	5.138	28.545	28.545	5.138	28.545	28.545
2	2.824	15.690	44.235	2.824	15.690	44.235
3	1.833	10.183	54.418	1.833	10.183	54.418
4	1.632	9.066	63.484	1.632	9.066	63.484
5	1.486	8.255	71.739	1.486	8.255	71.739
6	.997	6.538	76.276			
7	.846	4.699	81.976			
8	.790	4.318	86.294			
9	.667	3.704	89.998			
10	.605	3.359	93.357			
11	.362	1.835	95.192			
12	.276	1.213	96.405			
13	.255	1.417	97.821			
14	.203	.619	98.440			
15	.176	.536	98.976			

16	.130	.498	99.474			
17	.072	.399	99.873			
18	.023	.127	100.000			

Table 3 - Total Variance Interpretation

Rotating component matrix					
	constituent				
	1	2	3	4	5
Reputation & brand	.965				
Hotel rating	.960				
Marketing	.902				
Location	.930				
value/price		.780			
Comments from relatives & friends		.974			
Online reviews		.969			
Hotel' service quality			.709		
Service efficiency			.711		
Housekeeping			.900		
Security			.447		
Sanitation			.422		
Room's decoration				.850	
Hotel's integral decoration				.810	
Augment product (bar, spa, gym, etc.)				.526	

Equipment				.406	
Food quality					.683
Food service quality					.879

Table 4 - Rotating Component Matrix

According to the analysis of the component matrix, after removing the factors with the component coefficient less than 0.5, there remain 15 selection factors for subsequent classification. Exploratory factor analysis was still performed using 5 common factors. After screening the data, the KMO value is 0.869, between 0.8 and 0.9, and the Bartlett sphericity test value is 0, less than 0.01, which is still suitable for factor analysis.

KMO sampling suitability measure.		.869
Bartlett sphericity test	Approximate chi square	950.621
	Degree of freedom	105
	Significant	.000

Table 5 -KMO and Bartlett test

From Table 6 - Total Variance Interpretation and Table 7 - Rotating Component Matrix a, we can see common factor settings and component classification are reasonable, and the next step can be analyzed.

Total variance interpretation							
Constituent	Initial eigenvalue			Extract square sum loading			
	Total	Percentage variance	Cumulative %	Total	Percentage variance	Cumulative %	
1		4.483	22.415	22.415	4.483	22.415	22.415
2		3.240	17.280	39.695	3.240	17.280	39.695
3		1.817	10.115	49.811	1.817	10.115	49.811

4	1.638	8.923	58.734	1.638	8.923	58.734
5	1.302	7.680	66.414	1.302	7.680	66.414
6	0.999	6.324	72.738			
7	0.952	5.701	78.439			
8	.927	5.182	83.621			
9	.894	5.060	88.681			
10	.820	4.986	93.667			
11	.385	2.124	95.791			
12	.327	1.833	97.624			
13	.248	1.654	99.278			
14	.079	.405	99.683			
15	.056	.317	100.000			

Table 6 - Total Variance Interpretation

Rotating component matrix a						
	constituent					
	1	2	3	4	5	
Reputation & brand	.959					
Hotel rating	.968					
Marketing	.906					
Location	.891					
Online reviews		.974				
Comments from relatives & friends		.964				
value/price		.784				
Hotel' service quality			.663			
Service efficiency			.708			
Housekeeping			.924			

Room's decoration				.892		
Hotel's integral decoration				.874		
Augment product (bar, spa, gym, etc.)				.723		
Food quality					.691	
Food service quality					.713	

Table 7 - Rotating Component Matrix a

Factor 1

Hotel brand and reputation, hotel star rating, marketing and location is the objective information that tourists receive about the hotel, can be integrated into objectively received hotel information, this part of the factor variance contribution rate of 22.415%, ranking first, And the load of the four influencing components is higher, indicating that the objective information of the hotel that can be received is most affected for the initial selection of tourists. Hotels should pay attention to maintaining hotel information on the market, through various official channels, such as brand credibility, hotel star rating and aggressive marketing measures.

