MASTER'S THESIS

Comparison of human resource demand of luxury hotels in Hainan Island and Balearic Island: data analysis based on LinkedIn

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ABSTRACT

Human capital plays an indispensable role in the operation of hotels. To understand the differences in the human resource demand of luxury hotels in different regions, this study will conduct data analysis on the recruitment information of luxury hotels in Hainan Island and the Balearic Islands - two famous tourist destinations in China and Spain. The dataset will be obtained from LinkedIn for conducting content analysis and descriptive statistical analysis. The requirements of employee's language level, work experience, skills, education level and other personal conditions in luxury hotels' recruitment information will be analyzed. The conclusion discusses the differences between the labor demand characteristics of luxury hotels in these two regions. The results demonstrate that luxury hotels in Balearic Islands have more strict standards in recruitment, both in terms of skills, experience, education, and training. The results can help candidates to better understand the needs of the hotel industry, and the differences in human resource demand in this industry under different cultural and social backgrounds. In the summary, suggestions for candidates are put forward to obtain management positions in the future.

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1.   INTRODUCTION

From independent hotels to chain hotels, the development of any form of hotel needs talents. Some previous studies have proved that high category hotels usually have higher requirements for employees. In the research of Ramos et al. (2004), high category hotels provide employees with higher wages and longer-term work contracts. High quality staff means more efficient productivity. To build a orderly and excellent team can guarantee the hotel to achieve further business objectives and higher economic benefits. As a persistent problem, human resources are the top concern of hotel managers (Enz, 2001). And the human resource issues of attraction, retention, training, and morale were managers' key areas of concern (Enz, 2009). This research is based on this background - the importance of human resources in hotel industry. Brotherton and Wood (2000) used the supply-demand model to analyze the operation of the hotel industry. The results show that the supply side and the demand side interact with each other. It is necessary for hotel managers to adjust human resources timely and accurately to respond the trends of tourism. Luxury hotels attaches great importance to human resources, and their high level of management will undoubtedly enhance attraction towards job seekers. For talents who need to constantly improve themselves in response to the changes in the labor market, how to make themselves be more competitive when facing ideal jobs is a notable question. Only in-depth understanding of the specific talent needs of the hotel labor market, the labor market can provide more targeted training and education towards candidates.

This research is not only a descriptive analysis of human resource demand of luxury hotels in a specific area. Using the data of the two regions for comparison will provide more referential value. Here, we select Balearic Islands of Spain and Hainan Island of China as the research areas. The recruitment information provided by luxury hotels in the two regions on the LinkedIn website will be captured for comparative analysis. Understanding the similarities between the two regions can help in the comparison, some commonalities are shown below:

- Geographical conditions: As islands separated from the mainland, Balearic Islands and Hainan island have their own unique appeal. A study has shown that, the challenges faced by organizations in island tourism contexts have dimensions that set them apart in both kind and extent from other tourism environments (Baum, 2012). Similar geographical conditions make the tourism products of the two regions also have similarities. Long coastlines brought abundant sand beaches and marine tourism resources, which means, the positioning of hotels in both Balearic Islands and Hainan Island is homogenous. The type of hotels is mainly resort type.

- Economic structure: According the figures of Eurostat, the tertiary sector of Balearic Islands is the main component of regional gross value added and tourism is the most prominent activity in this sector. Similarly, tourism, as a pillar industry of Hainan Island's development, accounts for more than 50% of the regional GDP. The Balearic Islands are one of the most popular island tourist destinations in Spain. At the same time, Hainan Island has an equally important strategic position in Chinese tourism. Both of them are the epitome of their own countries' tourism industry. It can be said that the selection of comparison areas is appropriate.

- Hotel industry structure: By using Google search engine, it can be seen that there are 4,553 hotels in Balearic Islands, and 121 of them are five-star hotels. There are 4,475 hotels in Hainan Island, and

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159 of them are five-star hotels. Although there are more four-star hotels in Balearic islands than in Hainan Island, overall, the number of hotels in the two regions is similar. The scale of the hotel industry in the two region is also similar.

LinkedIn is positioned as a social platform for the job market. Job seekers can search for jobs and company information on this website. And those companies with human resources demand can also release recruitment information to search for talents efficiently. Larger firms are more likely to use formal recruitment methods (Saari et al., 1988), the cost per applicant of developing recruitment procedures will decrease as the number of hiring decisions increases (Tanova and Nadiri, 2005). As a public platform, LinkedIn attract more job postings from luxury hotels rather than smaller ones. It is obviously more efficient for human resources departments of luxury hotels to publish large-scale recruitment advertisements on such kind of platforms. This is the reason for this study to collect data on LinkedIn webpage. But it is worth noting that LinkedIn is not the only way to recruit. Luxury hotels often advertise on more than one website, and they also conduct offline recruitment campaigns. In this study, more qualitative data that related with the topic can be collected by using the information posted on LinkedIn than other platforms.

The field that this research focused is relatively subdivided. This paper attempts to understand the differences in human resource demand of the hotel industry under different social backgrounds by analyzing the recruitment information of luxury hotels in two islands. Most of the previous studies have focused on hotels in a specific region. The innovations of this study are:

- Analyze human resource demand of the hotel industry in an island perspective, only for luxury hotels
- The data was collected in a novel way, scraping text information from LinkedIn webpage
- Comparative analysis, which shows the differences of recruitment requirements between different countries

The article is divided into six sections. The first section is introduction, and the second section is literature review. The human resource demand characteristics of the hotel industry analyzed in the previous research will be summarized in the second section. The methodology and output results will be covered in sections 3, 4 and 5. In addition to the descriptive statistical analysis of the data, a new logistic regression will also be carried out to analyze the characteristics needed for management positions through STATA software. Finally, in the sixth section, there is the conclusion. This study will provide effective suggestions for both parties in the employment relationship. Employers in both China and Spain can understand the differences in the human resource demands of hotels in different regions and make appropriate adjustments in future recruitment advertisements to attract better talent. And by better understanding the preferences of human resource demands, applicants can improve their skills to find a more satisfying job in the hotel industry.

