

## Developing and Validating a Hospitality Service Quality Scale in Saudi Arabia (HOSP-SQ): A Structural Equation Model

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### Abstract

*This research objective is to construct a model of hospitality service quality, within the borders of Eastern Province in the Saudi Arabia. The research initially examines the literature review, then adapts the features of hotel industry. Empathy, Credibility, Responsiveness, Security, Tangibles, Courtesy and Competence are the seven dimensions assessing hospitality service quality. Structural Equation Modeling used in order to study conceptual model of hospitality service quality. The results, therefore, indicate that service quality is a significant ascendant of customer satisfaction and customer loyalty. Customer satisfaction and customer loyalty have a significantly direct impact on behavioral intentions, which verifies the necessity to continuous observation of the reactions of customers. Customer feedback could be gathered by hotels directors about the service they offered. Customers could also traced according to the directors' assessment, especially those who complain about the service quality. Hotels directors can, through this scheme, identify the problems that they encounter and take corrective and preventive actions.*

**Keyword:** hospitality service quality, customer satisfaction, customer loyalty and customer intention.

### 1. Introduction

Shahin and Dabestani (2010) indicated that tourism industry has become, during the past decades, one of the most significant factors of economies worldwide along with the Middle East, representing one of the most rapid developing regions. Hotel keepers must, in the light of current competitive environment, discover contemporary methods to make their services be conspicuous among their competitors. In order to accomplish this goal, Nadiri and Hussain (2005) suggested that hotel keepers have to realize their needs of customers and then begin immediately to satisfy these needs, they demonstrated that concentration on service quality from the customer's viewpoint is believed to be the most essential developments in the tourism industry. The success of any service organization is crucially related to service quality (Yilmaz, 2009; Kandampully, 2000). Nadiri and Hussain (2005) argued that hotels possessing good service quality will seek to improve their profitability and market share. Many studies concerning quality service in tourism sector were, nevertheless, conducted in the context of developed countries and very few of them were taken on in emerging market context.

Zeithaml and Bitner (1996); Gronroos (2004) indicated that the essential attributes of the services are different, concurrently, perishability and intangibility. There are also other factors like seasonal demand and inaccurate criteria were identified in the hospitality industry, which make the definition and measurement of service quality complex. Boulding et al. (1993) indicated that service quality has a relation with consumer satisfaction while according to Reichheld and Sasser (1990) it has a relation with customer retention. There is no doubt in the relationship between quality and the success of a hotel because quality relates with satisfaction and repeat purchasing behavior and positive word-of-mouth. General quality provided by a service has more effect on recommendation intentions than that provided by the expressed level of satisfaction (Getty and Thompson, 1994). The specific dimensions of service quality affecting the recommendation intention are the hotel exterior appearance, the perceived value connected with the accommodation, employees' readiness to communicate with customers and security. According to Barksy and Labagh (1992) there is, in the hospitality sector, a positive relationship between some dimensions of service quality which cause satisfaction and return intentions. Gonzales et al. (2007) on the other hand focused on the effect of service quality on behavioral intentions in the tourism sector.

Han et al. (2008), Gagnon and Roh (2008), and Wilkins et al. (2010) indicated that superior service quality enlarges customer satisfaction, customer loyalty, enhances customer retention, enhances profitability, and promotes sustainable competitive advantage. Customer satisfaction is regarded as affecting repurchasing intentions and attitudes that, in turn, influences an organization's future return and earnings. The issue of service quality and customer satisfaction, as a result of the direct association with profits, has become an important concern of the hospitality industries. Gilbert and Veloutsou (2006) indicated that majority of companies have to evaluate and enhance their service quality seeking to attract more customers. This study, therefore, seeks to achieve the goal of satisfy the need in the literature and provide empirical evidence about service quality dimensions in Saudi Arabia hotels. Its aim is also to examine the relationship of quality dimensions with customer satisfaction, customer loyalty and customer retention.

## **2. Literature Review**

### **2.1 Services Quality**

Swan and Comb (1976) are of the early authors that were concerned with the issues of measuring services quality and the factors of services quality. The service quality from their point of view has two basic factors: the material quality, and interactive quality during the interaction of the organization's staff with customers. In the same direction, Sasser, and Arbeit (1976) distinguished between three factors of service, which are the physical elements, facilities, and personnel. Lehtinen and Lehtinen (1982) added a fourth factor in the measurement of service quality, which is the organization quality. Gronroos (1984) also divided the quality factors into three major factors, which are technical quality, functional quality, and quality of the organization's image.

Parasuraman *et al* (1985) developed ten basic factors of quality, which determined the service quality according to customers' perception and expectations. In 1988, these researchers reduced the previous factors to only five to evaluate the aspects of the service: the tangibles, responsiveness, reliability, assurance, and empathy with the customers. Then, Gummesson (1990) specified the following basic elements to identify the customer's expectations for the service of administrative consulting: the experience of professional service providers, the quality of special services, proper diagnosis, how to implement the mandates, problem-solving, and implementation of solutions. In a subsequent study, Mary (1995) about improving the quality of the Underground service in Britain, the factors of quality were: regular routes continuously, cleanliness, efficiency of staff service, good treatment with the public, and easiness to buy a ticket.

Curry and Herbert (1998) reached that it could determine what are quality and its measurement at least through three main angles: customer quality scales, professional quality scale and management quality scales. Then, we found that Oh (1999) selected only an element of the perceived price, and eight elements of the perceptions of hotel equipment, while Dabholker, *et al* (2000) set three factors: trust, personal care, and comfort. As for both Broderick and Vachirapornpuk (2002), identified three factors: equipment service, customers' expectations, and the mental image of the service organization. There is also who determines the six factors to measure the e-Servicequality (Li, *et al.*, 2002), which are comfort, information quality, sympathy, assistance from the website, communication, and responsiveness. AL-dlaigan and Buttle (2002) varied in their four factors, which were the quality of the service system, the behavioral service quality, the accuracy of service transactions, and machine service. In the area of the quality of electronic services provided on the Internet, Van Riel, *et al.* (2003) identified five factors, which were the application interface, reliability, safety, responsiveness, and meeting the wishes of customers. In the same area, Kuo (2003) provided five factors according to their importance: advertising mail, customer service management, electronic quality, information security, and the design of Web site.