Whether hotel brand or star rating, it is a credibility for hotel guests about the overall quality of the hotel. Guests are keen to trust big brands, and they also have a minimum expectation value for the hotel's products and quality according to the hotel star rating. When developing, the hotel should actively introduce reputable hotel chain enterprises, participate in star rating, and choose the right geographical location. (convenient transportation, close to tourist attractions, etc.). At the same time, due to the cross-era development of network technology, the hotel marketing is infinitely possible. While maintaining the information coverage of the old media, the hotel should pay attention to the positive information delivering to the target customer groups through various new media.

Factor 2

The online reviews, comments from relatives & friends and value/price are subjective factors (even if value/price, visitors need to judge according to their own evaluation criteria), and can be integrated as objectively received hotel information. The variance contribution rate is 15.690%, which is also at a very high value. The online reviews, comments from relatives & friends are 0.974 and 0.964, respectively, indicating that these two factors have a great impact on the hotel selection of tourists. The hotel should pay attention to customer feedback and actively adjust the content of products and services to cater to hotel guests and achieve a good reputation. From the high load of online reviews and comments from relatives and friends, it can be seen that hotel guests value the evaluation of other guests when they choose.

Therefore, on the one hand, the hotel should focus on collecting customer feedback (online reviews, questionnaire and oral inquiry) through different channels. According to the customer's complaints, rectify the products and services, improve the quality of the staff through training, etc., so as to prevent the guests from incidents during the stay, which will affect their unpleasant comments on the hotel; on the other hand, there is a contradiction between the hotel and the guests. At the time, there should be a timely emergence of the leadership, appease the mood of the guests, express apologetic attitudes and positive rectification attitudes, try to restore the impression of the guests.

Factor 3

The room's decoration, hotel's integral decoration, augment product (bar, spa, gym, etc.) can be integrated into the hotel hardware. The contribution rate of variance is 8.923%, ranking fourth and lower. However, once the hotel is completed, its hardware facilities will be difficult to update. Due to the rapid development of technology, the upgrading of facilities and equipment has also been accelerated.

The current shortcomings of the hotel equipment management concept are mainly due to the lack of forward-looking concepts in the early stage of investment management. The concept of most hotel equipment managers is still lagging behind. It is in the "Focus on the technology and present" concept level, focusing on the daily equipment operation and maintenance, after-the-fact remediation, energy management after equipment purchase, and lacks predictive management of equipment purchase. (Ke, Chen, 2010) Therefore, we should start from the four strategies of product positioning strategy, price positioning strategy, distribution channel positioning strategy and promotion

positioning strategy to extend the product life cycle as much as possible and achieve sustainable development.

Factor 4

The food quality and food service quality can be integrated into the restaurant quality, and the factor variance contribution rate is the lowest, 7.680%, indicating that among the five public factors, the restaurant quality has the lowest impact on the tourist hotel selection. Unlike the hotel's housing department, the hotel's restaurant guests are not limited to the guest, and the guest has the right to choose whether to dine at the hotel.

Factor 5

Hotel' service quality, service efficiency and housekeeping can be integrated into hotel service quality, factor variance contribution rate is 10.183%, which is the third common factor of factor variance contribution rate. Although the factor variance contribution rate of hotel service quality is only ranked third, in the long run, the quality of hotel products and services has a great influence on the second choice of customers. (Shenwen, Zhao & Wenjing, Tang, 2018)

Therefore, hotels should pay attention to the quality of products and services to maintain them in a high quality state. At the same time, the stability of quality is also very important. The hotel should provide customers with stable quality products and services. This involves the training of hotel staff. After all, the hotel is a service-oriented industry. All services require employees to provide, and even some products are made by employees. Manufacturing (such as food in the restaurant), so the quality of hotel services needs the professionalism of the hotel staff as a guarantee.

Overall, In the Table 6 - Total Variance Interpretation, the percentage of the variance explained by the five factors is high, which means that the tourists' choice is mainly explained by five common factors and all variables are highly correlated to those factors. Therefore, a small mistake concerning one of the five factors can lead to customer loss, especially given that the current hotel industry competition is unprecedentedly fierce. On the other hand, the hotel that correctly reacts to these five choice factor of the occupants can be profitable.

