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# Integrating the Kano Model of Customer Service Quality to Identify Muslim Consumers' Requirements: A Preliminary Study of Hotels in Japan

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**Abstract:** The growth of Islamic market has attracted the attention of the Japanese government to focus on Muslim consumers and their needs. This study focuses on identifying the factors that influence Muslim consumers' choice of hotel accommodations in Japan. This study also integrates Kano model to identify elements of customers' requirements and satisfaction in hotels located in Japan. The results show that there are no significant differences with different attributes and most of the attributes that address specific needs of Muslim consumers, such as *Halal* restaurants, fall under excitement attributes that exceed expectations.

Key words: Kano Model; Muslim consumers; customer satisfaction; hotels; Japan

JEL codes: M3

### 1. Introduction

Japan is well known for its high-quality services. The service sector in Japan accounts for three-quarters of the total economic output (Global Finance, 2013). In 2012, Japan was the third visited country in Asia and the Pacific, with 8.3 billion tourists. In 2013 Japan received 11.25 million visitors (World Tourism Organization, 2013). One of the main service providers in Japan falls under hotel services. Different categories of hotels, such as luxury hotels and business hotels, offer different types of services. Thus, the hotel experiences differ from one hotel to the other. Hence, service providers, like hotels, must create memorable experiences for their customers that positively affect consumers' satisfaction. Moreover, this memorable experience will grant organizations competitive advantage compared to other companies in the same service sector. However, the hotel industry often meets some problem because of the lack of uniformity in their services due to the lack of experienced staff, as well as other problems that might occur during or after the service (Yang C. C., Yung-Tsan J. & Lai-Yu C., 2009). In addition, other competitors in the hospitality industry have become more culturally aware and have broadened their service due to the increasing demands and changes in customers' requirements. Therefore, creating an exceptional experience that meets the demands of consumers and give competitive advantage are essential to Japan.

Service satisfaction is achieved when customers' needs and expectations are fulfilled. Customers' satisfaction is a key element for a success of any business. Studies have shown that an increase of customer loyalty can increase the profits of a company. Anderson and Mittal (2000) conducted a study on Swedish companies that are

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part of customer satisfaction barometer and found that an increase of 1% in the customer's satisfaction is associated with 2.37% increase in the (ROV) Return Over Investment, while a decrease of 1% equals a decrease of 5.08% in the ROV (Anderson & Mittal, 2000). Therefore, creating a memorable experience will grant competitive advantage compared to other companies in the same sector and will increase the profits of the organization. Therefore, it highlights how important it is to identify the attributes in hotel services that consumers seek. With this in mind, measuring and identifying these attributes is an obstacle service providers face when they evaluate their services.

The fulfillment of customers' needs depends on hotels ability to meet their requirements in the products and services. However, customer requirements change overtime due to changes in their needs. In addition, companies' abilities to substitute or evolve specific services, which adapt to customers' needs, are crucial. As a result, service providers should identify the main attributes to consumers' satisfaction and identify points of strengths and weaknesses in their performance. Some studies were conducted to develop theoretical frameworks that introduce various means to identify attributes that are important to consumers in the hotel industry. The result of these studies showed that there are different elements of service quality in the hotels that serve different markets in the world. Moreover, some of the studies have investigated the elements that lead consumers to select their accommodation. Some elements such as staff attitude, cleanliness of rooms, locations, security, room rate, and additional services are considered as the most important factors in the selection of accommodation.

Quality Function Deployment (QFD) is an example of a model that has been tested to define customer needs or requirements and translate them into specific plans to produce products or services that meet those needs (Crow, 2014). The QFD model is powerful because it bears an organizations' process and how each process interacts to create customer satisfaction and profit (Tontini, 2007). The Kano model of service quality was developed to identify service attributes that affect customers' satisfaction, thus, helping organizations to understand the attributes that increase their customers' satisfaction. These attributes increase customers' satisfaction if they meet customers' requirements when visiting a certain hotel or using a certain product. Customers' requirements vary based on their needs and desires. The more precise an attribute is for the aim fulfillment, the higher the satisfaction. Mittal et al. (1999) indicated that the relative importance of service and product attributes change over time as the importance of each attributes to the customers change with time (Mittal et al., 1999). For instance, Kano (2001) conducted a study investigating customers' perception of TVs' remote controls through his questionnaire in 1983, 1989, and 1998 (Kano, 2001). The study found that a remote control was an attractive attribute in 1983, one dimensional in 1989, and in 1998 it was perceived as a must-be attribute (Kano, 2001).

