Hotel Guest’s Stay Prediction: A Secondary Data Approach

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ABSTRACT

Hotel guests are important in the hospitality business. Their existence affects the sustainability of the hotel. But, often the business people do not know the number of tourists who will come to their hotel. The purpose of this study is to find out what is needed by foreign or domestic tourists in hotel services, so that the businessman in the field of hospitality can step any strategy they need to do based on their target market. The research design used is a causal design. This study uses data from hotel guests in 34 provinces in Indonesia in 2016, accessed from the Badan Pusat Statistik (BPS). The analysis used is multiple regression analysis. The results of the analysis show that domestic and foreign tourists have different patterns. The number of beds positively affects domestic tourists, while the number of employees per room negatively affects domestic tourists. In contrast, the number of employees per room has a positive effect on foreign tourists staying. Similarly, the bedroom has a positive impact on foreign tourists who stay. The difference between hotel accommodation and the number of star hotel guests (domestic and foreign tourists) also occurs in a number of beds that negatively impact foreign tourists.

Key Words: Accomodation, hotels, consumer behaviour, foreign tourists, domestic tourist

1. INTRODUCTION

At this time, many people are busy with their work routines, it is because of the factor demands economic needs. Therefore, many families who perform quality / family time during long holidays by doing a vacation or traveling to several destinations. Traveling is something that is important to reduce the impact of stress from the pressure of work and the burden of the mind. Therefore, do not be surprised if someone went to visit tourist destinations at domestichome or abroad and spend a lot of money to spend time vacationing with family.

Based on BPS [1], the total number of foreign tourists who came to Indonesia from 2000-2008 experienced an increase and decrease, while in 2009-2016 the total number of foreign tourists who came gradually increased. Most foreign and domestic tourists prefer to use hospitality services as a place to rest and stay during their tour that located far from where they are come from.
At this time, the hospitality industry in every province in Indonesia is faced with intense competition and increasingly complex consumer behavior in choosing hotel services that they will use, therefore a hotel should be able to win the hearts of consumers. Based on BPS [2], indicates that total accommodation in Indonesia from 2000 - 2016 is decreasing. Where the lowest total was in 2005 with a total of 1,039 hotels, different in 2001, the total accommodation in Indonesia reached 10,125 hotels. We assumed that hotel entrepreneurs in countryside areas or close to tourist destinations do not know yet exactly what is the effect of accommodation they provide on hotels with how many foreign and domestic tourists decide to stay at their hotels. We assume that this may lead to the differences between behavior of foreign and domestic tourists in determining what service choices they would like to use in star-rated hospitality services in Indonesia.

The purpose of this study is to find out what is needed by foreign and domestic tourists in hotel services, so that the businessman in the field of hospitality, especially those in the countryside or tourist destination areas on how their customers actually decide to make purchases or consumption of their services, by being able to know what strategy steps that they need to take based on their target market.

We use the theory of hotel service as a measure of the quality of hospitality in Indonesia. In addition, we also use the method of consumer behavior approach to find out how consumers make purchasing decisions in accordance with the services available on a starred-hotel in Indonesia. The American Marketing Association defines consumer behavior as a dynamics interaction between influence and consciousness, behavior, and the environment in which human beings perform the exchange of life aspects. As in Kotler & Keller [3], the factors that influence consumer behavior are cultural, social, personal, and psychological. These factors are the basic determinants of a person making a purchase. The decision to make a purchase of a consumer is a very complex thing and through a long stage. Basically, purchasing decisions arise from the needs and sense of curiosity from consumers to a product or service. Consciously or not, consumers will seek information about the product or service, if it suits their needs, most likely they will buy it. If not, consumers will only seek information related to their needs. In short, consumer behavior involves the thoughts and feelings of consumers as the basis of the actions they take in purchasing a product or service.

The main thing that will be discussed in this research is the effect of hotel accommodation, the number of hotels, workers per hotel, number of rooms, workers per room and number of beds can influence the psychological of foreign and domestic tourists in deciding their purchase of starred-hotel services in Indonesia.