The specific classification is shown in Table 8- The Five Common Factor

objectively received hotel information	Reputation & brand
	Hotel rating
	Marketing
	Location
Subjectively received hotel information	Online reviews
	Comments from relatives & friends
	value/price
Hotel hardware	Room's decoration
	Hotel's integral decoration
	Augment product (bar, spa, gym, etc.)
Restaurant quality	Food quality
	Food service quality
Hotel service quality	Hotel' service quality
	Service efficiency
	Housekeeping

Table 8- The Five Common Factors

Conclusions

From the above analysis, we can get the following conclusions.

- The tourists of Mallorca are mainly young and middle-aged people from Germany and the United Kingdom. The proportion of men and women is balanced. The monthly net income is about 1001-4000, which belongs to the middle class. Most of the hotels that tourists choose to temporarily live in are concentrated in Zone 1, and the more remote the area, the lower the density of tourists, except Zone 5.
- The type of tourism activity in Mallorca is leisure tourism activities, and business tourism and MICE tourism account for 30.8%. The most popular tourist attraction is '3s' tourism, accounting for 57.9%. Hiking and cultural tourism also have a place in tourism.
- Tourist selection factor can be divided into five, 1. objectively received hotel information, including reputation & brand, hotel rating, marketing, location; 2. subjectively received hotel information, including online reviews, comments from relatives & friends and value/price; 3. Hotel hardware, including room's decoration, hotel's integral decoration, augment product (bar, spa, gym, etc.); 4. Restaurant quality, including food quality and food service efficiency; 5. Hotel service quality, including hotel' service quality, service efficiency, housekeeping.

Among the five common factors, the highest contribution rate of factor variance is the objectively received hotel information, reaching 22.415%, which means that it has the greatest influence on the choice of tourist hotels, followed by subjectively received hotel information, the hotel service quality, hotel hardware and restaurant quality. The contribution value is reduced, that is, the impact is reduced.

5.1 Problems in the hotel industry in Mallorca

5.1.1 Seasonal passenger flow

From the questionnaire survey, we can find that the majority of tourists from Mallorca are the leisure tourists who enjoy the '3s' tour, which also causes seasonal differences in tourist traffic and puts pressure on hotel operations.

Mallorca's peak season is concentrated in summer, especially in July and August. And on a yearly basis, the number of visitors to Mallorca is rising, challenging the limits of Mallorca.

The difference in the tourism season is not only a pressure on tourism destinations, but the hotel industry is also facing challenges. In the off-season, there is no passenger flow, business is bleak, the hotel's profit is not enough to pay the cost (such as daily water and electricity bills, employee wages, etc.). In the peak season, because of the excessive number of tourists, the hotel can make huge profits, but it will also cause excessive pressure on the hotel staff and damage to the environment.

According to the findings of the Cleaners Work Health Conference held on April 8, 2019 in the Balearic Islands, 70% of hotel cleaning staff have been taking drugs for pain relief without a doctor's diagnosis. The reason is the working environment and industry. High work intensity due to seasonality.

At the same time, in a short period of time, the hotel's consumption and discharge of the resources of the island of Mallorca reached an unsustainable peak, causing damage to the environmental carrying capacity, which is not conducive to sustainable development, which will be detailed in the excessive concentration of hotels below.

5.1.2 Excessive concentration of hotels

In the questionnaire, 68.6% of the tourists lived in Zone 1, and 15.7% lived in Zone 2. Excessive concentration of tourists and excessive concentration of hotel are mutually influential. As tourists prefer to live closer to the city centre, the hotel prefers Zone 1 when selecting a location, and as the number of hotels in Zone 1 increases, the number of visitors increases as well, and more visitors would choose a hotel in the city centre.

Excessive concentration of hotels in the same area will lead to excessive competition between hotels, and in the same geographical location, the competitive advantage of hotels of the same star rating is not obvious.