Kano model has proven to be an effective tool to identify attributes that effect customers satisfaction. Therefore, this study will integrate Kano model to identify elements of customers' requirements and satisfaction in hotels located in specific areas around Japan. The purpose of the research is to understand Muslim customers' requirements in hotels industry and help organizations to identify Muslim customers' satisfaction level in relation with requirements identified by customers. The Kano model has been chosen because of its "applicability" and "generalizability" of the model for quality assessment (Yang C., 2005). It also helps organizations to better understand the relationship between the degree of fulfillment and the level of customer satisfaction with certain attributes provided by different service providers (Kano et al., 1984). Kano model also helps service providers to prioritize the criteria that should be focused on. It highlights the different needs of the customers based on their segmentations as different segments have different needs (Kurt et al., 1996). It also allows service providers to achieve competitive advantage by focusing on attractive attributes (Kurt et al., 1996). Muslim consumers have

been chosen as the main sample of this study because of the recent intensified efforts of the Japanese tourism organization to attract the Muslim market, which represents 23% of the world market. This study will help hotels in Japan to focus on the needs of Muslim consumers and to shed the light on what is expected from the hotels to improve service quality and to maximize the satisfaction of Muslim consumers. This research is the first to tackle Muslim consumers' needs from hotels in Japan; thus, it will provide a guideline for further research on this topic.

This research will answer the following questions:

- (1) What are the factors that influence Muslim guests' choices of hotels for their accommodation in Japan?
- (2) Can those factors be classified as "must-be attributes", "one-dimensional attributes" and "attractive attributes" as defined in Kano model?

#### 2. Literature Review

The hotel industry has been recognized as a global industry with products and services that have spread around the world (Kendampully & Suhartanto, 2000). Service quality represents the main element for hotels' ability to differentiate themselves from their competitors to gain customers satisfaction and loyalty. Service quality has become the dominant element of the economy of different countries (Atilla, 2005). Several studies have shown that service quality is a requirement for the success in competitive environment especially in the face of globalization. Studies have also discussed the effect of service quality on customers' loyalty and retention (Atilla, 2005). The more loyal customers become, the longer they continue to accommodate in the same hotel (Anderson et al., 1994). Parasuraman et al. (1985) defined service quality as "the degree and direction of discrepancy between customers' perceptions and expectations". Customer satisfaction is considered to be one of the most important outcomes of service quality. Customers' satisfaction assists hotels in expanding their businesses, gain higher market share, and to acquire repeat and new customers, which leads to improve profitability.

Sivadas and Bake-Prewitt (2000) conducted a telephone survey of 542 shoppers to examine the relationship between service quality, customer satisfaction, and store loyalty within the retail department store context. The results show that service quality effects attitude and satisfaction with department stores. Satisfaction influences attitude, repurchase intention, and recommendation to other customers but has no direct impact on store loyalty (Sivadas & Bake-Prewitt, 2000). Cronin and Taylor (1992) conducted studies on service sectors such as banking, fast food, and dry cleaning to find that customer satisfaction has an effect on purchase intentions in all the sectors that they have researched in. Getty and Thompson (1994) studied the relationship between quality of lodging, customer satisfaction, and the resulting effect on customers' intentions to recommend the lodging to other customers. They found that customers' intention to recommend the lodging are a function of their perception of both their satisfaction and service quality with the lodging experience. Thus, they concluded that there is a positive relationship between customers' satisfaction and loyalty (Getty & Thompson, 1994).

Kano model of service quality was developed to divide consumers' preference in products or services attributes into five categories. These categories are: attractive attributes, one-dimensional attributes, must-be attributes, indifferent attributes, and reverse attributes. With must-be attributes, if not fulfilled customers will be dissatisfied (Nilsson-Witell & Fundin, 2005). The one-dimensional attributes result in satisfaction when fulfilled and dissatisfaction when not fulfilled. The one-dimensional attributes are what grant competitive advantage to service providers as they differentiate service quality from others. Attractive attributes are attributes that exceed

customers' expectations and can be described as excitement attributes (Nilsson-Witell & Fundin, 2005). These attributes result in customers' satisfaction if provided but don't cause any dissatisfaction if the service providers didn't attain them. "Reverse attributes express a situation where the higher the states of fulfillment of an attribute the more dissatisfied are the customers" (Nilsson-Witell & Fundin, 2005). Finally, indifferent attributes are when the degree of satisfaction is not influenced by the state of fulfillment of that attributes (Nilsson-Witell & Fundin, 2005).