2.   LITERATURE REVIEW

2.1.   Human capital demand characteristics in the hotel industry

2.1.1.   The emphasis on experience

Currently, the research about human capital demand characteristics of hotel industry is relatively few. They are mainly empirical analysis conducted in a particular region and the samples were obtained

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from all types of hotels. There is a consensus in the literature that hotels need more experienced and skilled workers rather than those with higher education level. According to a survey conducted in Hong Kong, employers perceived that "a positive service-mind and commitment to the industry with a certain degree of working experience" were important components to success for every member of staff, rather than having a good educational background (Chan and Coleman, 2004). The descriptive statistics of Ramos et al. (2004) indicate that formal educational endowment is not a strong binding condition for worker mobility between categories. Back in 2000, experts drew the similar conclusion after analyzing the sample of 500 hotels in Scotland. They found "the main route to a permanent management post still remains one of practical work experience, rather than the attainment of a hospitality-related degree" (Ingram et al., 2000). In the comparative empirical analysis of Greece, respondents in the hospitality sector had more industry experience than those in the sample of 120 non-hospitality members (Paraskevas, 2000). All these examples show that in the traditional hotel industry, the education background is not necessary for employees. In the recruitment process of hospitality, curriculum knowledge taught in schools may not be superior to practical experience. For employers, they pay more attention to an employee's individual skill level, service awareness and work experience.

2.1.2.　Huge demand for human capital

The hospitality industry is internationally considered as the sector with the highest turnover rate in both hourly and managerial levels (Paraskevas, 2000). Abbasi and Hollman (2000) think that labor turnover is the one of most important reasons for the decline in productivity and morale in the public and private sectors. Similar as restaurant sector, the hotel sector also must face exceptional peaks of work. Therefore, maintaining a large pool of temporary labor is best selection to draw in response to demand (International Labour Organization, 2001). One of the greatest challenges facing the tourism industry in the Niagara region today is the operational issues related to the attributes of seasonal business (Willie and Laver, 2008). In some cases, hotels must suspend services. Not only because of the loss of labor, but also because of the long and complicated recruitment process - they cannot hire enough staff to support the business activities in the short term. One possible solution is outsourcing. This approach makes it possible to fill vacancies in a short period of time and cut down the costs. However, if outsourcing strategy is frequently used, the decrease of staff loyalty and their lack of skills will be detrimental to the long-term development of the hotel (Hall, 2000). The hotel industry is a personnel intensive industry. The imbalance between supply and demand has resulted in the lack of talent in the hotel industry, which has also resulted in the low entry threshold of this industry.

2.1.3.　Human resource demand of luxury hotels

The success of the hospitality industry depends heavily on aggressive and quality-oriented human resources (Øgaard et al., 2008). Hotel chains, especially those industry giants such as Marriott and Ritz-Carlton, are bound to pay more costs to find high-quality talents and carry out high-quality human resource management activities. However, by using "luxury hotels" and "human resources" as the keyword to search, the number of literatures obtained is still limited. Chu (2014) reviewed 70 qualified scholarly research articles related with luxury hotels that were published between 1994 and 2014, he found that although HR and technology being the most popular research themes, the diversified

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number of subjects are independent without direct connection. In such a specialized field as luxury hotel, currently there is no consensus on the human resource demand characteristics in the global scope. In a web-based questionnaire survey of luxury hotels in Australia, Davidson and Wang (2011) found that when hiring new employees, hotels consider individual performance, interpersonal and client skills to be the most important. And the conclusion obtained by Zhou (2013) through network content analysis method presents those main characteristics of human resource demand for high category hotels in China are as follows: low education threshold, no obvious tendency to gender requirements, younger age of employees, emphasis on work experience, regionalization of language requirements, and certain computer application ability. Some commonalities can be seen, however, due to the small number of literature for empirical analysis, it is more of a regional differentiation. The research on human resources of high category hotels in Spain mainly focuses on the human resources management of hotels and the training provided for employees, for example, Ubeda-Garcia et al. (2013), have studied the effects of training practices that cause on performance levels. The literature that related to demand side still needs to be supplemented and developed, which is what this paper try to research.

2.2.   The research methods for related studies of LinkedIn recruitment

As a global site, the impact of LinkedIn is widespread. Social work platforms represented by LinkedIn are playing an increasingly important role in the process of personnel recruitment. According to data released by OMNICORE, by 2020, there are more than 30 million companies and 20 million job postings on LinkedIn (OMNICORE, 2021). A study in North American found that more than half of the hotels of that region uses social media in their human resource activities (Gibbs et al., 2015). Some studies focus on employee turnover and satisfaction, focused group discussion (FGD) method (Hosain and Liu, 2012), questionnaires distribution (Subhani et al., 2012), in-depth interviews (Olsen, 2008) and other qualitative methods are used to collect employee opinions. However, since this study focuses on the recruitment information of employers on LinkedIn, quantitative analysis carried out based on content analysis is more applicable.

By analyzing the content of job offers in journalism on LinkedIn Spain, Lazo et al. (2018) tried to understand the professional skills and profiles in journalism requested by the companies. All the information collected was divided into two categories: descriptive data that related with the types of contracts and data about the skills required. Another paper investigates the relationship between ownership concentration and human capital disclosure released via LinkedIn (Pisano et al., 2017). The authors used a quantitative methodology and content analysis to test human capital disclosure. In addition, a regression analysis was used to verify the hypothesis. Hu and Hussein (2020) examined the behavior and motivations of LinkedIn members through quantitative analysis. The above literature provides references for the methodology of this study. All of them use software SPSS and STATA to complete data analysis. A descriptive analysis and additional regression analysis - logistics regression based on the text of LinkedIn recruitment content will be carried out in detail.

3.   METHODOLOGY

3.1.   The collection of data

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Before the descriptive statistical analysis, it is necessary to establish the database of luxury hotels' recruitment information on LinkedIn. The data of the Balearic Islands and Hainan Island should be collected separately for comparison. On LinkedIn, select "Jobs" option and locate the location on "Balearic Island", there are 867 job offers available in the hospitality industry (recruitment information posted before May 31, 2021). It should be noted that if "luxury hotel" is used for keyword search, the recruitment listings of some luxury hotels that did not provide certain star rating information would be omitted. To obtain as many samples as possible, the selection of luxury hotels will also be judged from their recruitment content. Furthermore, in order to reduce errors and valid data, the process of filtering should follow the conditions below:

- Delete recruitment information from agency companies. Some luxury hotels also recruit employees through third-party agencies, these posts are likely to be repetitive of their own recruitment information.
- Delete recruitment information of hotels that do not provide locations, or those hotels that locates outside of the island area.
- Delete job listings where the employers are actually not luxury hotels. Retain recruitment information of four-star and five-star hotels.
- Delete repetitive recruitment information for the same position in the same hotel.
- Spanish and Chinese recruitment information will be translated into English.