2. LITERATURE

2.1 Consumer Behavior

Theory about consumer behavior is used to predict how consumers make decisions on starred hotels in Indonesia. As in Prasetijo [4], consumer behavior is the study of how individuals, groups, or organizations make decisions in purchasing or making purchases of a product and consuming it. In line with that thinking, as in Swastha [5], defines consumer behavior as a behavior that consumers show in searching, buying, using, evaluating, and depleting products and services that they hope will satisfy their needs. In contrast to the previous definition, Setiadi [6] states that consumer behavior is a dynamic interaction between affection (feeling) and cognition (mind), behavior and environment in which humans conduct exchange activities in their lives. From all opinions above, it can be concluded that consumer behavior is a dynamic interaction between the feelings and thoughts of individuals, groups or organizations in purchasing products or services, using and evaluating products or services and spend the product or service in order to satisfy their needs.

2.1.1 Stages of Consumer Behavior

As in Tjiptono [6], there are three stages of consumer behavior in choosing a service product, they are the pre-purchase stage, consumption stage, and the evaluation of past-sale. In the first stage there are three processes that occur before
consumers consume a service, the three of which are the identification of needs, information search, and alternative evaluation. The first process is the identification of needs, consumers basically have a need for a good or service. Here they will identify what needs to be met. Once they know what is needed, they will go into the second process of information retrieval process. There are several important things they need to know in this process, the sources of information to be used, knowing the risks, and what will be generated. Once they find some options related to their needs, then the process will be done is to evaluate the alternative. From a selection of services, they have to decide which ones to choose by evaluating them. Then in the second stage there are two processes that occur simultaneously the purchase and consumption. At this stage consumers buy in accordance with the evaluation results and then they consume it. Here they will feel whether the service they choose in accordance with expectations or not. The last is the after-sale evaluation stage, where the process occurs after they consume the selected services. The latter process is the process by which they judge whether the service is appropriate or not. In addition, whether they are satisfied with his service or not. The results will affect consumer loyalty and their purchasing decisions in the future. If associated with the behavior of hotel consumers then before consuming a hospitality services consumers will find out in advance related information about which hotel they will choose. Consumers in question are domestic and foreign tourists. Surely they have their own criteria to choose which services are appropriate. After that they will buy the service by hiring the appropriate hotel. After purchasing the service, consumers will use and evaluate it. Evaluations are based on their experience when the service is provided. They will evaluate the hotel based on existing accommodation related to the facilities provided. When they are satisfied with their services then in the future they will make the hotel their first choice in hospitality services.

2.1.2 Factors Affecting Consumer Behavior

Consumer actions are influenced by several things, both external and internal consumers themselves. There are four factors that influences consumer behavior [6], as follows:

a) Cultural Factors, consisting of culture, sub-culture and social class.

b) Social Factors, consisting of reference groups, families, roles and social status.

c) Person, consisting of age / age, life cycle stage, position / occupation, economic condition, lifestyle, personality and self-concept.

d) Psychological, which consists of motivation, perception, learning, trust and attitude.

2.2. Hotel Accommodation

In measuring the quality of service used, it using five dimensions: physical evidence, reliability, responsiveness, assurance, and empathy. But in its development, the appropriate service quality measurement is used for SERVQUAL service (Quality of Service) under the name HOLSERV (Quality of Hotel Services). This measurement has three dimensions in the hospitality industry, such as employees, tangibles, and reliability [8]. However, according to the data obtained there will only be a scale used to measure the quality of hotel services in Indonesia, there are: employees and tangibles.

2.2.1. The employees

- Number of Employees per Business

The hotel is not a main destination for tourists when they visit an area. Hotel is commonly used as a temporary resting place for the tourist. The quality of a hotel needs to be considered because it will have an impact on choosing a hotel. One of the most important is the number of employees in a hotel. Hotel that has a large number of employees will make it easier for them in conducting hotel service activities. Therefore, the number of employees should be adequate and as much as possible they have the skills that suit the needs. Based on the data, the average of starred hotel in Indonesia employs 103 people. Looking from the average results, the hotel business especially the starred hotel is able to absorb about 183,134 workers throughout Indonesia.

- Number of Employees per Room

As in Sulastiyono [8] hotel with 182 units available room takes 15 person room boy. That means, if 182 rooms are available (with 80% habitation rooms), then a hotel should have 15 people room boy in one shift to clean the room to the maximum in accordance with the standards and procedures that have been given. According to Lisna [10], it is mentioned that if there is a shortage of employees impact on the productivity of work that is not maximal so that quantity is preferred over quality. This is because the number of rooms charged exceeds the work capacity resulting in quality of work more ruled out and only pursues the target cleanliness of the assigned rooms. So, the hotel needs to consider the number of employees available for per room so the services received by
consumers will be more helpful. With that consumers will be satisfied with the services provided.