Several studies have tested the Kano model to identify consumers' satisfaction attributes. Kuo-Chien Chang and Mu-Chen Chen (2011) have integrated Kano model and Quality Function Deployment (QFD) to identify brands contact elements. They have performed empirical study of hot spring hotels. The results indicate, that consumers' perception about contact elements are mostly classified into one-dimensional and 14 elements were classified as must be attributes by the Kano model and 12 elements were classified as indifferent attributes. In addition, the results show that customers' contact experiences are displayed through the brand contact priority grid (Kuo-Chien & Mu-Chen, 2011). Finally, atmosphere oriented brand contacts dominate customers' brand perception more than other elements.

Matzler et al. (2006) investigated the drivers of service and price satisfaction and the impact of service and price satisfaction on loyalty. They have found that five dimensions of service satisfaction differ in their importance as drivers of overall satisfaction and drivers of price satisfaction (Matzler et al., 2006). The results also indicate that service satisfaction and price satisfaction influence consumers' loyalty on different levels (Matzler et al., 2006).

Gerson Tontini (2007) has integrated the Kano model in the Quality Function Deployment QFD in a case study showing the development of a new mug of draft beer to enhance the understanding of customers' needs, which led to an excellent product design (Tontini, 2007). Kano Model allowed the identification of existing requirements while QFD gave priority to requirements that should be included or improved in the product. The study showed that customers tend to give high priority to basic requirements. Kano model helped in finding requirements that the company should fulfill (basic) such as keeping the beer cold, requirements they should be competitive with (performance) such as strip hook, and requirements that differentiate them from competitors and bring excitement to the customers such as easy to drink, anatomic body, resistance to impact, and not spill the beer out of the mug (Tontini, 2007).

The Kano Model has been extensively used by the service industry to improve their services. Quality attributes of Kano model, which influence customers' satisfaction, are usually related to the degree of importance attached to it by customers. Yang (2005) conducted a study with the aim of refining the precision of Kano model in evaluating the influence of quality attributes. As a result, Yang suggested that the Kano model can be refined by considering the importance of certain quality attributes. Therefore, Yang (2005) argued that degree of importance is an important dimension that is highly considered by customers when they evaluate quality performance. Yang (2005) divided the degree of importance into two categories: high importance is when the degree of importance is greater than the mean of the importance degree for all the attributes and low if below the mean (Yang C., 2005). This model, proposed by Yang, allows the classification of the categories by adding the degree of importance of the attributes (Yang C., 2005). Thus, it divides the attributes into more precise categories. This model is known as the Importance-Satisfaction Model (I-S Model); it helps service providers with understanding quality attributes from customers' perspective and assists in making more precise decisions (Yang C., 2005).

### 3. Muslim Consumers

Recently, the Japanese government has started to address the Islamic segment. This is seen as part of the efforts to attract 20 million tourists to the country by 2020 (NY Daily News, 2014). With their increasing efforts to attract the Muslim visitors Japan has conducted seminars and classes to familiarize businesses with the Islamic market. In addition, it established the Japan Halal Association in 2012 (NY Daily News, 2014). The Islamic market represents 23% of the world population, and there are 1.57 billion Muslim consumers that are living in different continents (Temporal, 2011). 26% of the Muslim consumers are living in Asia and pacific, 31% in south Asia, 4 million in South and North America, 15% in sub Saharan Africa, and 24% in Europe (Young, 2010). Muslim market represents a huge business opportunity and addressing the needs and demands of this market will help business in attracting them. In addition, meeting Muslim consumers' needs, lead to an increase satisfaction and in turn the ability to retain them.

Although Islamic markets share the same faith, which is Islam, there are differences and similarities across the global Muslim markets. Similarities like common faith, values, and identity as Muslims, and welfare (Young, 2010). However, studies have showed that Muslim consumers cannot be treated as a one homogeneous market and each market has different characteristics. Some of the obvious differences that can be mentioned are; diverse locations, multiple languages and dialects, various cultural and lifestyles differences, varying degrees of Islamic adherence, varying degrees of education, affluence and marketing sophistications. Based on these differences and similarities, Muslim consumers are not a homogeneous whole. Thus, targeting one market cannot be generalized to other markets (Young, 2010). Questions about how Muslim consumers can be reached and how their behavior differs or remains similar from place to place are still subjects to be researched. Young (2010) mentioned that Western marketers face two challenges when it comes to addressing Muslim consumers (Young, 2010). One is the geographic basis and the other is that Muslim consumers don't differ by one variable from the norm but with alternative norms that starts with Islamic identity.