Finally, 112 valid data listings were obtained from 867 pieces of information of Balearic Island. 85 valid data listings were obtained from 146 pieces of information of Hainan Island. By using Google search engine, it can be seen that 982 of 4,553 hotels in Balearic Islands are luxury hotels. And the 4,475 hotels in Hainan Island only includes 446 luxury hotels. In view of the number of luxury hotels in the two regions, and considering the possibility of multi-platform advertising, the number of valid data listings collected is reasonable. The preliminary database contains the name of the hotel and the content of recruitment information. To determine the indicators that should be selected for descriptive analysis and regression analysis, word frequency statistics can be used to analyze the concern of recruitment content in both Balearic Islands and Hainan Island.

3.2. The selection of indicators for descriptive analysis

Word frequency query can be carried out through NVivo software to display the most frequent words in the database. Import the preliminary database for query processing, set the minimum length to three letters to filter unnecessary prepositions. As shown in Table 1, the 20 most frequently appearing words in luxury hotels of the two regions are sorted from high to low. Words that more related to hotel recruitment demand are boxed.

Table 1: Word Frequency Statistics on Recruitment Information of Luxury Hotels in Balearic Islands and Hainan Island

Word Frequency Statistics					
Balearic Islands hotels recruitment information			Hainan Island hotels recruitment information		
Word	Count	Weight (%)	Word	Count	Weight (%)
hotel	226	1.43	service	258	1.16
experience	187	1.19	guest	216	0.97

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service	173	1.1		experience	173	0.78
work	139	0.88		team	172	0.77
team	130	0.82		food	168	0.75
training	111	0.7		guests	158	0.71
skills	101	0.64		hotel	156	0.7
customer	96	0.61		work	154	0.69
position	91	0.58		ensure	145	0.65
functions	81	0.51		standards	135	0.61
hotels	80	0.51		employees	131	0.59
guests	78	0.49		management	126	0.56
ensure	77	0.49		customer	125	0.56
knowledge	74	0.47		property	118	0.53
English	72	0.46		ensures	117	0.52
level	72	0.46		training	109	0.49
food	66	0.42		procedures	105	0.47
management	66	0.42		skills	104	0.47
carry	64	0.41		business	102	0.46
company	64	0.41		operations	101	0.45

It can be seen that "experience", "training", and "skills" frequently appear in the recruitment requirements of luxury hotels in the Balearic Islands and Hainan Island. Moreover, these words account for a higher proportion of recruitment information in the Balearic Islands. The follow-up descriptive analysis needs to explore whether it means that luxury hotels in the Balearic Islands have higher requirements for experience and skills.

Another interesting finding is that if the query output is set to 50 words, "languages" accounted for 0.24% of the total content in Balearic Islands recruitment information. The requirements for language skills of luxury hotels in the Balearic Islands far exceed those of Hainan Island. This assumption will also be verified in the descriptive analysis.

Table 2: Selection of Factors Affecting the Human Resource Demand of Luxury Hotels

I Indicators	II Indicators		Variables
Skills	Language	X1	English
		X2	Third language
		X3	Number Languages
	License	X4	Driver license
	Software skills	X5	Computer
Experience	Work experience	X6	Experience
		X7	Years experience
	Legal working status	X8	Resident
Education/training		X9	Education/training
		X10	Bachelor's degree or above
Gender		X11	Specific gender requirement
Manager		X12	Management position

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In order to conduct descriptive and regression analyses, relevant variables need to be identified. In view of the fact that previous studies did not establish an index system for evaluating the factors that affect the human resource demand of luxury hotels, the relevant impact factors should be determined in this study. First-level indicators (I Indicators) are derived from literature review and word frequency analysis. Based on the detailed recruitment information of the two regions, the second-level indicators (II Indicators) and final variables are the subdivision of the first-level indicators. Results are shown in Table 2.

The literature review concludes that hotels need more experienced and skilled workers rather than those with higher education level. In order to verify whether this conclusion is correct in both destinations, education level, training, skills and experience are selected as the first-level indicators. In the wider hotel industry, many women are employed (Lucas, 1995). Evidence from the modern hotel industry shows that hotels usually have a diverse workforce - men and women from different ethnic and national backgrounds, serving customers from different countries (Adib and Guerrier, 2003). The gender factor can also be used as a indicator to measure that whether there is a gender preference for employment in luxury hotels in the Balearic Islands and Hainan Island. In addition, when posting recruitment information, some hotels indicate that the employees must be residents. The identity of the job applicant is also an indicator worth considering. In addition to language skills, some luxury hotels are looking for applicants with good driving skills or computer skills in the Balearic Islands and Hainan. All these factors will be taken into account. The first-level indicators can be subdivided into several small items, and finally 12 variables are determined. The codes X1 through X12 will be used to refer to the twelve variables. It is worth noting that variable X12, which refers to whether the job position is a management position, will be used as a dependent variable for the following regression analysis.

3.3. Data entry

Based on the preliminary database, valid data needs to be entered according to the III indicators. Values should be assigned. Some indicators are categorical variables, whose values are qualitative. All the categorical variables in this study are binary variables, that is, variables with only two possible outcomes.

The following is the assignment rule for each variable:

- X1: Binary variable. If the hotel needs English speaking applicants, put the value 1, if not, put the value 0. Notably, phrases such as "good level of English will be valued" will not be counted. Only mandatory requirements will be counted.

- X2: Binary variable. If the hotel requires the applicant to speak a third language, put the value 1, if not, put the value 0. Notably, phrases such as "good level of German or French will be valued" will not be counted. Only mandatory requirements will be counted.

- X3: Numeric variable. The number of languages required in the recruitment advertisements.

- X4: Binary variable. If the hotel requires the applicant to have a driving license, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

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- X5: Binary variable. If the hotel requires the applicant to have Computer skills (PMS Opera, MS Office, Internet, among others), put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X6: Binary variable. If the hotel requires the applicant to have work experience, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X7: Numeric variable. Minimum number of years of work experience required.

- X8: Binary variable. If the hotel requires the applicant's legal residence status, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X9: Binary variable. If the hotel requires the applicant to have a certain level of education or training, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X10: Binary variable. If the hotel requires the applicant to have a bachelor's degree or above, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X11: Binary variable. If there is a specific gender requirement of the hotel, put the value 1, if not, put the value 0. Only mandatory requirements will be counted.

- X12: Binary variable. If the position involves management job (higher level position), put the value 1, if not, put the value 0.

4.   RESULTS

4.1.   Differences in the demand of education and training

Luxury hotels in the Balearic Islands pay more attention to education and training. As shown in Figure 1, nearly half of the hotels in the Balearic Islands have education/training requirements for applicants. In Hainan Island, the proportion is only 32.94%. Bachelor's degree or higher-level degree does no play an important role in obtaining employment in the luxury hotel industry of both two regions. There is even not a hotel that requires a master's degree among all the samples. In the 85 listings of recruitment information in Hainan Island, only two of them clearly state that a bachelor's degree is required. In Figure 2, the percentage is close to 2%, which can be explained that the role of a bachelor's degree in the recruitment process of Hainan luxury hotels is extremely low.