The model of automatic service quality in banks provided by AL-Hawari, *et al.* (2005) relied on five factors, which were ATMs, telephone banking, online bank, price, and the quality of products. In the same year, Gaunaris (2005) presented four factors of the quality of houses of development and construction of software for the computer. These factors were potential quality, the quality of physical processes, quality of programs, and quality of output. In the supply chain, Seth, *et al.* (2006) identified seven factors: reliability, credibility, efficiency, internal organizational communications, and flexibility of service, financial confidence, and service environment. Kaul (2007) presented five factors for measuring service quality in retail stores, included the natural aspects, reliability, personal interaction, problem solving and policies adopted. Many studies have adopted the SERVQUAL model in their attempts to measure the service quality.

Sargeant and Kaehler (1998) used the SERVQUAL model; and the analysis showed that demographic variables such as age and sex had a little impact on the satisfaction degree with the factors of service quality of health care in general, and patients who dealt with surgery sections were more satisfied with the level of service provided compared with other patients who were dealing with the other sections.

## 2.2 Customer Satisfaction, loyalty and Purchase Intention

Satisfaction means consumer feeling resulting from exposure to a specific purchase situation (Hunt, 1977). Many researchers tend to describe the service as a form of trend related to satisfaction, which results from the comparison between expectations and actual performance, Parasuraman, *et al.* (2006), Bolton and Drew (1991). Although the majority of researchers recognize that the current measurement of the consumer perceptions for the service quality is largely consistent with the idea of the disconfirmation model, they also recognize that the service quality and satisfaction are two different things and distinct Bolton and Drew (1991) and Zeithaml, *et al.* (1990).

The results of some studies on the relationship between satisfaction and quality indicate that the expectations and perceptions of performance levels affect customer satisfaction directly; they also affect the satisfaction indirectly through the effects of the existence of disconfirmation between actual performance and expectations. (Liusar, *et al.*, 2001; Boshoff and Gray, 2004; Spring *et al.*, 2005). This contradiction in the results prompted researchers to exert more efforts in an attempt to put an end to this contradiction again. For example, the results of some studies indicated (Parasuraman, *et al.* 1988; Yu S, 2007; Scotti, *et al.*, 2007; Kim and Lough, 2007) that the presence of high levels of perception of the service quality led to a higher degree of consumer satisfaction, the same conclusion reached by Cronin and Taylor (1992). The service quality is considered one of the important inputs affecting the consumer satisfaction.

Customer loyalty is defined by Oliver (1999) as deep participation of customer, that is, a successive purchase of a superior product or service. Dick and Basu (1994) suggested that a customer who has loyalty to a specific product or service would not modify his/her own purchasing behavior in spite of the marketing efforts to impose substitute products or services.

## 3. Research Methodology

### 3.1 Study Population

The study was conducted in one of the most important sectors of the Saudi Arabia economy. It is the sector of hospitality services. Eastern province hotels were selected to represent this sector due to the size of their dealings, their branches spread across all provinces of the Kingdom, and having the largest number of dealers. As for the hotels selected in the service industry, they represented in 38 hotels working across the Eastern province, they containing excellent hotels and five stars to one star hotels. Our sample contain the customers of excellent, five stars and four stars only (26 hotels) because they achieve the highest market share or deal with the largest number of beneficiaries from the hospitality services at the time of the present study. The study population contained all the customers of the excellent, five stars and four stars of the Eastern province who dealt with hospitality services provided by those hotels.

The sample contained 500 respondents, the sample characteristics included the proportion of 19.8% respondents aged 25 to 34 years and 30% aged between 35 to 44 years and 33.6% aged between 45 to 54 years, while the remaining percentage were aged greater than 55 years. The sample included 55.8% of married respondents and the rest were unmarried. Relative to the level of education our sample included 58 percent of them hold a university degree, and 8.2% holders of degrees higher than the university degree, and the proportion of 17.4 % who received a high school diploma and the rest of the sample was who did not received a high school diploma. For members of the sample experiences in dealing with the hotels were 52% of them have dealt with the hotels for more than three times, and 29.2% treated with hotels only three times, while the rest of the sample was treated with hotels for less than three times. For hotels, there are 38 hotels in the Eastern Province of Saudi Arabia, and hotels have been identified from the (Premier League, only two hotels; five- stars, 13 hotels and four-star, 11 hotels) because it is the largest hotel in terms of market share, mass turnout, and the sample includes 42.8% of four-star hotels clients that equal 214 respondents, 45.6% of five-star hotels clients that equal 228 respondents and the rest were first class hotel.

### 3.2 Scale Generation Procedures

To reach a quantitative, multifactor scale to assess the quality of hospitality services, the following steps and actions were relied on (Parasuraman, et al., 1988; Al-Hawari, et al., 2005):

#### 3.2.1 Development of Specific Scale Elements for Hospitality Service:

Many studies have investigated the controversial topic of fixed tools for the assessment of service quality in hotels. Through comprehensive survey of the published studies in the field of assessing the quality of hospitality services indicates that all of the models have many dimensions. Nevertheless, Ekinci *et al.* (1998), Nadiri and Hussain (2005) demonstrated that the dimensional structure diversified from two dimensions to nine according to Juwaheer (2004). Various of these dimensions are alike to the service quality dimensions; for instance: “Tangibles” (Akbaba, 2006; Albacete-Saez *et al.*, 2007; Khan, 2003; Mei *et al.*, 1999; Nadiri and Hussain, 2005; Saleh and Ryan, 1991); “Credibility” (Juwaheer, 2004; Khan, 2003; Mei *et al.*, 1999; Saleh and Ryan, 1991); “Responsiveness” (Khan, 2003; Saleh and Ryan, 1991); “Assurance” (Akbaba, 2006; Juwaheer, 2004; Khan, 2003; Saleh and Ryan, 1991); and “Empathy” (Albacete-Saez *et al.*, 2007; Juwaheer, 2004; Khan, 2003; Saleh and Ryan, 1991).