In addition, the global Muslim market is expected to increase by 35% in 2030. That means a raise from 1.6 billion in 2010 to 2.2 billion in 2030. As a result, this market represents a huge opportunity for business (Temporal, 2011). This study focuses on Muslim market potential and differences in their needs that calls for more research in this area. Thus, the study aims to identify different elements, which are important to Muslim consumers in order to help hotels in attracting and satisfying their expectations.

### 4. Japan and the Islamic Market

Japan has been aiming to increase the number of tourists to 20 million visitors by 2020, that's when Tokyo will host the Olympics Games (Singleton, 2014). However, in 2013, 11.25 million tourists visited Japan, which is 27% higher than 2012 (Holliday, 2014). This increase in the number of tourists in Japan is because of the economic growth of neighboring Asian countries and other Southeast Asian countries (Holliday, 2014).

The Islamic market represents 23% of the world market (Temporal, 2011). Therefore, targeting this market counts as an opportunity to different kinds of industries such as hospitality industries, food and beverages industries. Japan has intensified its efforts to increase the number of tourists in the country and stepped up the efforts to meet the demands of the Islamic market that has a huge potential and will allow for new economic growth in the country (Tang, 2014). In 2013, 11.25 million tourists have visited Japan, 37% of this number were

tourists from Indonesia (Singleton, 2014), which represents 13.1% of the Islamic market with 209,120,000 Muslims (Maps of World, 2012), and 21% from Malaysia, where Muslims accounts for 60.4% of the population (Ali, 2014). The number of Indonesian tourists in 2013 surged to 27.3%, which is higher than 2012, while the number of Malaysian tourists increased by 65.5%. In addition, there is an increase of 50% of tourists from the Gulf Area (Asia News, 2014).

With the increasing numbers of tourists from Islamic countries, Japan started courting Muslim tourist by providing prayer rooms, *Halal* food restaurants and most importantly, Japan established the Japan Halal Association, which was founded in 2012 and issued 40 Halal certificates to different restaurants around Japan (NY Daily News, 2014). This rising interest in meeting the demands of Muslim tourists is related to the number of tourists visiting Japan from different Islamic countries, in addition to the rise of the middle class in Southeast Asia, and finally the influx of different Muslim athletes and audiences that the hosting of the Olympics Games in Tokyo will bring to Japan (NY Daily News, 2014).

### 5. Methodology

This research used qualitative and quantitative data in its methodology to answer the research questions. The qualitative part of the study performed an interview that allowed Muslim customers to elicit service requirements, which they desire to be available in the hotels they visit. The quantitative part used the Kano Survey to identify elements of customers' satisfaction in hotel industry. The elements will include hotel atmosphere, price, facilities, service, hygiene, and staff attitude. The Kano model questionnaire is a five point Likert scale; where 1 is "I like it that way", 2 "It must be that way", 3 "I am neutral", 4 "I can live with it" and 5 "I dislike it that way".

#### 5.1 Interview

The interview questions were set to elicit different attributes that Muslim consumers seek in the hotels for their accommodation in Japan. These elements will help the hotel industry in Japan in maximizing the customer experience and increase their level of satisfaction. The questions consisted of open-end questions about nationality, age, gender and travelling experience. In addition, questions about different attributes that might influence the Muslim consumers' decision making about their choice of accommodation. The attributes that have been identified are: Staff attitude, the service in general, the physical layout of the hotel, room rates (prices), the hotel facilities, size of the rooms, entertainment facilities in the hotel, location of the hotel, prayer room in the lobby, restaurants that serve Halal food, providing a prayer mat in the rooms, and providing prayer notification system.

One on one interviews and online interviews were held with Muslim consumers from different countries. A total of 10 interviews were conducted. The interviewees were from Saudi Arabia, Syria, Oman, Indonesia, Canada, and Senegal. Each interview was conducted in a time span of an hour. The interviews have identified different elements that the Muslim consumers focus on such as staff attitude, location, and room rates. However, all the interviewees have stressed the importance of price and location in their choices of accommodation in Japan.