Figure 1: Percentage of luxury hotels that require the applicants to have a certain level of education or training.
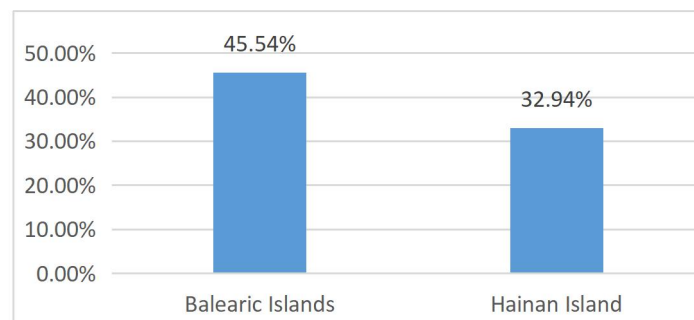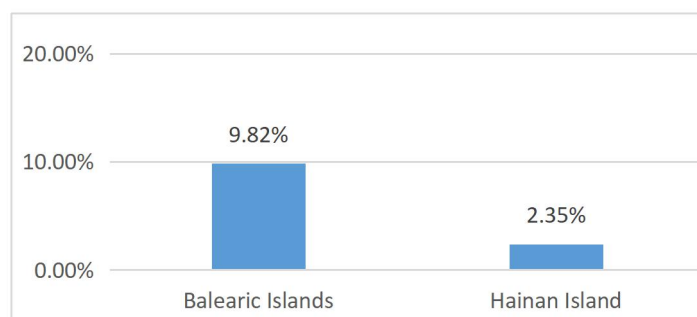

Figure 2: Percentage of luxury hotels that require the applicants to have a bachelor's degree.

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As part of the recruitment information in the Balearic Islands is in Spanish, there is a wide variety of Spanish degree requirements that should be explained by the equivalent degree in English. In the 112 listings of recruitment information in Balearic Islands, 6 of them mentioned the requirements of "*EGB/ESO*". The full names of these two abbreviations are: *Educación General Básica* and *Educación Secundaria Obligatoria*, which can be translated as *Primary Education and General Certificate of Secondary Education* in English. In addition, the abbreviation "*FPI*" and "*FPII*"is also mentioned in a recruitment advertisement. *FPI - Formación Profesional de Primer Grado* can be translated as *Vocational Education and Training in English*, and *FPII - Formación Profesional de Segundo Grado* can be translated as *Certificate of Higher Education* in English. Higher education is usually not a requirement for these hotels. According to Garavan (1997), training, education and development can be considered as an integrated whole, and learning is the glue that bonds them together. The recruitment information of luxury hotels indirectly illustrates this point of view. Luxury hotels in the Balearic Islands and Hainan Island rarely require applicants to provide both training and degree certificate. Normally, applicants only need to meet one of two conditions, training certificate or education level certificate. It is not hard for an applicant to get a job in a luxury hotel without a bachelor's degree but with the appropriate training experience. Many hotels mentioned in the recruitment information that corresponding training will be provided after employees joining the company. Induction training can make up for lack of knowledge and experience. As it confirmed in the empirical analysis of Groot and De Brink (2000), formal job-related training improves employability.

In addition, the requirement of *Bachillerato* and *Curso de Orientacion Universitaria* (*COU*) are also mentioned in the recruitment advertisements of luxury hotels in Balearic Islands. Compared with recruitment in Hainan Island, luxury hotels in the Balearic Islands have a more detailed classification of academic qualifications. Some hotels also require applicants to provide the certificate of *Ciclo Formativo de Grado Medio* (*CFGM*) or *Ciclo Formativo de Grado Superior* (*CFGM*). In China, there is not so much division of training levels in the labor market. In the recruitment information of Hainan island, owning a high school diploma or a bachelor degree is almost the only standard to distinguish the applicant's level of education. There is no doubt that the luxury hotels' recruitment standards for the education and training in Balearic Islands is stricter than those in Hainan Island.

4.2.   Differences in the demand of language skills

In the recruitment of human resources in Macau, interpersonal skills are regarded as the most important skills that employers require (Chan and Kuok, 2011). King et al. (2003) evaluated the professional experience and views of tourism industry graduates from Hong Kong and Australia, the

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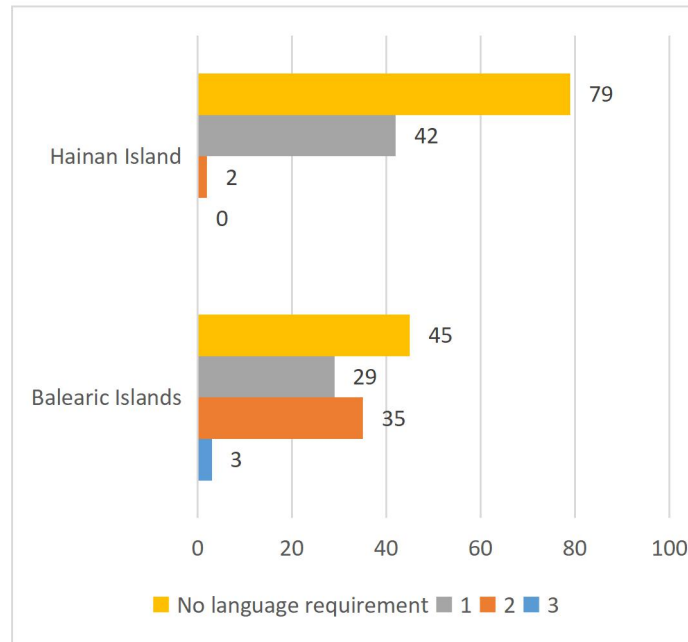
results showed that language skills played a greater role in getting their first job than tourism, hotel management subjects. In the previous word frequency statistics, the frequency of the word "English" ranks among the top 20. This raises thinking about the demand degree of language skills in luxury hotels. In this descriptive statistics, English skills, third language requirement, and the number of languages required will be three dimensions to measure the differences in the language skills demand of these luxury hotels.