Other particular tools used for the assessment of hotel service quality have developed dimensions differing from those of SERVQUAL. This can be illustrated that different kinds of accommodations were studied. For instance, six dimensions were reported by Khan (2003). A study conducted by Albacete-Saez *et al.* (2007) to evaluate service quality in rustic accommodation and to identify seven dimensions that include compatible offers. Other researchers differentiated between technical quality and functional quality. It was also suggested that technical and functional quality considered as significant elements of perceived service quality (Schofield and Katics, 2006). Several researchers also suggested a conceptual model of service quality that has multiple levels. It was reported that service quality is a second order element that consists of three dimensions (physical product, service experience, and quality food and beverage) and seven sub-dimensions: quality employees, fashionable coziness, privacy, room quality, quick service, supplemented extras, and food and beverage quality.

This was followed by the development of a list of items measuring the quality of hospitality services through reviewing the items that represented many features of the previously identified factors of the quality of hospitality service, in order to form the initial items of the scale. This process resulted in 92 items. Each item was paraphrased in two statements, one to scale expectations, and the other to scale perceptions. Then, a set of preliminary interviews was done with managers of the Eastern province hotels. The list of items was submitted to them to get to know their opinions and suggestions for those items. The result of this procedure was the exclusion of 14 items from that list, to become 78 items. Then, an initial structure of the survey was done using 78 statements, with the use of Likert scale consisting of five points, and the range was *from strongly disagree (1), to strongly agree (5)*, as a prelude to submit that list to the academics and professors, to make sure of the validity of the components of this survey. The list of the initial survey was submitted to four of the members of the faculty staff, the Faculty of Business Administration Department, College of Applied Studies and Community Service, University of Dammam, and discussed the items of this survey and the validity of its components to measure the quality of hospitality service with them. The result of this procedure was their proposal by deleting another 20 items from the list of the survey which was presented to them. Thus, the final format the survey consisting of 58 items only.

#### 3.2.2 Data Collection and Scale Development (First Experiment):

Data were collected from the customers of the Eastern province hotels, using the instrument consisting of 58 items. Such data were compiled from a sample of 500 customers of such hotels. It was taken into account in that the sample to represent the 26 hotels. The size of the sample was chosen based on Churchill, *et al.*, (1974); Parasuraman, *et al.*, (1988). Then, the tool of scale was refined and the refinement process here was done through calculating correlation coefficients of alpha for each of the factors, (Cronbach, 1951), and this step was based on what came in (Churchill, 1979). Data used to calculate the correlation coefficients of alpha was in the form of differences, through the equation (quality = perceptions – expectations). The value of the coefficient of alpha ranged between 0.542 for credibility, to 0.921 for the Service performance, for the ten factors proposed, which called for the need to delete certain items of some factors.

Through the table Total-Item Statistics, specifically, the column of Cronbach's alpha if an item deleted, the coefficient of alpha recalculated for each factor more than once, and every time test of self-correlation was done to total correlation again, which led to another processes of deletion, resulting in the improvement of value of the coefficient of alpha for the different factors. Repeating this process many times and repeating the calculation of the coefficient of alpha yet, with the deletion of items, resulted in an initial instrument of scale consisting of 51 items with alpha coefficients ranging from 0.542 to 0.921 of the ten factors. After the process of calculating alpha coefficients, for the different factors, was done, the factor analysis was used for differences in the values of the 51 items remained in the scale.

To determine the internal correlations among these factors the method resulted in a matrix of factor loadings is used, which can be interpreted easily. In any case, there were some elements that still had high loadings with more than one factor, so it was necessary to delete those items, they were five items. There also were some items having a very weak loading (less than 0.5) on their factors, which necessitated furthermore delete these items, they were four items. By deleting those items from the matrix loadings, we found that some factors became meaningless, which led that those factors had correlations equal to zero or close to zero with the remained items, which led to a reduction in these factors to eight, which already set to measure the quality of hospitality services, the eight factors containing 42 items ( $42 = 51 - 9$ ). In addition, the loadings resulted demonstrated the need to load some items on factors other than that identified in advance. This is what showed the need to recalculate the coefficients of alpha for each factor and determine the correlation for each item to total correlation, and also the need to re-examine the factor structure reached, with repeating the number of times, which enabled reaching an instrument consisting of 27 components after deleting another 15 items with the existence of seven factors, including those 27 items. The mean correlation among these seven factors extracted based on the oblique rotation method, is 0.67 and this correlation is considered average for the high loadings of the factors reached. The value of alpha correlation coefficients was high.

### **3.2.3 Scale Refinement**

The scale became seven factors, involving 27 items. To make sure of the strength of the current structure, the factor analysis must be repeated for the seven factors, and the 27 items loaded on them to make sure of the strength of the internal consistency of the scale. In this step, the results of this analysis were consistent with what we have achieved in the last step, that is, the factor analysis did not result in any new deletion of the factors or items and became the final format of these factors and items.

(Table 1), shows the results of factor analysis and the degree of loading of each item on the factor specified for it and the Results Summary of the Scale Alpha Coefficients Analysis. See Appendix A.