2.2.2. Tangibility

- **Hospitality Business in Indonesia**
  In its development, the object of tourism is influenced by tourists, where a tourist attraction will develop if tourists who come to tourist objects in large and sustainable. Therefore, for the tourists who come repeatedly to the tourist objects and take advantage of all the tourist facilities, then all the facilities supporting the tourist in enjoying the tourist destinations should be available, one of which is a business hotel accommodation in sufficient quantities.
  In Indonesia, the number of hotel accommodation business has increased tremendously in its growth, such as the data contained in BPS stating that the number of accommodation business in 2016 amounted to 2197 which in 2017 increased 2387 spread over 34 provinces. Most of the accommodation business is in the province of Bali with the number 317, the second position is the province of West Java with the number 217.

- **Number of Rooms**
  Each hotel has its own standard in determining the number of existing rooms and facilities in it. As in [11] explained that, at one-star hotel has a standard room type with a minimum number of rooms is 15 with a minimum area of 20 square meters and bathroom inside. The two-star hotel, has a minimum number of standard rooms of 20 with 22 square meters each, a suite type room of at least one room with an area of 44 square meters. A three-star hotel, has a minimum number of standard rooms of 30 with 24 square meters each, has a minimum 2 suites with an area of 48 square meters each. Four-star hotel, has a minimum standard room type 50 with 24-square-meter room, at least 3 suites with an area of 48 square meters each. A five-star hotel, with a minimum standard type of 100 rooms with 26 square meters of each room, there are four suites with 52 square meters each.

- **Number of Beds**
  Based on data at BPS in 2016 regarding to the number of hotel accommodation in all provinces in Indonesia, there were 2,387 hotels classified as star with 233,007 rooms and 346,959 beds. With 346,959 beds, the average room occupancy rate is 56.16% or the number of rooms used is on average 1.9 thousand people, mean bed rate is 68.98%. Then the average length of stay of foreign guests in star hotels by 2.73 per night while for domestic guests is 1.66 per night.

If the quality of service in hotel is bad, it will affect consumers in evaluating the service. Consumers are not satisfied with the service then there will be no loyalty. Otherwise if the quality of hotel services is good then there will be consumer loyalty to the service.

The quality of hotel services is very important and must be maintained by a hotel in running its business. This is the key to the success of the hotel in keeping its customers consistent with the hotel services provided. According to a study base on Hardiyati [12] states that the quality of service has a significant influence on consumer satisfaction, and consumer satisfaction impact on consumer behavior itself. In line with previous research, research conducted by Khusaini [13] states that customer satisfaction is influenced by the quality of service in which there are facilities and infrastructure, reliability and competence of employees in handling the consumer also the openness of the service providers in receiving criticism and suggestions from consumers. In addition, the study as in Dewi [14] states that customer satisfaction derived from good service quality from service providers can affect consumer loyalty. This is a thought that can be a reference for the hospitality service providers to improve the quality of service for consumer loyalty is higher.

The quality of hotel services is something that is very important and must be maintained by a hotel in running its business. This is the key to the success of the hotel in keeping its customers consistent with the hotel services provided. According to studies as in Hardiyati [12] states that the quality of service has a significant influence on customer satisfaction, and consumer satisfaction impact on consumer behavior itself. In addition, the quality of good service is very meaningful for the sustainability of the company due to influence on consumer behavior, especially satisfaction and loyalty. Then good consumer behavior is seen from consumer loyalty, true loyalty lies in customer satisfaction where service quality is the key. Based on the three opinions above, it can be seen that the relationship between service quality and consumer behavior of the hotel occurs when there is satisfaction and also loyalty. When the quality of a hotel service is good, it will create satisfaction with the services provided. Satisfaction will have an impact on consumer behavior that is in the form of loyalty to the hotel that they visit.