#### 5.2 The Survey

Kano model of customer satisfaction distinguished between different attributes of products or services requirements that influence customers' satisfaction. Kano model classifies attributes into five categories; "must-be", "one dimensional", "attractive", "reverse", and "questionable". Based on the Kano questionnaire, which is used to confirm and categorize Muslim customers' requirements, the survey of this study has been formulated. The survey consisted of pairs of questions that focused on customers' needs that have been identified

through the interview. Therefore, 26 quality attributes, which have been identified through the interview stage, were the main focus of the questionnaire. For every attribute two questions were formulated to which the customers can answer in one of five different ways. A total of 52 questions were developed and used in the survey to achieve the purpose of the study. The final survey consisted of three parts: first, demographic questions about gender, nationality, and age. Second, How Muslim customers felt if an attribute was fulfilled "functional questions", and how Muslim consumers felt if an attribute was unfulfilled, "dysfunctional questions". Third, how important is an attribute to the customer.

The second part of the questionnaires, the quality attributes are structured in reference to Kano's Model. A five-point Likert scale was used with 1 is "I like it that way", 2 "It must be that way", 3 "I am neutral", 4 "I can live with it", and 5 "I dislike it that way". There are a total of 26 quality attributes forming 26 pairs of questions. Each attribute required the participants to provide a pair of responses. The first in each pair is a functional question or a positive question that refers to a situation in which the hotel service attribute is fulfilled. The second question in the pair is a dysfunctional question or a negative question, which refers to an opposite situation in which the same attribute is not fulfilled.

A pilot study was conducted on Muslim consumers to understand the preliminary responses of the survey, whether the questions were clear and directed to their needs, and to assess the reliability of the attributes. After the pre-testing stage of the final survey has been modified using 52 questions. The survey was distributed to random sample of Muslim consumers. The collection of the data lasted for a period of a month. The survey was distributed through social media. A total of 27 responses have been collected and served as the main data of this study.

### 6. Data Analysis

The interviews have been conducted with the purpose of identifying attributes that Muslim consumers seek in the hotels of their choice. This study interviewed a group of Muslim consumers and identified customers' requirements from hotels they choose as their accommodation during their stay in Japan. These requirements are: Staff attitude, the physical layout of the hotel, room rates (prices), the hotel facilities, size of the rooms, entertainment facilities in the hotel, location of the hotel, prayer room in the lobby, restaurants that serve Halal food, providing a prayer mat in the rooms, providing a prayer notification system (alarm), entertainment system, and finally addition of wash-lets in the restrooms. Analysis of these interviews corresponds to respondents who represent Muslim consumers. The analysis identified factors that influence Muslim guests' choices of hotels for their accommodation in Japan. The first research question has been answered.

This study is based on 27 respondents who represent Muslim consumers from different countries, ages, and different traveling experience (Table 1). To analyze the data, excel has been used to enable analysis of the sample, mainly, means, percentage and frequencies (Table 3). To categorize the attributes, the analysis has been performed manually, which is possibly due to the small limited number of responses, following the categorization of Kano model described in Tables 1 and 2 (categorization of Kano mode).

Table 1 shows that 71.40% of the respondents were females and 28.60% were males. Most of the respondents were between the ages of 20-30 (64.30%) followed by 30-40 age group, which represent 35.70% of the sample. 50% of the respondents travel alone while 35.70% travel with family and 14.30% travel with friends. Most Muslim customers visiting Japan and staying at hotels are customers between the ages of 20-30 and traveling alone, which

are considered as the primary potential target customers in the hotel industry around Japan. 52% of the respondents are from Saudi Arabia followed by Indonesia 13% and Oman 14%. The results show that most of the respondents are females that travel alone for leisure. The hotels were also recommended to meet the needs of solo travelers and provide services that are particular to their needs. Therefore, providing services with excellent qualities that address the needs of female and males solo travelers need to be considered by the hotel management.