**Table (1) Test Sample Factor Analysis Results (500 items)**

Items	Factors	Items loading	Items no.,	average	variance	St., deviation	Dimension importance	Alpha coefficient
<b>Credibility</b>			7	5.864	62.961	7.935	2	<b><u>0.916</u></b>
Cred <sub>1</sub>		0.856						
Cred <sub>6</sub>		0.790						
Cred <sub>3</sub>		0.780						
Cred <sub>5</sub>		0.755						
Cred <sub>4</sub>		0.720						
Cred <sub>7</sub>		0.627						
Cred <sub>8</sub>		0.578						
<b>Empathy</b>			4	6.204	27.312	5.226	1	<b>0.872</b>
Emp <sub>1</sub>		0.963						
Emp <sub>3</sub>		0.843						
Emp <sub>2</sub>		0.810						
Emp <sub>4</sub>		0.649						
<b>Competence</b>			3	1.160	17.846	4.224	7	<b>0.842</b>
Comp <sub>1</sub>		0.921						
Comp <sub>2</sub>		0.817						
Comp <sub>3</sub>		0.766						
<b>Tangibles</b>			5	3.088	18.016	4.245	5	<b>0.836</b>
tang <sub>1</sub>		0.776						
tang <sub>3</sub>		0.760						
tang <sub>6</sub>		0.721						
tang <sub>4</sub>		0.682						
tang <sub>5</sub>		0.670						
<b>Security</b>			3	4.008	6.867	2.621	4	<b>0.848</b>
Secu <sub>1</sub>		0.948						
Secu <sub>4</sub>		0.863						
Secu <sub>2</sub>		0.720						
<b>Responsiveness</b>			3	4.252	4.627	3.103	3	<b>0.886</b>
Resp <sub>2</sub>		0.896						
Resp <sub>1</sub>		0.876						
Resp <sub>4</sub>		0.704						
<b>Courtesy</b>			2	2.828	5.982	2.449	6	<b><u>0.811</u></b>
Cour <sub>3</sub>		0.833						
Cour <sub>4</sub>		0.812						

Overall model Cronbach alpha =0.951.  
Percentage of explained variation = 84.64%.

The test of alpha coefficient for each of the seven factors was performed, which confirmed the strength of internal consistency of the scale and consistency in measurement. The results demonstrated that there was no need to delete any item of the seven factors, and therefore, we reached the final structure of the scale consisting of seven factors and twenty-seven items. Table (1) shows the analysis results summary of alpha correlation coefficients, and the value of alpha coefficient for each factor. It is clear from the table that the scale is characterized by strength and internal consistency of the structure, consisting of seven factors, where the value of alpha ranged from 0.811 to 0.916, very high values confirming the consistency of the scale. The table also shows the mean and standard deviation for each factor.

### 3.2.4 Scale Validity Evaluation

The assessment of the validity of the structure / content of the scale in terms of descriptive (qualitative) and quantitative aspects is crucial to the scale. It contains testing two main factors: Theoretical validity and Construct Validity. Procedures adopted to develop this scale (the theoretical study, previous studies, and personal interviews) meet these two requirements. Therefore, we can consider that the proposed scale has an appropriate and sufficient amount of the validity of the components. Then the validity of this scale was evaluated experimentally through the test of the validity of convergence.

In order to measure customer response, they were asked about their degree of their satisfaction of the hotel, the degree of their loyalty with the hotel and also their purchase intention. The respondents in the second stage of the process of data collection arranged the level of their satisfaction, the level of their loyalty and their intentions of purchasing, by selecting one of five different categories (ranged from high = 5 to low = 1). This relationship between the responses to the three questions and the values of the scale proposed were tested using correlation analysis, which was done through several steps. The correlation between each factor of the scale and other factors was measured, then, measuring correlation between all factors of the scale as dependent variables and the responses of respondents on the three questions separately, as it was the independent variable.

Table (2) shows the total correlation matrix of the scale factors, and responses to the questions mentioned.

**Table (2) Correlation Matrix of the Scale and Customer Responses**

factors		RESP	COUR	COMP	TANG	SEC	EMP	CRED	Customer Satisfaction	Customer Loyalty	Purchase Intention
RESP	Pearson correlation	1	0.274	0.397	0.470	0.531	<b>0.611</b>	0.601	<b>0.211</b>	0.541	0.204
	Significance levels		0.000	0.000	0.000	0.000	0.011	0.000	0.021	0.000	0.000
COUR	Pearson correlation	0.274	1	0.477	<b>0.303</b>	0.213	0.196	0.378	0.505	0.645	0.206
	Significance levels	0.000		0.000	0.046	0.001	0.002	0.000	0.000	0.000	0.029
COMP	Pearson correlation	0.397	0.477	1	0.263	<b>0.271</b>	<b>0.311</b>	0.276	<b>0.331</b>	0.454	0.601
	Significance levels	0.000	0.000		0.000	0.037	0.041	0.000	0.021	0.000	0.000
TANG	Pearson correlation	0.470	<b>0.303</b>	0.263	1	0.217	<b>0.250</b>	0.273	0.401	0.895	0.405
	Significance levels	0.000	0.046	0.000		0.001	0.016	0.000	0.000	0.000	0.000
SEC	Pearson correlation	0.531	0.213	<b>0.271</b>	0.217	1	0.354	0.256	0.350	0.659	0.206
	Significance levels	0.000	0.001	0.037	0.001		0.000	0.000	0.000	0.000	0.044
EMP	Pearson correlation	<b>0.611</b>	0.196	<b>0.311</b>	<b>0.250</b>	0.354	1	0.299	0.450	0.508	0.204
	Significance levels	0.000	0.002	0.041	0.016	0.000		0.000	0.000	0.000	0.021
CRED	Pearson correlation	0.601	0.378	0.276	0.273	0.256	0.299	1	<b>0.281</b>	0.638	0.309
	Significance levels	0.000	0.000	0.000	0.000	0.000	0.000		0.037	0.000	0.000
Customer satisfaction	Pearson correlation	<b>0.211</b>	0.505	0.331	0.401	0.350	0.450	<b>0.281</b>	1	0.721	0.511
	Significance levels	0.021	0.000	0.021	0.000	0.000	0.000	0.037		0.000	0.000
Customer Loyalty	Pearson correlation	0.541	0.645	0.454	0.895	0.659	0.508	0.638	0.721	1	0.301
	Significance levels	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Purchase intention	Pearson correlation	<b>0.204</b>	<b>0.206</b>	0.601	0.405	<b>0.206</b>	<b>0.204</b>	0.309	0.511	0.301	1
	Significance levels	0.031	0.029	0.000	0.000	0.044	0.021	0.000	0.000	0.000	

Parameters significant at  $p < 0.01$  (two tailed test). Parameters significant at  $p < 0.05$  (two tailed test).