3. RESEARCH METHODS

3.1. Research design
In our research, using a causal research design is used to determine the relationship between the
number of star-rated hotel accommodation in 34 provinces in Indonesia. As in Malhotra [15] causal research is a study to test the truth of causal relationships (causation), namely the relationship between independent variables (that affect) with the dependent variable (that is affected). The research model in this research is as follow:

H1: The number of employees per business positively affects the number of foreign guests and the number of domestic guests in starred hotels.

H2: The number of employees per room positively affects the number of foreign guests and negatively affect the number of domestic guests in starred hotels.

H3: Hospitality business in Indonesia positively affects the number of foreign and domestic guests in starred hotels.

H4: The number of rooms positively affects the number of foreign guests and negatively affect the number of domestic guests in starred hotels.

H5: The number of beds positively affects the number of domestic guests and negatively affect the number of foreign guests in starred hotels.

3.2. Data Collection Instruments
In this study we use secondary data. Secondary data is data in finished form, collected and processed by other parties and usually already in the form of publication. The researcher will record, access, and request the data to other parties who have collected it in the field [16]. Source of data comes from external data, the data is coming from outside company. The secondary data collection that writers do is a group of external databases, where databases are provided by organizations outside the company that are usually available in print or online [17]. Some databases can be accessed free of charge, such as the source of this research data coming from the Badan Pusat Statistika (BPS).

3.3. Multiple Linear Regression Analysis
Multiple linear regression analysis is a research method that we use to measure how much influence all accommodation variables have on the number of starred hotel guests in each province in Indonesia. As in Ghozali [18] explained regression analysis is used to measure the strength of the relationship between two or more variables, also shows the direction of the relationship between the dependent variable with the independent.

3.4. Coefficient of Determination (R2)
As in Purbayu [19], the coefficient of determination (R2) is used to find out how big the relationship of some variables in a clearer sense. The termination coefficient will explain how much change or variation of a variable can be explained by changes or variations in other variables. The larger the result of R2, the greater influence of all accommodation variables, and the smaller the R2 result, the less effect of the accommodation variable on the number of guests.

4. RESULTS OF RESEARCH ON DOMESTIC AND FOREIGN TOURISTS AT STAR HOTELS
We used multiple linear regression analyzes to find the significance of each of the variables through the SPSS application. We calculate the dimensions of the Hotel Accommodation variable on the number of domestic tourists and the number of foreign tourists by using available data.

Table I. Regression of hotel accommodation variable towards number of guests of domestic tourists per year.

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Enterprises</td>
<td>-0.176</td>
<td>-0.374</td>
<td>0.711</td>
</tr>
<tr>
<td>Number of Rooms</td>
<td>-3.575</td>
<td>-1.983</td>
<td>0.057</td>
</tr>
<tr>
<td>Number of Beds</td>
<td>4.715</td>
<td>2.217</td>
<td>0.035*</td>
</tr>
<tr>
<td>Average Worker per Business</td>
<td>0.024</td>
<td>0.155</td>
<td>0.878</td>
</tr>
<tr>
<td>Average Workers</td>
<td>-0.311</td>
<td>-3.195</td>
<td>0.003**</td>
</tr>
</tbody>
</table>
the hotel. Researchers assume that this is because foreign tourists prefer hotels with good room availability and do not bother them related to room availability. And it is known that the more workers per room, the more foreign tourists visit the hotel. Researchers assume that this is because foreign tourists prefer to stay in hotels with fast service and have clean facilities so that the number of workers per room will speed up the services available and foreigners feel more satisfied as it is served by many workers. Proven by research As in Maskuri [20], consumer expectation value toward hotel cleanliness is felt in three, four and five-star hotel room. So we get the index of satisfaction on the cleanliness of star hotel rooms at 8.34%, three-star hotels provide the lowest satisfaction picture compared to four and five-stars. This shows how important the many employees in the hotel in maintaining the cleanliness of the hotel.

In addition, it can be seen in the data that the more beds in a room, the less guests to the hotel. Researchers assume that this is because foreign tourists are more concerned with comfort and privacy when they stay overnight and prefer a more efficient space to use. If studied further, the average foreign tourists who come to other countries must have adequate budget so that indirectly it shows the social class of tourists are the upper middle class, that class is more likely to be willing to pay more for the best service.