Figure 3: Percentage of the English skill and third language requirements of luxury hotels
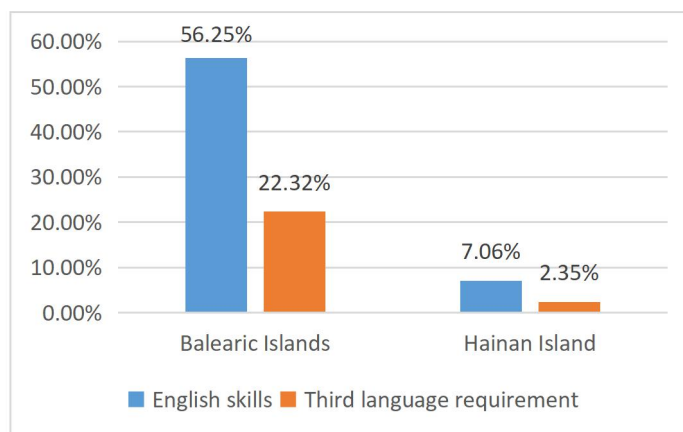
The results of the comparison are still significant in Figure 3. In the Balearic Islands, 56.25% of job offers require employees to have English skills. In Hainan, only 7.06% of applicants are required to have these skills. In addition, in the Balearic Islands, 22.32% of job offers require employees to have a third language. The figure is as low as 1.18% in Hainan. Spanish, as the first language of the Balearic Islands, and Chinese, as the first language of Hainan Island, are not included in the assessment. Further statistics show that the second and third language skills needed in the luxury hotels of Balearic Islands are all European languages, such as French, Italian, and German. There are 10 offers requesting German skills, 3 offers requesting Italian skills, and 5 offers requesting French skills. Similarly, the division of language levels in Balearic Islands is more detailed. For specific language requirements, luxury hotels may require the level of "French A1/A2/B1" or "Intermediate English/A1/B1" among others, as standards. At luxury hotels in Hainan, only two jobs posting required a third language. One hotel needs a staff who speaks the local dialect, not the international language, to deal with local matters. Another hotel needs a Russian speaker. Some hotels just simply put forward "oral and written fluency in English" or "proficiency in English", without specific assessment criteria or classification basis. Obviously, the luxury hotels in Balearic Islands involved in more international tourism affairs, they mainly take the tourist groups from the European region. Luxury hotels on Hainan Island, meanwhile, are still mainly targeting the domestic market.

Figure 4: The number of languages required.

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When providing a higher level of service, the importance of foreign languages is a very crucial thing, which can make guests feel at home, thereby bringing more brand loyalty and greater cash flow (Torres and Kline, 2013). Apparently, luxury hotels in the Balearic Islands are struggling to recruit people with more language skills for departments such as restaurants, concierge, and the reception desk. Stricter recruitment standards of luxury hotels in the Balearic Islands are shown in Figure 4. By contrast, luxury hotels on Hainan Island do not seem to make efforts for wider communication. According to the study of Pan (2018), due to the limited industry background, it is difficult for the hotels in Hainan Island to recruit highly educated talents, which results in the English level of staff failing to meet the work requirements, thus affecting the development of its hotel industry, and restricting the construction of an international tourism island to a certain extent. The effectiveness of English language communication is one of the important indicators to measure the service quality of tourism and hotel industry (Wang and Lin, 2017). Despite in the report of Eurostat, compared to other European countries, the Spaniard's English level stay in the bottom, " in the last 20 years and the level has improved a lot" (El Pais, 2019). The positive trend is presented in the empirical analysis of the Balearic Islands. Luxury hotel industry, at least in this island, employers are seeking more internationalized talents and more diverse communication opportunities.

4.3.   Differences in the demand of experience

Figure 5: Percentage of the experience requirements of luxury hotels

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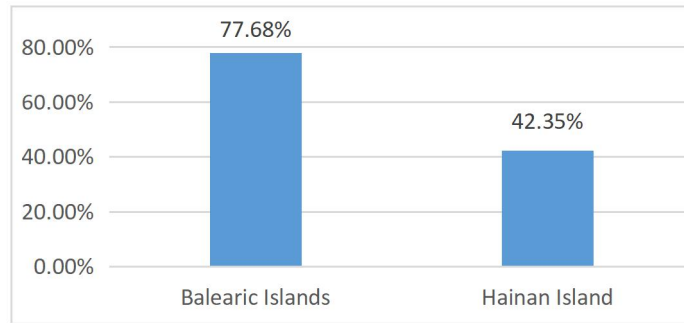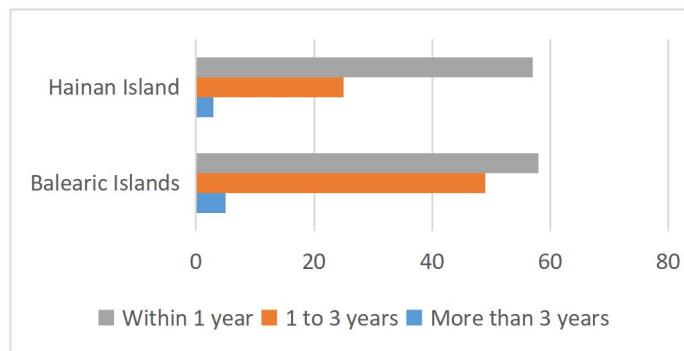
Figure 6: Minimum number of years of work experience required.

Experienced employees bring more efficient productivity. In both the Balearic Islands and Hainan Island, the recruitment information shows the emphasis of luxury hotels on experience. The difference is that more job positions of luxury hotels in the Balearic Islands require experienced applicants, the percentage of the experience requirements reached 77.68%. In Figure 6, it can be seen th

at the demand for applicants with more than 3 years working experience is not high in both regions. The reason may be that for employees with long-term work experience, the turnover trend has stabilized. Most of the general staff recruited by the hotel industry are graduates or young staff. It can be seen that the luxury hotel industry in the Balearic Islands and Hainan Island has a huge demand for applicants with less than three years of work experience. Recruitment demand with more than three years of work experience, generally involving management positions. An interesting finding is that in the recruitment information of luxury hotels in Hainan Island, there is a stronger substitutability between experience and degree. Take the Marriott Hotel in Wanning, Hainan as an example, they mentioned about "*High school diploma; 2 years' experience in the guest services, front desk, or related professional area. OR 2-year degree from an accredited university in Hotel and Restaurant Management, Hospitality, Business Administration, or related major; no work experience required*" when they tried to hire a front office manager. This is also the reason why the variables X9 and X10 have relatively few counts in Hainan Island. If the applicant has a higher education degree, he/she may not be required to have work experience in the luxury hotels of Hainan Island. If the work experience of the applicant is long enough, the requirement for a degree may not be necessary. The requirements of luxury hotels in the Balearic Islands are more stringent, and this finding in the Hainan sample do not have a significant performance in Balearic Islands.