The correlation between all the items on the scale and these responses are significant at levels 0.01 and 0.05, which confirms the validity of this scale (the validity of convergence) to measure what it was developed for. In spite of the high level achieved by the scale proposed of consistency, confidence and the degree of reliability, as well as the scale was characterized by the validity, whether the validity of the content or validity of convergence. It was our desire to achieve the highest degree of consistency, reliability and validity of our scale proposed, in the next section tests of consistency, reliability and validity of the scale proposed will be done, depending on the structural equation modeling using the (AMOS.16).

#### 4. The Application of Structural Equation Modeling (Second Experiment):

##### 4.1 Proposed Causal Relationships Model:

Another survey was conducted for the customers of the hotels of eastern province, Saudi Arabia for the application of the scale proposed to measure the quality of hospitality services in these hotels. The sample drawn from the population this time was composed of 300 items, evenly distributed to the customers of the same 26 hotels that mentioned earlier.

Data were collected from the lists used, and those data are converted to AMOS 16.0 used in the analysis, to conduct the statistical analysis depending on that sample.

Figure (1) shows the proposed diagram and paths of relationships assumed based on the results of the previous section, and also depending on studies published in this field.



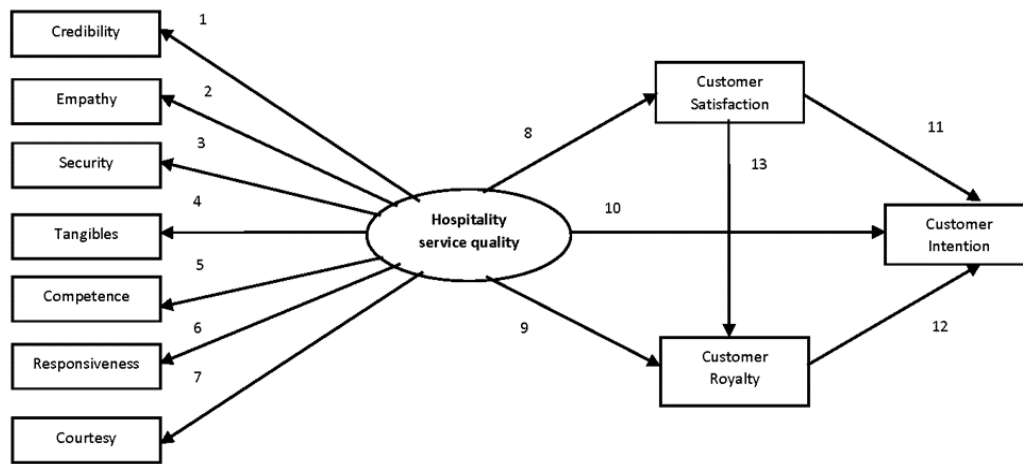


Figure (1) Causal Relationships Model

4.2 Formulating Causal Relationships Hypotheses:

Table (3) shows the various hypotheses formulated by the researcher, and the previous studies that support our point of view.

Table (3) Paths and Hypotheses of the Conceptual Model

Paths	Hypotheses	Literature
Credibility ← service quality	The Hotel characterized by the Credibility would affect the level of customer’s perceived quality.	(Al Khattab and Aldehayyat, 2011; Qin H., and Prybutok, 2009; Ladhari, 2011)
Empathy ← service quality	Empathy of Hotel’s management and its staff with its customers would affect the level of customer’s perceived quality.	(Parasuraman, et al., 1988; Al Khattab and Aldehayyat, 2011; Qin H., and Prybutok, 2009)
Security ← service quality	Feelings of safety and security of the Hotel’s customers in their dealings with the Hotel would affect the level of customer’s perceived quality.	(Yang, et al, 2004; Qin H., and Prybutok, 2009; Al Khattab and Aldehayyat, 2011)
Tangibles ← service quality	The physical and tangible aspects of the Hotel would affect the level of customer’s perceived quality.	(Parasuraman, et al., 1988; Ladhari, 2011 ; Qin H., and Prybutok, 2009; Al Khattab and Aldehayyat, 2011; Salazar and Costa, 2010)
Competence ← service quality	The Hotel characterized by Competence would affect the level of customer’s perceived quality.	(Yang, et al, 2004; Cronin, and Taylor, 1992; Ming & Ing, 2005; Tien, et al., 2006)
Responsiveness ← service quality	The speed of response of the Hotel’s management and its staff to the wishes of customers would affect the level of customer’s perceived quality.	(Parasuraman, et al., 1988; Avkiran, 1994; Al Khattab and Aldehayyat, 2011, Ladhari, 2011)
Courtesy ← service quality	The behavior of Hotel employees with customers would effect on the perceived service quality by the customers.	(Gerrard and Cunningham, 2001; Tien et al., 2006; Ladhari R., 2011)
Customer loyalty ← service quality	The level of perceived service would affect the Customer loyalty by the customers.	(Cronin, and Taylor, 1992; Ming & Ing, 2005; Tien et al., 2006; Bloemer, 1999; Andreassen and Lindestad, 1998)
Customer satisfaction ← service quality	The level of perceived service quality would affect the level of customer’s satisfaction.	(Cronin, and Taylor, 1992; Ming & Ing, 2005; Jacob and Kai, 2007; Phillip, et al, 2003; Tien et al., 2006; Qin H., and Prybutok, 2009)
Purchase intention ← service quality	The perceived service quality Affect the purchasing intention of the customers.	(Cronin, and Taylor, 1992; Ming & Ing, 2005; Qin H., and Prybutok, 2009; Salazar and Costa, 2010)
Purchase intention ← Customer loyalty	The level of Customer loyalty by customers would affect the customer’s purchase intention with the Hotel.	(Cronin, and Taylor, 1992; Ming & Ing, 2005 ; Jackie, 2004; Juan, et al, 2001, Leung, 1998, Keiningham et al., 2007, Hellier et al., 2003)
Purchase intention ← Customer satisfaction	The customer’s satisfaction would affect their purchasing intention with the Hotel.	(Kim and Lough, 2007; Jackie, 2004; Yi et al., 2004; Cronin Jr et al., 2000, Keiningham et al., 2007, Hellier et al., 2003 )
Customer loyalty ← Customer satisfaction	The level of customer satisfaction would affect their Customer loyalty.	(Tien et al., 2006; Luam & Lin, 2003; Kandampully and Suhartanto, 2000, 2003, Bowen and Chen, 2001, Anderson and Srinivasan, 2003, Chandrashekar et al, 2007, Keiningham et al., 2007, Hellier et al., 2003)