5.3. Implications and Conclusions
Hotel accommodation has several aspects that affect the interest of hotel guests both domestic and foreign tourists. In this study, the elements that serve as things that affect the interest of hotel guests are the accommodation business, the number of employees per business, the number of rooms, the number of employees per room, and the number of beds. The finding of this study highlight that some aspects affect the interest of domestic tourists and foreign tourists to visit star hotels. The results of this study clearly show that all aspects of hotel accommodation do not give the same results to domestic and foreign tourists, it was found that the number of beds positively affect the number of domestic guests and the number of workers per room, the more foreign tourists visit the hotel room and reduce the number of employees per room so as to reduce disturbance for the consumers who are in the hotel and will increase the domestic number of tourists to the hotel.

### Table II. Regression of hotel accommodation variable towards number of guests of foreign tourist per year.

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Enterprises</td>
<td>1,148</td>
<td>1,765</td>
<td>0.088</td>
</tr>
<tr>
<td>Number of Rooms</td>
<td>5,459</td>
<td>2,190</td>
<td>0.037*</td>
</tr>
<tr>
<td>Number of Beds Average</td>
<td>-6,106</td>
<td>-2,077</td>
<td>0.047*</td>
</tr>
<tr>
<td>Worker per Business</td>
<td>0,116</td>
<td>0,546</td>
<td>0.590</td>
</tr>
<tr>
<td>Workers per Room</td>
<td>0,395</td>
<td>2,932</td>
<td>0.007**</td>
</tr>
</tbody>
</table>

Significant at $p < 0.01 (**); R^2 = 0.867; F = 36,490**

5. DISCUSSION OF THE FINDINGS
5.1. Domestic Tourist as Guest to Star Hotels
Based on the results of data processing above, regarding to the number of domestic tourist arrivals in star hotels per year, it can be seen that the more beds in a hotel room, the more domestic tourists visit the hotel. Researchers assume that this is because domestic tourists generally carry their family members while travelling, so the domestic tourists prefer to sleep in one room with a large number of beds to save expenses, so that domestic tourists make a hotel room reservations only one room for whole family. However, more workers per room then fewer domestic tourists visit the hotel. Researchers assume that this is because the domestic tourists prefer private rooms and are not distracted by employee activity. The more hotel employees who serve, will cause more costs to pay for tips. While in Indonesia the culture of giving money tips to employees is very low and not a habit. One that may be the cause in the consumer behavior factor is culture. This factor consists of culture, subculture, and social class. A social class society that can make community attitudes different. The middle to lower social class tends to save money to meet their needs. Not only that, in Indonesia many people belonging to middle-class social class who are not accustomed to giving tip money to someone who serves them.

5.2. Foreign Tourist as Guest to Star Hotels
The result of data processing number of foreign tourist arrivals at star hotels per year that have been processed using SPSS shows that the more room available in a hotel the more foreign tourists visit the hotel. Researchers assume that this is because foreign tourists prefer hotels with good room availability and do not bother them related to room availability. And it is known that the more workers per room, the more foreign tourists visit the hotel. Researchers assume that this is because foreign tourists prefer to stay in hotels with fast service and have clean facilities so that the number of workers per room will speed up the services available and foreigners feel more satisfied as it is served by many workers. Proven by research As in Maskuri [20], consumer expectation value toward hotel cleanliness is felt in three, four and five-star hotel room. So we get the index of satisfaction on the cleanliness of star hotel rooms at 8.34%, three-star hotels provide the lowest satisfaction picture compared to four and five-stars. This shows how important the many employees in the hotel in maintaining the cleanliness of the hotel.
In contrast to the results for domestic tourists, the number of rooms and the number of workers per room in a hotel positively affects the number of foreign guests at star-rated hotels in every province in Indonesia. In contrast, the number of beds has a negative effect on the number of foreign guests in starred hotels in every province in Indonesia. So for star hotels that have the segmentation of foreign tourists, should increase the number of rooms and number of employees per room and reduce the number of beds in each room, thus increasing the number of foreign tourists to the hotel.

If studied further, foreign and local tourists certainly have a different culture. Thus the decision-making of a service is closely related to cultural differences. Not only decision-making alone, but the criteria they specify as well. Understanding some of the cultural forms of foreign and local tourists can help in predicting visitor reception to service at the hotel.

The findings in this study contribute to the knowledge of consumer behavior patterns in the hotel industry so that the entrepreneurs in the field of hotels can find out what aspects that give influence to the number of guests to the hotel both domestic and foreign tourists.

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