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5. Logistic regression

5.1. Model selection

The demand of luxury hotels for senior and junior talents may be different. When hiring management staff, hotels may put forward more requirements. In order to verify this assumption. The regression model with variable X12 (whether the position involves management job) as the dependent variable will be analyzed.

General linear regression requires that the dependent variable must obey the normal distribution. If the dependent variable does not obey the normal distribution, the ordinary least square (OLS) method no longer has the characteristics of optimal linear unbiased. Since the explained variable of the model is binary variable, using OLS model for estimating linear probability has limitations.

If the explained variable is discrete, the binary selection model can be called as discrete choice model. In this case, the selection of Logistic Regression model (Logit model) is more appropriate. Suppose that there are only two options in the recruitment process of luxury hotels, management jobs (y=1) or general jobs (y=0). We need to verify whether the requirements for management positions are related to the 11 independent variables speculated above, including experience, education, skills and other indicators. Firstly, an auxiliary continuous variable yi* should be determined through a linear model:

$$y_i^* = x_i'\beta + \varepsilon_i (i = 1, 2,...,n) \qquad (1)$$

Here, β presents the regression coefficient, εi presents the error term. Xi presents the independent variable. A piecewise function can build the relationship with the dependent variable yi:

$$y_i = \begin{cases} 1 & y_i^* > 0 \\ 0 & y_i^* \le 0 \end{cases} \qquad (2)$$

The probability of y=1 can be deduced according to the two formulas above:

$$\begin{aligned} P(y_i|\mathbf{x}) &= P(\mathbf{x}_i'\beta + \varepsilon_i > 0) \\ &= P(\varepsilon_i > -\mathbf{x}_i'\beta) \\ &= 1 - P(\varepsilon_i \le -\mathbf{x}_i'\beta) \\ &= P(\varepsilon_i \le \mathbf{x}_i'\beta) \end{aligned} \qquad (3)$$

If the residual εi follows a logical distribution and meets the assumption of independent identical distribution, then the mean value of the residual εi is 0 and the variance is $\pi 2/3$. The general form of the Logit model can be derived as:

$$P(y_i|\mathbf{x}) = \Lambda(\mathbf{x}_i'\beta) \equiv \frac{\exp(\mathbf{x}_i'\beta)}{1 + \exp(\mathbf{x}_i'\beta)} \qquad (4)$$

5.2. Data analysis

Imported the database into STATA, the regression analysis is completed by using logit command, and output of the regression results of Balearic Islands and Hainan Island respectively. The results are shown in Table 3 and 5.

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In addition, the independent variables *education/training* and *bachelor degree or above* in this study are both educational indicators. The number of languages required by the hotel, is related to variables *English* and *third language*. In order to avoid the high correlation between explanatory variables which makes the model difficult to estimate accurately, the test of collinearity is still necessary. Any continuous independent variable in the model is taken as the dependent variable of the new model, and other independent variables are taken as the independent variables of the new model. Do multiple linear regression, and then check Variance Inflation Factor (VIF) diagnosis. After testing, the VIF value of the model of the Balearic Islands is less than 10, which proves that there is no multi-collinearity problem in the model.

Table 3: Logistic regression results of Balearic Islands

Manager position	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
English	.834	.947	0.88	.378	-1.022	2.689	
Third language	-1.98	.801	-2.47	.013	-3.55	-.409	**
Number_Languages	.342	.634	0.54	.59	-.902	1.585	
Driver license	-1.039	.974	-1.07	.286	-2.948	.869	
Computer	.912	.552	1.65	.098	-.169	1.993	*
Experience	.713	.766	0.93	.352	-.788	2.215	
Years_experience	.545	.228	2.39	.017	.099	.992	**
Resident	-1.067	1.046	-1.02	.308	-3.118	.984	
Education/training	.705	.565	1.25	.212	-.402	1.813	
Bachelor degree or above	-1.202	.794	-1.51	.13	-2.759	.354	
Specific gender requirement	1.872	1.146	1.63	.102	-.374	4.117	
Constant	-2.896	.611	-4.74	0	-4.093	-1.699	***

Mean dependent var		0.321	SD dependent var		0.469	
Pseudo r-squared		0.221	Number of obs		112.000	
Chi-square		28.008	Prob > chi2		0.003	
Akaike crit. (AIC)		133.558	Bayesian crit. (BIC)		166.180	

*** p<0.01, ** p<0.05, * p<0.1

In the Logistic regression of luxury hotels in Balearic Islands, independent variables *third language* and *years experience* have significant correlation with dependent variable *manager position*. A negative correlation is seeming to be abnormal, if applicants are required to have a third language skills, the possibility that this is a management job will be greatly reduced. However, after a further analysis of the recruitment information in the Balearic Islands, it can be found that almost all positions that require a third language are reception positions. Such as restaurant waiters, front desk, and office customer service. These luxury hotels attempt to employ French, Italian and German-speaking service staff to increase their attractiveness to customers from other European countries and maintain good customer relations. For managers, more of their work is to communicate with employees, therefore a third language is not necessary.

In luxury hotels in the Balearic Islands, if the number of years of work experience required increases by one year, the possibility of this position being a management position will increase by approximately 55%. Whether the applicant have skills such as driving, computers, whether the gender

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is male or female, or whether he/she have a higher level of education has no significant correlation with management positions. In luxury hotels in the Balearic Islands, recruitment involves more than 70 diverse positions. The specific skills required for different positions are different. As an important skill in luxury hotels of this region, English skills and work experience have become necessities for most positions (Figure 3 and Figure 5). If applicants want to widen the gap with other job seekers, the accumulation of work experience is the most important thing. In the luxury hotel industry of Balearic Islands, only talents with more than a certain year of work experience are more likely to become managers.

Table 4: Collinearity test: the data of Hainan Island

Variable	VIF	1/VIF
Amount_Lan~e	17.69	0.056532
English	13.52	0.073968
Thirdlangu~e	3.19	0.313802
Bachelorde~e	2.06	0.486249
Eduacation~g	1.69	0.591486
Manager	1.58	0.632075
Computer	1.22	0.816877
Mean VIF	5.85	

Table 5: Logistic regression results of Hainan Island

Manager	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
English	-2.724	1.637	-1.66	.096	-5.932	.484	*
Experience	1.957	.868	2.25	.024	.255	3.659	**
Years_experience	1.021	.822	1.24	.214	-.59	2.631	
Eduacation/training	2.346	.791	2.97	.003	.795	3.896	***
Constant	-1.144	.347	-3.30	.001	-1.824	-.465	***
Mean dependent var	0.541		SD dependent var		0.501		
Pseudo r-squared	0.401		Number of obs		85.000		
Chi-square	16.461		Prob > chi2		0.002		
Akaike crit. (AIC)	80.197		Bayesian crit. (BIC)		92.411		

*** p<.01, ** p<.05, * p<.1

In the regression model of Hainan Island, independent variables such as driver license, computer and resident are automatically omitted by Stata. Because among these variables, the number of samples assigned a value of 1 is too small, their coefficients are too close to zero. Only valid explanatory variables can be used for Logistic regression. As shown in Table 4, in the multicollinearity test, the independent variable *English* and the required number of languages produce collinearity, and one of them needs to be deleted. In the model of Hainan Island, comparing with the independent variable *English*, the number of languages has fewer observations, so it needs to be eliminated. The collinearity is not detected in the data of Balearic Islands, so the independent variable does not need to be eliminated in the model of Balearic Islands.