**4.3 Validity Factors Tests of the Proposed Model:**

The validity of all factors of the model measuring the quality of hospitality services was tested, before the validity of the model as a whole was measured, by testing the validity of each of the seven factors separately. This was done with all the seven factors, and the results of this procedure are as illustrated in Table (4) as follows:

**Table (4) Factors Validity Results**

<i>Paths</i>	<i>Regression Coefficient</i>	<i>R<sup>2</sup></i>	<i>C R</i>	<i>P</i>	<i>(S.E.)</i>
<i>Credibility</i>					
<i>Cred8← Credibility</i>	0.67	0.54	8.320	0.000	0.095
<i>Cred 7← Credibility</i>	0.83	0.69	19.031	0.000	0.071
<i>Cred 6← Credibility</i>	0.77	0.59	16.156	0.000	0.087
<i>Cred 5← Credibility</i>	0.81	0.65	17.747	0.000	0.051
<i>Cred 4← Credibility</i>	0.86	0.74	20.307	0.000	0.064
<i>Cred 3← Credibility</i>	0.91	0.83	23.627	0.000	0.059
<i>Cred 1← Credibility</i>	0.83	0.68	8.189	0.000	0.077
<i>Empathy</i>					
<i>Emp3← Empathy</i>	0.68	0.56	11.918	0.000	0.085
<i>Emp4← Empathy</i>	0.56	0.52	9.570	0.000	0.087
<i>Emp2← Empathy</i>	0.85	0.73	16.343	0.000	0.084
<i>Emp1← Empathy</i>	1.00	1.00	21.020	0.000	0.074
<i>Security</i>					
<i>SEC4← Security</i>	0.82	0.67	14.786	0.000	0.077
<i>SEC1← Security</i>	1.00	1.00	19.660	0.000	0.074
<i>SEC2← Security</i>	0.81	0.65	17.385	0.000	0.044
<i>Tangibles</i>					
<i>TANG5← Tangibles</i>	0.78	0.60	13.599	0.000	0.082
<i>TANG1← Tangibles</i>	0.79	0.63	16.362	0.000	0.049
<i>TANG6← Tangibles</i>	0.84	0.71	18.528	0.000	0.051
<i>TANG4← Tangibles</i>	0.83	0.70	18.117	0.000	0.063
<i>TANG3← Tangibles</i>	0.72	0.52	10.812	0.000	0.088
<i>Competence</i>					
<i>Comp1← Competence</i>	0.85	0.73	15.730	0.000	0.051
<i>Comp2← Competence</i>	0.83	0.69	15.201	0.000	0.073
<i>Comp3← Competence</i>	0.84	0.70	15.419	0.000	0.066
<i>Responsiveness</i>					
<i>RESP2← Responsiveness</i>	0.91	0.83	22.227	0.000	0.069
<i>RESP1← Responsiveness</i>	0.88	0.77	20.432	0.000	0.047
<i>RESP4← Responsiveness</i>	0.78	0.61	23.682	0.000	0.070
<i>Courtesy</i>					
<i>Cour 3← Courtesy</i>	1.00	1.00	20.578	0.000	0.063
<i>Cour 4← Courtesy</i>	0.69	0.73	16.504	0.000	0.092

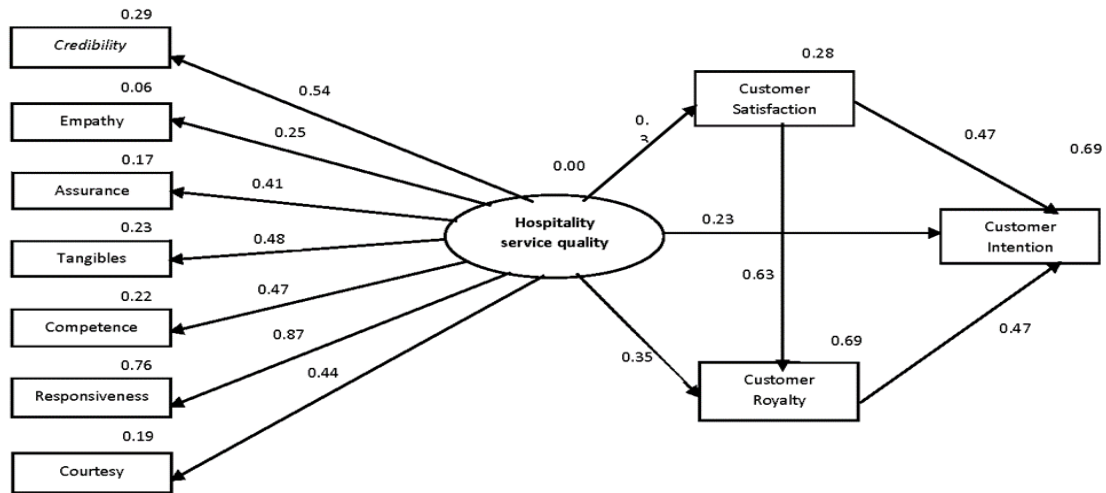
**4.4 The Validity Tests for Proposed Model:**