**Table 1** Demographic Profile of Respondents

Gender									
Male	8	28.60%							
Female	19	71.40%							
Traveling experience									
Alone	13	50%							
With friends	4	14.30%							
With family	10	35.70%							
Age									
20-30	17	64.30%							
30-40	10	35.70%							

Table 2 Categorization of Kano Model

Table 2 Categorization of Kano Model										
If you have fr	ee Internet access in	the room, how	<b>-</b>	1. I like it						
would you feel?			2. It must be that way.							
			3. I am neutral.							
			4. I can live with it.							
			5. I dislike it that way.							
			1. I like it							
			2. It must be that way.							
If you don't have free Internet access in the room, how would you feel?				3. I am neutral.						
				4. I can live with it.						
			4	5. I dislike it that						
							Free Internet a			
Customer requirements 1.				2.	3.	4.	5.			
		Like		Must-be	Neutral	Live with	Dislike			
	1. Like	Q		A	A	$\stackrel{A}{\Longrightarrow}$	О			
	2. Must-be	R		I	I	I	<b>→</b> M <b>←</b>			
Functional	3. Neutral	R <b>←</b>		I	I	I	M			
	4. Live with	R		I	I	I	M			
	5. Dislike	R		R	R	R	Q			

 $O = One-Dimensional, \ M = Must-be, \ A = Attractive, \ I = Indifferent, \ Q = Questionable, \ R = Reverse$ 

Table 3 summarizes the results of all the attributes that Muslim consumers seek in their choice of accommodation. The table shows that the following attributes: security and cleanliness of the room are "must be" attributes that all Muslim consumers seek in their hotel. Furthermore, attributes that mainly targeting Muslim

consumers such as halal restaurants, prayer rooms, prayer mats, prayer notification system, are considered "attractive" elements. In addition, attributes that are also considered "attractive" to the Muslim consumers are the efficiency of the online reservation system, providing breakfast when reserving the room, the availability of drinking water in the rooms, transportations to/from the airport, providing tourist information, free internet access in the rooms, laundry services, the location of the hotel, self service facilities in the hotel, the room size, the design of the hotel, and entertainment facilities in the hotel. Muslim consumers do not expect these attributes however, providing them will attract more Muslim consumers and will increase their level of satisfaction.

In conducting a survey using Kano model, it is important for hotels to put emphasis on "one-dimensional" attributes and "must-be" attributes. This is because "one-dimensional" attributes grant competitive advantage and bring elements of differentiation to the service thus increasing customers' satisfaction. As for "must be" attributes, it increases customers' expectations and can also generate a positive word of mouth and customers' retention. Based on Kano's model the attributes described as cleanliness of the rooms and security and safety of the hotel are treated as "must-be" quality attributes that Muslim customers seek in their hotels. The hotel owners must fulfill these requirements; otherwise, customers will be dissatisfied with their accommodation.

The attributes classified as "one-dimensional" or Performance attributes should be emphasized. For example, the efficiency of the online reservation system, easiness of use, and finally separate swimming pools for male and females uses. These attributes when fulfilled by the service providers will lead to a high level of satisfaction, the higher the level of fulfillment the higher customers' satisfaction. These attributes can gain competitive advantage to service providers and as a result will succeed in attracting Muslim consumers to select their hotel as their accommodation.

Attributes such as the availability of safe deposit facilities and car renting services do fall under the "indifferent" categorization. That means these attributes don't affect the satisfaction level of Muslim consumers. However, having a separate swimming pool at the hotel can fall under both indifferent and one-dimensional categorization. Therefore, it relies on the hotel on how they want to handle this attribute. The possibility of classifying attributes into "must-be attributes", "one-dimensional attributes" and "attractive attributes" has been answered, hence, answering the second objective of this study.

Customer satisfaction shows whether meeting a service requirement can increase satisfaction, or whether fulfilling this requirement prevent customers' dissatisfaction. Customer satisfaction coefficient indicates how strongly a service attribute can influence satisfaction and dissatisfaction (Sauerwein et al., 1996). To calculate customer satisfaction coefficient of customers' satisfaction the following formula has been applied:

Satisfaction level = 
$$\frac{A + O}{A + O + M + I}$$

To calculate the customer satisfaction coefficient of customers' dissatisfaction the following formula has been applied:

Dissatisfaction level= 
$$\frac{O + M}{(A + O + M + I)^*(-1)}$$

These two formulas have been proposed by Kano model to calculate customer satisfaction coefficient of customers' satisfaction and dissatisfaction. The minus sign in the dissatisfaction formula to emphasize the negative influence on customer satisfaction if this attribute is not fulfilled (Sauerwein et al., 1996). The positive customer satisfaction coefficient ranges from 0 to 1, the closer the value is to 1, the higher the influence on customer satisfaction. A positive customer satisfaction coefficient that is near 0 implies that there is a minimum

influence on satisfaction. On the other hand, customer satisfaction coefficient of customers' dissatisfaction ranges between 0 and -1. If the value approaches -1 the influence on customers' dissatisfaction is strong if the attribute is not fulfilled. A value of near 0 indicates that the attribute does not cause dissatisfaction if not fulfilled (Sauerwein et al., 1996).