The output results in Table 5 show that experience, education, or training have a significant positive correlation with management position. Under the same conditions, if the applicant has work experience, or received good education and training, the probability that he can become a manager is about twice as high as before. In recruitment of luxury hotels in Hainan Island, the barrier to entry is

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very low. Compared with the Balearic Islands, whether it is an ordinary position or a management position, it has very few requirements for special skills. It is precisely because the recruitment standards of Hainan Island are not strict. Once more detailed restrictions are put forward in the recruitment information, the corresponding positions are more likely to be management positions. In the luxury hotel industry in the Balearic Islands, even ordinary service positions have many requirements for skills. That is the reason why working years have become the most important condition for management positions in the Balearic Islands. Among the excellent grassroots employees, almost every one of them has mastered certain skills. When it becomes difficult to compare their skills and education, the most important selection condition for management positions is the accumulation of experience.

5.3. The goodness of fit

In multiple linear regression models, R-square and the adjusted R-square are used to test the goodness of fit of the model. However, they represent the percentage explained by the independent variable in the model in the change of the dependent variable, which does not involve the difference between the predicted value and the observed value. In the logistic regression, other approaches should be used to test the goodness of fit. The indexes for assessing the goodness fit of the model mainly include Pearson $\chi 2$, Deviance, Hosmer-Lemeshow (HL), Akaike Information Standard (AIC) and SC. Since the early 1990s, a lot of Monte Carlo simulation studies proved that McKelvey and Zavoina pseudo-R^2 is the best one to assess the fit of binary and ordinal logit models (Langer, 2017). The basic idea pseudo-R^2 test is similar to the likelihood ratio test, which is to compare the relative size of the likelihood value (L0) of the model containing only constant terms with that of the likelihood value (L) containing all explanatory variables and constant terms. The calculation formula can be：

$$\text{McFadden's}\, R^2 = 1 - \frac{\ln L}{\ln L_0}$$

In general, the Pseudo R-squared index reached more than 0.2 has a better goodness-of-fit. As shown in Table 4 and Table 5, the pseudo-R^2 of both two logistic regressions is greater than 0.2, which indicates that the goodness-of-fit of the model is good. The results of the empirical analysis are valid.

6. Conclusion

6.1. Summary and suggestions

Through the descriptive analysis and Logistic regression analysis of the recruitment information on the LinkedIn website, this study explains the differences between the human resource demand of luxury hotels in Balearic Islands and Hainan Island. The most significant finding is that the luxury hotels in Balearic Islands have higher recruitment standards than Hainan Island. More than half of job listings in Balearic Islands require applicants to have English skills, or even a third language, while the rate in Hainan Island is extremely low. Luxury hotels in these two regions have put forward certain requirements for the applicant's education level, training experience and work experience, but the demand in the Balearics is greater. Driving skills, gender, and computer skills are only related to

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specific job requirements, not associated with regional differences. The conclusions put forward by other literature are also verified here, that is, the role of academic qualifications in the hotel industry is limited. Luxury hotels in the Balearic Islands and Hainan Island rarely require applicants to have a bachelor's degree.

In addition, we found that in Balearic Islands, if a job requires longer years of work experience of the applicant, it is more likely to be a management job. In the luxury hotel industry in Hainan Island, the demand for management positions is closely related to the applicant's experience, education, and training level. The reason is that most of the positions in luxury hotels on Hainan Island only have simple requirements, that is, it is easier for talents to enter management. In Balearic Islands, luxury hotels provide a variety of positions with stricter requirements - even the reception department needs to recruit people who can speak three fluent foreign languages.

Due to its geographical advantages, currently, Hainan Island is trying to build the image of an international tourist island. However, compared with the Balearic Islands, which attract tens of millions of European tourists every year, the hotel industry in Hainan Island still has a lot of shortcomings. In terms of employee recruitment, they need to set higher standards, especially recruit more talents with language skills and higher education or training level to meet the needs of internationalization. For job seekers in Balearic Islands, they need to establish a correct career outlook and cultivate a good mentality. In the islands with such fierce competition in the tourism industry, skills may not necessarily lead to promotion in the short term. Accumulating practical experience and getting more work experience seems to be the best way to become a manager in the luxury hotel industry of Balearic Islands.

A tentative idea could be establishing a strategic cooperative relationship between the two places. The exchange of talents is feasible. To receive better education and training, Hainan Island can send some hotel industry practitioners to the Balearic Islands to learn more advanced knowledge. At the same time, Hainan Island can provide employment subsidies to attract talents of the hotel industry from Balearic Islands to come to work to ease the pressure of competition of Balearic Islands.

6.2. Limitations

LinkedIn is not the only recruitment website in Spain and China, so the results may be affected by the sample size. In addition, the recruitment information of some local luxury hotels is not released in English. In the process of translating Chinese and Spanish into English, some expressions may not be exactly the same as the original meaning. The information available on the LinkedIn website is limited. In future research, it may be possible to combine the scale data published by the hotels on their official webpages, or salary information obtained through questionnaire surveys, to do further regression analysis. More research on the influencing factors of luxury hotels' human resource demand in the two regions, or even expanded to the scope of the two countries, could be carried out.

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BIBLIOGRAPHY

Abbasi, S. M., & Hollman, K. W. (2000). Turnover: The real bottom line. Public personnel management, 29(3), 333-342.

Adib, A., & Guerrier, Y. (2003). The interlocking of gender with nationality, race, ethnicity and class: The narratives of women in hotel work. Gender, Work & Organization, 10(4), 413-432.

Baum, T. (2012). Human resource management in tourism: a small island perspective. International Journal of Culture, Tourism and Hospitality Research, 6(2), 124-132.

Chan, B., & Coleman, M. (2004). Skills and competencies needed for the Hong Kong hotel industry: The perspective of the hotel human resources manager. Journal of Human Resources in Hospitality & Tourism, 3(1), 3-18.