It is necessary to move to the last stage of testing the validity of this model, which is to add the values of customer responses for the third part of the survey concerning the level of customer satisfaction, the level of customer loyalty and the customer’s purchase intention. Table (5) shows the final experiment results.

**Table (5) Final Experiment Results**

<i>Paths</i>	<i>Hypothesis Acceptance</i>	<i>Hypothesis number</i>	<i>critical values</i>		<i>(S.E)</i>
			<i>CR</i>	<i>P</i>	
<i>Credibility ← service quality</i>	<i>Accepted</i>	<i>(1)</i>	11.686	0.000	0.054
<i>Empathy← service quality</i>	<i>Accepted</i>	<i>(2)</i>	4.948	0.000	0.070
<i>Security← service quality</i>	<i>Accepted</i>	<i>(3)</i>	4.175	0.000	0.047
<i>Tangibles← service quality</i>	<i>Accepted</i>	<i>(4)</i>	4.473	0.000	0.046
<i>Competence ← service quality</i>	<i>Accepted</i>	<i>(5)</i>	4.535	0.000	0.076
<i>Responsiveness← service quality</i>	<i>Accepted</i>	<i>(6)</i>	11.873	0.000	0.046
<i>Courtesy ← service quality</i>	<i>Accepted</i>	<i>(7)</i>	12.870	0.000	0.011
<i>customer loyalty ← service quality</i>	<i>Accepted</i>	<i>(8)</i>	13.882	0.000	0.032
<i>Customer satisfaction← service quality</i>	<i>Accepted</i>	<i>(9)</i>	7.981	0.000	0.053
<i>Purchase intention ← service quality</i>	<i>Accepted</i>	<i>(10)</i>	14.123	0.000	0.58
<i>Purchase intention← customer loyalty</i>	<i>Accepted</i>	<i>(11)</i>	22.318	0.000	0.043
<i>Purchase intention← Customer satisfaction</i>	<i>Accepted</i>	<i>(12)</i>	22.882	0.000	0.056
<i>Customer satisfaction← customer loyalty</i>	<i>Accepted</i>	<i>(13)</i>	8.984	0.000	0.068

1. The standard error of all paths is less than 0.1.
2. The critical values of all paths are greater than 1.96 with the level of significance 0.000.
3. Based on those results, all hypotheses accepted, it is the final format of the network diagram.



**Figure (2) Final Diagram for Measuring Hospitality Service Quality**

- The numbers above each rectangle represent the value of R<sup>2</sup>, which are greater than zero.
- The numbers above each path represents the regression coefficient of each path.

**4.5 Convergence Validity, Differentiation and Standard Validity:**

Based on the present study, all the items of the scale represented its factors significantly where the critical value is greater than 1.96 for all paths / relationships (Cheung and Au, 2005). Regarding the Discriminant validity, the results of the previous table, and the values of R<sup>2</sup> of the network diagram confirm that each structure is distinctive, clear and no overlap among the items of various factors (Fouladi, 2006). As for making sure of the standard validity, it was done through the calculation of correlation of scale factors with the other external items such as customer loyalty, customer satisfaction and the desire to purchase intention. This was confirmed by the previous table (Fox, 2006; Preacher, 2006).

After the completion of all tests of reliability and validity, it was necessary to calculate the overall conformity quality of the scale. To get the highest quality of the overall conformity, it must rely on more than one scale of the correspondence quality (Byrne, 2001) which is shown by the table (6), which shows the conformity quality standards, the value accepted in the published studies (Hair, et al., 1995;; Byrne, 2001; Holmes and Smith, 2001; Al-Hawary, 2005), and also the value reached (Model Fit Summary).

**Table (6) Model Conformity Quality Results**

Fit indexes	Suggested critical values	Values of this study
Chi- Square (X <sup>2</sup> )	The best the lower	43.951
degree of freedom (df)		24
X <sup>2</sup> /df	≥ 3.00	1.83
Probability level	≥ 0.05	0.008
(NFI) Normed Fit index The Bentler- bonett	≤ 0.9	0.981
(RFI) Relative fit index	≤ 0.9	0.950
(IFI) Incremental fit index	≤ 0.9	1.021
(TLI) the tucker- Lewis Coefficient	≤ 0.9	1.058
(CFI) Comparative fit index	≤ 0.9	1.000
(RMSEA) Root Mean Square Error of approximation	≥ 0.05	0.000

Based on the above, clearly the proposed model has a very good high degree of conformity. Therefore, the researcher can emphasize the validity of the model, now applied to the hotels in the Eastern Province of Saudi Arabia, and the sample results confirm this. Accordingly, the model is acceptable with a high degree to be used in measuring the quality of hospitality services.

## **5. Conclusions**

This study initially contributes in developing a more suitable structure to assess the service quality of hotel industry.