More importantly, too many buildings are concentrated in a small area, and the damage to environmental carrying capacity is also huge, including the excessive use of water resources. The hotel uses a lot of water every day, whether it is a guest room, a restaurant or a swimming pool, while the island's

fresh water resources are scarce. the destruction of biological habits, the lights and noise of hotels built on the beach will interfere with the turtles' annual spawning to the Mallorca; a large number of guests will also increase the number of cars, while the traffic becomes dense and generates a lot of exhaust gas and noise.

5.1.3 Hotel equipment is old

Mallorca's tourism industry flourished in the 1950s, and most hotels were built after that. Due to the increasing technology and natural damage rate, the old facilities are inevitably, coupled with the wrong concept of "focus on the technology and present", which shortens the life cycle of equipment, and some equipment in the hotel industry on the island already can't satisfy the needs of customers. According to Joaquim's (2018) study, a large number of guests complained in the online travel agency that the facilities of the Mallorca Hotel are too old, and the frequently appearing words are beds (too narrow) and air conditioning (in the humid and sultry environment by the sea, well-functioning air conditioning is essential), bathrooms (especially showers and bathroom space is too small).

5.1.4 Hotel pays insufficient attention to new media

Also in Joaquim's (2018) paper, more than half of the hotels that have been reviewed have increased their competitiveness by joining the site's preferred projects, but the hotel management team only responded to one-sixth of the searched bad reviews, ignoring the value of online hotel guests' comments.

5.2 Improvement measures

5.2.1 Cooperate with the Mallorca government to develop other inland tourism resources

As mentioned in the literature review, the development of island cultural tourism can increase product diversification and enhance competitiveness. In Mallorca, the development of other tourism resources can alleviate the problem of seasonal passenger flow. The peak season of '3s' tourism is concentrated in the summer, while cultural tourism has no specific seasonal restrictions. The hotel can cooperate with the government's tourism department to build a hotel next to the inland tourism resources which would be developed.

On the one hand, it can help the Mallorca government to attract tourists and narrow the gap between the peak and weak seasons. On the one hand, it can alleviate the excessive concentration within the hotel industry. At the same time, large international hotel chain groups have more advantages in cooperating with government actions. According to the analysis results of the questionnaires, the objectively received hotel information has the greatest influence when tourists choose, so the prestigious international hotel chain group can better attract visitors.

While transferring the hotel to the inland area, it is also necessary to take into account the convenience of tourists. The construction of the basic transportation facilities on the island is very mature. At the same time, due to the small size of the island, it is not a long time to drive from the inland to other tourism products. The car rental business in Mallorca is very mature and the hotel can work with it to provide car rental services for hotel guests. A competent company can also provide a shuttle service directly to guests.

5.2.2 Take care of employees

Many of the hotel's products and services require employees to manufacture and provide them to customers, so taking care of employees can increase employee loyalty to the hotel and encourage employees to provide high quality products and services to customers. For example, hotels can provide regular health checks, improve employee benefits and rewards, provide training and appreciation space for employees, and curb the unpleasant experience of most hotel guests from the source.

5.2.3 Periodic update equipment

Although the facilities and equipment will be difficult to change once they are completed, the renovation of the interior of the hotel rooms and some hotel facilities can be phased updated, then finally replacing all parts of the rooms or large facilities. Replacing new equipment will not only improve hotel hardware, but also increase the chances of the hotel being chosen by tourists. The purchase of new and more environmentally-friendly equipment can also reduce environmental damage by reducing energy consumption and emissions, filtering and recycling water resources, (March, J. G., Gual, M., & Orozco, F. , 2004) and reducing the rate of customer online evaluation.

5.2.4 Appointment of the department responsible for new media

The hotel needs to be responsible for the uploading and dissemination of hotel information on the new media, as well as public relations and replies to any negative information and customer bad reviews, and report to the hotel management for improvement. Therefore, the hotel can set up a department responsible for new media or appoint an existing department, and appoint a special person in charge to assume this part of the responsibility.

5.3 The shortcomings and prospects of this paper

The shortcomings of this study can be summarized into two points.

First, the questionnaire was distributed in limited places and time, and the sample was too small. The distribution of the questionnaire was mainly concentrated in the center of Palma. The more scientific method of taking points should be filled out in the Zone 1-5, and the questionnaire distribution time is too short because of the time limitation, the author only distributed the questionnaire in March, and the final effective sample number is only 159. Questionnaires should be distributed in different locations in different months, and the impact of various factors on the results has been eliminated. And the expanded sample size also makes the final data more representative.