Table 3 and Figure 1 show the result of customer satisfaction coefficient of customers' satisfaction and dissatisfaction. The results show that 11 attributes are near the 1 value, therefore, they highly influence customers' satisfaction. These attributes are; staff attitude (0.74), free Internet access (0.70), convenience of the online reservation system (0.85), providing breakfast (0.76), free transportation from/to airport (0.78), location (0.85), prayer room (0.88), halal restaurants (0.85), self-service (0.74), prayer notification (0.77), and restrooms with wash-lets (0.81).

Table 3 and Figure 1 also implie that there are six attributes that strongly affect customers' dissatisfaction. These attributes are; safety of the hotel (-0.93), cleanness of the rooms (-0.83), convenience of the online reservation system (-0.56), English translation services (-0.52), restrooms with wash-lets (-0.56), and staff attitude (-0.63).

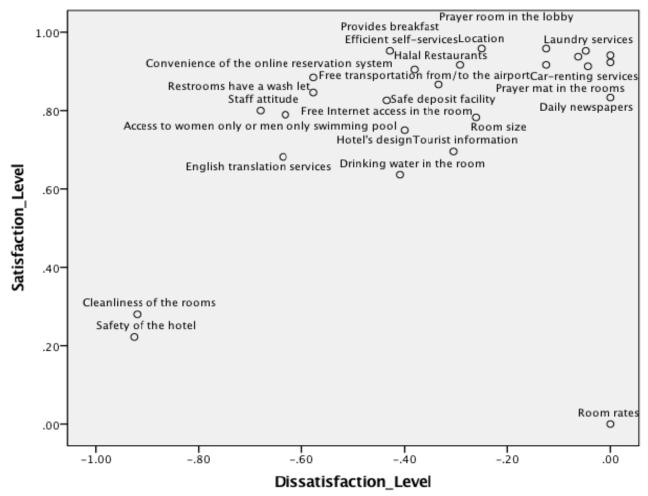


Figure 1 The Influence of Service Quality Attributes on Satisfaction and Dissatisfaction

Table 3 Kano Model Classification for Muslim Consumers' Requirements from the Hotel in Japan

Service Quality Attributes	M	0	A	Q	R	I	Satisfaction Level	Dissatisfaction Level	Mean	Importance	Category of Kano model
Safety of the hotel	20	5	1	0	0	1	0.22	-0.93	0.351852	8.236504	Must Be
Staff attitude	4	13	7	0	0	3	0.74	-0.63	-0.06	4.223742	One dimensional
Cleanliness of the rooms	17	6	1	1	0	2	0.27	-0.88	0.32	8.777243	Must Be
Free Internet access in the room	3	7	12	0	0	5	0.70	-0.37	0.195652	2.939388	Excitement
Convenience of the online reservation system	2	13	10	0	0	2	0.85	-0.56	0.153846	3.720215	One dimensional
Provides breakfast	1	7	12	1	1	5	0.76	-0.32	0.261905	2.154066	Excitement
Room rates	0	0	0	0	19	8	0.00	0.00	0	1.854724	Reverse
Drinking water in the room	7	2	12	0	0	6	0.52	-0.33	0.113636	4.079216	Excitement
Free transportation from/to the airport	1	0	21	0	0	5	0.78	-0.04	0.434783	4.317407	Excitement
Tourist information	6	1	15	0	0	5	0.59	-0.26	0.195652	2.727636	Excitement
Daily newspapers	0	0	5	0	0	22	0.19	0.00	0.416667	1.356466	Indifferent
Laundry services	0	0	16	0	0	11	0.59	0.00	0.470588	6.343501	Excitement
Access to women only or men only swimming pool	3	9	6	0	0	9	0.56	-0.44	0.078947	3.555278	Linear/indifferent
Location	0	6	17	0	0	4	0.85	-0.22	0.354167	2.727636	Excitement
Safe deposit facility	1	4	9	0	1	12	0.50	-0.19	0.266667	2.497999	Indifferent
Car-renting services	0	0	12	0	0	15	0.44	0.00	0.461538	2.416609	Indifferent
English translation services	6	8	7	0	0	6	0.56	-0.52	0.022727	1.854724	One dimensional
Efficient self-services	0	9	11	0	0	7	0.74	-0.33	0.261905	4.963869	Excitement
Room size	4	2	16	1	0	4	0.69	-0.23	0.26087	2.8	Excitement
Hotel's design	4	4	11	0	0	8	0.56	-0.30	0.175	2.87054	Excitement
Prayer room in the lobby	0	3	20	0	1	3	0.88	-0.12	0.416667	3.97995	Excitement
Service Quality Attributes	M	О	A	Q	R	I	Satisfaction Level	Dissatisfaction Level	Mean	Importance	Category of Kano model
Halal Restaurants	1	6	16	0	1	3	0.85	-0.27	0.3125	2.416609	Excitement
Prayer mat in the rooms	1	2	20	1	0	3	0.85	-0.12	0.395833	3.006659	Excitement
Prayer notification system	0	1	19	1	0	6	0.77	-0.04	0.452381	2.57682	Excitement
Entertainment facilities	0	1	14	0	0	12	0.56	-0.04	0.4375	4.317407	Excitement
Restrooms have a wash let	3	12	10	0	0	2	0.81	-0.56	0.134615	4.029888	One dimensional