Chan, S. H., & Kuok, O. M. (2011). A study of human resources recruitment, selection, and retention issues in the hospitality and tourism industry in Macau. Journal of Human Resources in Hospitality & Tourism, 10(4), 421-441.

Chu, Y. (2014). A review of studies on luxury hotels over the past two decades. Unpublished master's thesis, Lowa State University. Retrieved from http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article =4920&context=etd#

Davidson, M. C., & Wang, Y. (2011). Sustainable labor practices? Hotel human resource managers views on turnover and skill shortages. Journal of Human Resources in Hospitality & Tourism, 10(3), 235-253.

Enz, C. A. (2001). What Keeps You Up at Night?: Key Issues of Concern for Lodging Managers. Cornell Hotel and Restaurant Administration Quarterly, 42(2), 38–45.

Enz, C. A. (2009). Human Resource Management: A Troubling Issue for the Global Hotel. Cornell Hospitality Quarterly, 50(4), 578–583.

Garavan, T.N. (1997). Training, development, education and learning: Different or the same? Journal of European Industrial Training, 21(2), 39–50.

Groot, W., & De Brink, H. M. V. (2000). Education, training and employability. Applied economics, 32(5), 573-581.

Gibbs, C., MacDonald, F., & MacKay, K. (2015). Social media usage in hotel human resources: Recruitment, hiring and communication. International Journal of Contemporary Hospitality Management, 27, 170-184

Hall, R. (2000). Outsourcing, contracting‐out and labour hire: implications for human resource development in Australian organizations. Asia Pacific Journal of Human Resources, 38(2), 23-41.

Hosain, S., & Liu, P. (2020). LinkedIn for Searching Better Job Opportunity: Passive Jobseekers' Perceived Experience. The Qualitative Report, 25(10), 3719-3732.

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Comparison of human resource demand of luxury hotels in Hainan Island and Balearic Island: data analysis based on LinkedIn

Hu, M., & Hussein, M. M. (2020). Linkedin, Quantitative Analysis to Examine Members' Behavior and Motivations. Global Journal of Management And Business Research, 20(3), 3176-3188.

Ingram, A., Jamieson, R., Lynch, P., & Bent, R. (2000). Questioning the impact of the 'graduatization' of the managerial labour force upon the management of human resources in the Scottish hotel industry. Journal of Consumer Studies and Home Economics, 24(4), 212–222.

International Labour Organisation. Sectoral Activities Programme. (2001). Human Resources Development, Employment and Globalization in the Hotel, Catering and Tourism Sector: Report for Discussion at the Tripartite Meeting on Human Resources Development, Employment and Globalization in the Hotel, Catering and Tourism Sector, Geneva, 2001. International Labour Office.

King, B., McKercher, B., & Waryszak, R. (2003). A comparative study of hospitality and tourism graduates in Australia and Hong Kong. International Journal of Tourism Research, 5(6), 409-420.

Langer, W. (2017, September). How to assess the fit of multilevel logit models with Stata?. In German Stata Users' Group Meetings 2017 (No. 05). Stata Users Group.

Lucas, R. E. (1995). Managing employee relations in the hotel and catering industry. Cassell plc.

Marta-Lazo, C., González, P. y Herrero, E. (2018). Professional Skills and Profiles in Journalism Demanded by Companies: Analysis of Offers at LinkedIn and Infojobs. Communication & Society, 31(4), 211-228.

Øgaard, T., Marnburg, E., & Larsen, S. (2008). Perceptions of organizational structure in the hospitality industry: Consequences for commitment, job satisfaction and perceived performance. Tourism management, 29(4), 661-671.

Olsen,L.E.(2008). Professional networking online. A qualitative study of LinkedIn use in Norway. Master thesis, The university of Bergen. Retrieved from https://bora.uib.no/handle/1956/2935=

OMNICORE. (2021, January 6). Linkedin by the Numbers: Stats, Demographics & Fun Facts. https://www.omnicoreagency.com/linkedin-statistics/

Pan, L. P. (2018). A study on the status quo of oral English proficiency of hotel service personnel in Hainan International Tourism Island. Journal of Taiyuan Urban Vocational College, 206(09), 143-144.

Paraskevas, A. J. (2000). Management selection practices in Greece: are hospitality recruiters any different?. International Journal of Hospitality Management, 19(3), 241-259.

Pisano, S., Lepore, L., & Lamboglia, R. (2017). Corporate disclosure of human capital via LinkedIn and ownership structure: An empirical analysis of European companies. Journal of Intellectual Capital, 18, 102-127.

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Comparison of human resource demand of luxury hotels in Hainan Island and Balearic Island: data analysis based on LinkedIn

Ramos, V., Rey‐Maquieira, J., & Tugores, M. (2004). The role of training in changing an economy specialising in tourism. International Journal of Manpower, 25 (1), 55 – 72.

Saari, L. M., Johnson, T. R., McLaughlin, S. D., & Zimmerle, D. M. (1988). A survey of management training and education practices in US companies. Personnel Psychology, 41(4), 731-743.

Subhani, M. I., Joseph, S., Osman, A., & Hasan, S. A. (2012). Contribution of linkedin on recruitment and selection. South Asian Journal of Management Sciences, 6(2), 23-34.

Tanova, C. and Nadiri, H. (2005), 'Recruitment and training policies and practices: the case of turkey as an EU candidate', Journal of European Industrial Training, 29, 9, 694–711.

Torres, E. N. & Kline, S. (2013). From customer satisfaction to customer delight: Creating a new standard of service for the hotel industry. International Journal of Contemporary Hospitality Management, 25(5), 642-659.

Úbeda-García, M., Marco-Lajara, B., Sabater-Sempere, V., & Garcia-Lillo, F. (2013). Training policy and organisational performance in the Spanish hotel industry. The International Journal of Human Resource Management, 24(15), 2851-2875.

Wang, X. L., & Lin, Y. (2017). Reasons and Suggestions for the Inadequacy of English Reception Capacity in Tourism Hospitality -- A Case Study of Hainan International Tourism Island. Journal of Jiamusi Vocational College, 000(006), 15-16.

Willie, P.A., Jayawardena, C., & Laver, B. (2008). Attracting and retraining quality human resources for Niagara's hospitality industry. International Journal of Contemporary Hospitality Management, 20(3), 293–302.

Zafra, I. (2019, November 11). Spain continues to have one of the worst levels of English in Europe. El País. https://english.elpais.com/elpais/2019/11/08/inenglish/1573204575_231066.html

Zhou Juan. (2013). Survey on Human Resource Demand of High-star Hotels in China. Foreign Trade and Economic Cooperation (08), 111-114.