Second, there are rather few questions in the questionnaire design. The selection factors in the second part of the questionnaire should be increased to obtain more public factors that influences tourists' choice.

At the same time, the questionnaire only studied the initial selection of tourists. Otherwise this study just discussed the tourists choose factors when select hotel. For the factors affecting the second choice of tourists, how to cultivate customer loyalty, so that customers will still choose this hotel for the second time or even recommend new guests, this part is not designed in the questionnaire. This part can be improved and developed on the basis of this research, and it has a strong practical significance for the hotel industry in Mallorca.

References

Liu Liang. (2014). Progress and Prospects of Island Tourism Research. *China Fisheries Economy*, 32(3), 105-112./刘亮. (2014). 海岛旅游研究进展及展望. *中国渔业经济*, 32(3), 105-112.

Lu Lin. (2007). Progress and Enlightenment of Island Tourism Research at Home and Abroad. *Geography Science*, 27(4)./陆林. 国内外海岛旅游研究进展及启示[J]. *地理科学*, 2007, 27(4).

Liu Jiaming. (2000). Research on the development of island tourism at home and abroad. *Journal of Huazhong Normal University (Natural Science Edition)*, 34(3), 349-352./刘家明. (2000). 国内外海岛旅游开发研究. *华中师范大学学报(自然科学版)*,34(3), 349-352.

Knafou, R. (2000). Scènes de plage dans la peinture hollandaise du XVIIe siècle: l'entrée de la plage dans l'espace des citadins. *Mappemonde*, 58(5), 1-5.

Urbain, J. D. (1994). *Sur la plage: mœurs et coutumes balnéaires (XIXè-XXè siècles)* (Vol. 271). Payot.

Lockhart, D., & Drakakis-Smith, D. W. (Eds.). (1997). *Island tourism: Trends and prospects*. Thomson Learning.

Gao Weiwen, Chen Jinhua, & Li Nengbin. (2015). Research progress on island culture and tourism development at home and abroad. *Journal of Guangxi Economic Management Cadre College*, 27(2)./[7]高伟雯, 陈金华, & 李能斌. (2015). 国内外海岛文化与旅游发展研究进展. *广西经济管理干部学院学报*, 27(2).

Ayres, R. (2002). Cultural tourism in small-island states: Contradictions and ambiguities. *Island tourism and sustainable development: Caribbean, Pacific, and Mediterranean experiences*, 145-160.

Ryan, C. (2002). Tourism and cultural proximity: Examples from New Zealand. *Annals of tourism research*, 29(4), 952-971.

Walker, J. L., Mitchell, B., & Wismer, S. (2000). Impacts during project anticipation in Molas, Indonesia: Implications for social impact assessment. *Environmental Impact Assessment Review*, 20(5), 513-535.

Kousis, M. (1989). Tourism and the family in a rural Cretan community. *Annals of Tourism Research*, 16(3), 318-332.

Ghina, F. (2003). Sustainable development in small island developing states. *Environment, Development and Sustainability*, 5(1-2), 139-165.

University of Surrey. Dept. of Management Studies for Tourism, & Hotel Industries. (1991). *Progress in tourism, recreation, and hospitality management* (Vol. 3). Belhaven Press.

Apostolopoulos, Y., Apostolopoulos, Y., & Gayle, D. J. (Eds.). (2002). *Island tourism and sustainable development: Caribbean, Pacific, and Mediterranean experiences*. Greenwood Publishing Group.

Prescott, V. (2003). *A Geography of Islands: Small Island Insularity*.

Harrison, D. (2003). Themes in Pacific island tourism. *Pacific island tourism*, 1-23.

Zhao Bing. (2011). *Research on customer trust and customer choice behavior of Beijing service enterprises*. Economic Management Press./赵冰. (2011). *北京市服务企业顾客信任度与顾客选择行为研究*. 经济管理出版社.