O = One-Dimensional, M = Must be, I = indifferent, Q = Questionable, A = Attractive, R = Reverse

### 7. Conclusion

This study contributes to service quality improvement efforts for hotels that target Muslim consumers. Consumers usually evaluate the service quality according to the attributes they consider to be relevant to their needs. This study focused on different attributes that Muslim customers seek in their choice of accommodation in Japan. This study has identified attributes of service quality for Muslim consumers and classified these attributes using Kano model. This research has classified elements that are helpful for hotel owners to make decisions on which attributes they need to prioritize and improve. Analysis of this study provides insights on needs of Muslim consumers and implications on how hotel managers should prioritize attributes that lead to higher level of satisfaction. Hotels should focus their attention on attributes that fall under "one-dimensional", as these are the elements that Muslim customers seek in different hotels. Based on Kano's method of classification, "attractive

attributes" are more focused on specific needs of Muslim consumers, however, not providing these elements won't lead to dissatisfaction of Muslim consumers.

The results show that there are no significant differences among attributes that address specific needs of Muslim consumers, such as *Halal* restaurants and prayer rooms, and other attributes. Most of the attributes that address specific needs of Muslim consumers fall under "attractive attributes", such as prayer mats, prayer notification system, and restaurants that serve *Halal* food, thus providing these attributes will exceed customers' expectations. However, failing to provide these "attractive" attributes will not affect customers' satisfaction on any level and as a result will not affect their choice of the hotel. On the other hand, "one-dimensional" attributes, such as staff attitude, convenience of the online reservation system, English translation services, and wash-lets, have a great impact on the Muslim consumers' choice of a hotel. Fulfilling "one-dimensional" attributes will result in their satisfaction and dissatisfaction if not fulfilled. In addition, one-dimensional attributes grant competitive advantage for hotel owners; therefore, it is highly recommended for the hotels to improve on these attributes.

However, with different types of hotels such as luxury or business hotels the results may differ, as the expectations are not similar from each hotel. Finally, the results show that Muslim consumers search for the same attributes with other consumers in their choice of hotel accommodations regardless of age, gender, and nationality.

Customers' satisfaction and dissatisfaction coefficient show that 11 attributes affect customers' satisfaction and six attributes that highly affect customers' dissatisfaction. This implies that fulfilling these attributes can increase satisfaction and prevent customers' dissatisfaction. This also helps in focusing on the different needs of different customers segments.

#### 8. Limitations

This study has identified different attributes that Muslim consumers seek in their choice of hotels when visiting Japan. This study employs Kano model to categorize the different attributes under five main categories which are, "one dimensional" attributes, "attractive" attributes, "must-be" attributes, "indifferent" attributes and "questionable" attributes. As this study has been tested on a small sample size, the results cannot be generalized. In addition, this study has identified different attributes of service quality in various types of hotels in Japan; thus, the results identified in this study cannot be applied on different types of hotels such as luxury hotels, business hotels, or traditional Japanese hotels. If tested on different kinds of hotels such as luxury hotels or business hotels the results might differ, as the expectations of hotels' targeted customers are not similar.

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