Despite insignificant result shown in the aspect of customer service, the study still adopts seven major factors for assessing the service quality of hotels by reviewing past literature. These seven major factors involve empathy, credibility, responsiveness, security, tangibles, security and competence. Hotel managers must, therefore, give more attention to the tangibles, courtesy and competence aspects of the service quality because customers have the lowest sense scores on the dimensions of tangibles, courtesy and competence. They also must focus on specific elements related to improve the dimensions of tangibles, courtesy and competence. These fields comprise equipment and physical facilities, employees' appearance, materials connected with the service, and operating hours in the hotels. Human resource management strategies, as an aspect of managerial implication, are necessary for the hotel to train employees to become more professional in their job, excellently communicate, and have courtesy and competence to satisfy customers' need. This aspect of the study is consistent with the Nadiri and Hussain (2005) study. Hotel managers, on the other hand, must consider that empathy was the most significant dimension in evaluating general service quality offered by hotel to the customers.

The results, furthermore, indicate that service quality is a significant predecessor of customer satisfaction and customer loyalty. This result strengthens the necessity for hotels managers to emphasize the importance of the fundamental dimensions of service quality. Customer satisfaction and customer loyalty have a significantly direct impact on behavioral intentions, which verifies the necessity to continuous observation of the reactions of customers. Customer feedback could be gathered by hotels directors about the service they offered in real time. Customers could also traced according to the directors' assessment, especially those who complain about the service quality. Hotels directors can, through this scheme, identify the problems that they encounter and take corrective and preventive actions.

## **6. Managerial Implications**

As it has been known that superior service quality enlarges customer satisfaction, customer loyalty, customer retention, recommendation, and earnings, it is necessary for hotel managers to realize which dimensions are most significant to hotel customers in assessing service quality. The comprehensive review of tools, conducted by this study, for evaluating service quality in different aspects should help hotel managers recognize the dimensions of service quality that are related to their specific kind of accommodation.

Hotels managers, to satisfy the "tangibles" dimensions, must assure that both internal and external establishments are kept in a good condition, that is, the properties are clean and well illuminated. In addition, the restaurant surroundings is welcoming, the hotel shop is enjoyable and fascinating, and the employees are tidy and presentable. Hotels managers, regarding "credibility" dimension, must assure that guests are satisfied with the service they paid for, that the rooms are well prepared, and that all facilities are available and work properly. Managers, regarding to the "responsiveness" dimension, should also realize that guests expect employees to react immediately to their demands and solve their problems quickly. Hotel managers, to execute the "security" dimension, should be aware that guests assume they will have a respectful treatment by polite employees, that the hotel will maintain a safe surrounding, and that it has a suitable location. Eventually, Hotel managers, concerning the "responsiveness" dimension, should assure that guests get unique care, which staff members are in charge of reservations, recognize their guests' individual demands, and that expenses are unmistakably illustrated. Managers should as well realize that the results of the current study indicate that guests mainly depend on "empathy" and "credibility" in assessing their hotel experience. Hotel managers should therefore exert great efforts on providing good service quality in these dimensions to satisfy their guests. Especially, taking into account the comparative significance of the responsiveness dimension in anticipating general service quality, perceptive satisfaction, loyalty, and readiness to pay premium price, hotel managers must pay great attention to employee training. They must assign adequate facilities for training employees' on how to predict customer demands; how to offer distinctive courtesy; how to be susceptible to guest's special demands; and how to make guests feel highly estimated.

The results of this study also concentrate on implications for managers in terms of evaluating the level of service quality they are offering. Hotel managers are able to confidently use this aspect to follow the perceived quality of the service that they provide because this study has verified the credibility and the effectiveness of the service quality tool. They could also use this tool to measure how their guests perceive the quality of the service in their own hotel with that provided by competitors. Nevertheless, if used in this way, managers should realize that the service quality tool should be carefully applied in hotels of different characteristics (hotel rating, countryside hotels, accommodation hotels, motels, and so on).

Taking into account this variation, managers could conform this service quality aspect for use in certain contexts. Such conformation could include rewrite some expressions, adding some new expressions, and/or deleting some current expressions from the service quality aspect. Nevertheless, to achieve this goal, hotel keepers should benefit from credible qualitative research with guests.

### **7. Limitations and Future Researches**

The results of this study are characterized with generalization; they do have restrictions. The selection of research population was restricted to a single industry, that is, hospitality, which tends to restrict the generalizability of the results in the context of other industries. Consequently, future study could be conducted on numerous industries. Because this study was conducted exclusively in Saudi Arabia, future study may also consider if the results of this research differ by countries. As for future research conducting, the introduction of a more extensive qualitative stage is suggested, to involve meetings with hotel managers and employees, in order to evaluate other possible dimensions and characteristics that can more completely illustrate service quality evaluation.

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### Appendix A: Hospitality Service Quality Elements

#### Tangibles

1. Physical facilities at the hotel have visual attraction
2. Staff members at the hotel have good appearance
3. The restaurant’s surrounding is welcoming
4. The shops were enjoyable and fascinating
5. The outdoor environments had visual attraction

#### Responsiveness

6. Staff members responded immediately to my requests
7. Room service was done immediately
8. The hotel operates working hours to be appropriate to all its customers

#### Empathy

9. The hotel has staff members who give you individual attention
10. The hotel considers your best interest at the top of its priorities
11. staff members of the hotel understand your specific demands
12. The hotel has staff members who are efficient

#### Competence

13. All my service needs are included in the hotels services.
14. The hotel provides most of the service functions that I need.
15. The hotel provides services with the features I want.

#### Credibility

16. My guestroom was prepared as promised
17. Room facilities, and other mechanical equipment worked adequately
18. When the hotel promises to do something by a certain time, it does so
19. When you have a problem, the hotel shows a sincere interest in solving it
20. The hotel provides its services at the time it promises to do so
21. Employees of the hotel tell you exactly when services will be performed
22. The hotel insists on error-free records

#### Security

23. Staff members respectfully treated me
24. The hotel offered a safe environment
25. The facilities were in a convenient location

#### Courtesy

26. Employees of this hotel are courtesy to customers.
27. Here is a warm relationship between employees of this hotel and customers.