Pu Hong. (2010). *Research on the relationship between perceived value, satisfaction and loyalty of budget hotels* (Master's thesis, Southwest Jiaotong University)./蒲红. (2010). *经济型酒店顾客感知价值, 满意度与忠诚度关系研究* (Master's thesis, 西南交通大学).

Zhao Shengwen, & Tang Wenjing. (2018). Research on Customer Choice Behavior in the Saturated State of the Hotel Industry. *Management and Management*, No.408(06), 127-130./赵圣文, & 唐文静. (2018). 酒店行业饱和状态下的顾客选择行为研究. *经营与管理*, No.408(06), 127-130.

Cheng Ke. (2010). On the risk and positioning strategy of hotel equipment management from the perspective of globalization. *Modernization of shopping malls* (34)./程柯. (2010). 论全球化视野下酒店设备管理风险与定位策略. *商场现代化*(34).

Pomar Cabot, J. M. (2018). Analysing hotel guests' online reviews on their stay in Palma de Mallorca.

Zhao Shengwen, & Tang Wenjing. (2018). Research on Customer Choice Behavior in the Saturated State of the Hotel Industry. *Management and Management*, No.408(06), 127-130./赵圣文, & 唐文静. (2018). 酒店行业饱和状态下的顾客选择行为研究. *经营与管理*, No.408(06), 127-130.

Pomar Cabot, J. M. (2018). Analysing hotel guests' online reviews on their stay in Palma de Mallorca.

March, J. G., Gual, M., & Orozco, F. (2004). Experiences on greywater re-use for toilet flushing in a hotel (Mallorca Island, Spain). *Desalination*, 164(3), 241-247.

Yin Ruifei, & Zhu Jianping. (2005). Discussion on the classification of variables using factor analysis methods. *Statistics and Decisions* (3), 20-21./殷瑞飞, & 朱建平. (2005). 关于利用因子分析方法对变量分类的探讨. *统计与决策*(3), 20-21.

Yu Diyi. (1993). A Review of Factor Analysis. *Finance and Economics* (5), 62-63./余迪意. (1993). 因子分析法介评. *财经科学*(5), 62-63.

Zhao Xicang. (1995). The characteristics of factor analysis and its application should pay attention to the problem. *Zhejiang Statistics* (12), 21-21./

赵喜仓. (1995). 因子分析法的特点及其应用中应注意的问题. 浙江统计(12), 21-21.

Annexes

Questionnaire of the factors of guests' hotel choice on the island of Mallorca

Dear Sir/Madam, thank you so much for finishing this questionnair. This questionnaire is intended to investigate the factors which determine your hotel choice on the island of Mallorca. Thank you again for taking time out of your busy schedule to read and answer this questionnaire. Please only choose one option per question unless stated otherwise.

1. Your age?

A. 18-30. B. 31-50. C. 51-70. D. older than 70

2. Your gender?

A. Male. B. Female.

3. Your nationality? _____

4. Your net salary per month (accounting by euro)?

A. 0-1000. B. 1001-4000. C. More than 4000.

5. The reason why you come to Mallorca:

A. Business. B. Leisure. C. MICE (Meetings, Incentives, Conventions, Exhibitions&Event). D. Others: _____

6. Which tourism attraction of Mallorca interests you most?

A. 3S(sun,sea,sand). B. Culture. C. Shopping. D. Hiking E. Others: _____

7. In which hotel do you stay now? _____

8. How did you book this hotel?

- A. Travel agencies. B. Online travel agencies. C. Directly reserve with hotel.
D. Other way: _____

9. Your considering when choosing hotel. How do you value the factors below ?
The lower the score is, the less important it is; the higher the score is, the more important it is (1 is very unimportant; 2 is not so important ; 3 it doesn't matter ; 4 is important; 5 is very important)

	1	2	3	4	5
Reputation & brand					
Hotel rating					
Comments from relatives & friends					
Online reviews					
Sanitation					
Hotel' service quality					
Service efficiency					
Room's decoration					
Hotel's integral					

decoration					
Location					
Housekeeping					
Equipment					
Security					
value/price					
Food quality					
Food service quality					
Marketing					
Augment product (bar, spa, gym, etc.)					