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Modeling Service Quality Improvement Priorities in Selected Hotels for Efficient Service Delivery

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ABSTRACT: This paper develops an integrated performance model that is aimed at improving service quality and providing accurate indicators that guide hotel managers in improving service priorities that promote customer satisfaction and eliminate resource wastage. The study was guided by three objectives of determining the level of importance of selected service quality attributes, the level of satisfaction with selected service quality attributes and establishing the key service quality attributes that aid managers focus their improvement efforts.

Quantitative techniques were used based on a sample size of 238 respondents selected from 30 hotels labeled as Commonwealth Heads of Government Meeting hotels in 2007. The findings indicate that out of the 22 service quality items, 13 needed

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improvements. These were mainly to do with staff skills in handling customers' requirements and the hotel owners' inability to provide flexible services to customers which affected service quality. There is need for hotel owners to recruit personnel with skills in customer care in order to improve service quality.

Keywords: Service quality; Customer satisfaction; Performance management; Performance model

Introduction

Quality is one of the competitive priorities which enable firms in the hospitality industry to survive. Providing excellent service quality and high customer satisfaction is the most important issue and challenge facing the contemporary service industry (Hung, Huang & Chen, 2003). Service quality has for long been recognized to play a critical role in a firm's competitive advantage (Fitzsimmons & Fitzsimmons, 1994). Quality is understood to mean conformance to specifications, though more recently it is taken to mean meeting and /or exceeding customers' expectations. Kandampully, Mok and Sparks (2001) suggested that attempt to have effective service quality management is the best way to achieve superior customer satisfaction.

Oakland (2005) and Kandampully et al. (2001) showed that service quality can only be achieved if organizations empower their employees to underpin service quality dimensions. These dimensions include tangibles (physical facilities, equipment, and appearance of personnel); reliability (ability to perform the promised service dependably and accurately); responsiveness (willingness to help customers and provide prompt service); assurance (knowledge and courtesy of employees and their ability to convey trust and confidence); and empathy (caring, individualized attention provided to customers).

In the hospitality industry, communicating service quality begins with an understanding of the aspects of service quality that are most important to customers. Pariseau and McDaniel (1997) stressed that in order to attract customers, a firm has to serve their needs and retain them. Failure to achieve this may yield customer complaints which may adversely affect repeat purchase and customer loyalty. The ultimate result of this is low competitiveness of the firm, yet today's survival in the market place is guaranteed by a firm's ability to outpace its competition (Hamel & Prahalad, 1994).

Although service quality management has been embraced world over in the hospitality industry, many hotels in Kampala city have not embraced the concept fully. Anecdotal surveys of the hotels within Kampala city and other hotels outside the city revealed that the degree to which management has defined quality, empowered employees to deliver quality is not clear. There are service quality inefficiencies in terms of low grade tangibles such as utensils, beds, room size, among others. These have led to limited customer assurance, low reliability, responsiveness and empathy which have cost the organizations sums of money as a result of low repeat purchases. For most of the hotels, the processes through which bills are made, food is delivered, and the ways bookings are confirmed are all slow. Yet these facilities endeavor to achieve superior customer satisfaction.

In most hotels, the service quality inefficiencies have culminated into less than the desired level of growth over the last five years, that is, only 10% as opposed to 25% of the previous years (Hotel Owners Association Annual reports, 2001- 2006). This is because the level of customer satisfaction has been low highlighted by only 60% monthly room occupancy. The management of these hotels seems not to have a specific way of measuring quality and its general perception of service quality dimensions differ from one hotel to another thus affecting standardization of services in the hotel sub-sector. Customer complaints are enormous and efforts to resolve them are usually reactive rather than proactive. The net result is that customer satisfaction is low in the hotel.

Different models have been advanced in the study of service quality (Hung et al., 2003; Parasuraman et al., 1985; Yang, 2003a). Though these models have formed the basis for advancing service quality studies for year now, there exists gaps in their application in the hotel sector. For example, The SERVQUAL Model (Parasuraman et al., 1985) applies the gap between customer perceptions and expectations of service quality to determine perceived service quality. Expectations and perceptions relate to tangibles, reliability, responsiveness, assurance and empathy and that low satisfaction attributes are those that require improvement. This argument presents a gap in service quality research because low satisfaction attributes are not enough to determine all areas of improvement and the model ignores the element of ‘importance of a service attribute’ which actually shows customer priorities.

Yang et al. (2003) importance satisfaction model in figure 1 claim that items located in the “surplus area” indicate that resources are over invested but such items are not listed among the items for improvement and yet quality

attributes like X1 and X2 located on the borderline between two different areas makes it difficult to determine where they belong.

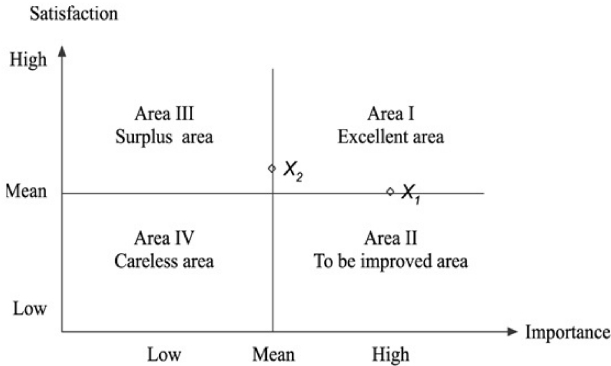


Figure 1. Importance- Satisfaction model (Yanget *al.*, 2003a)

Lastly, the Service quality performance matrix advanced by Hung et al (2003) in figure 2 fails to resolve the issue of having quality attributes Y1 and Y2 that lie on the borderline of APZ. Therefore, assigning superior ratings becomes very difficult specifically in terms of deciding whether to list the attributes among the items for improvement.

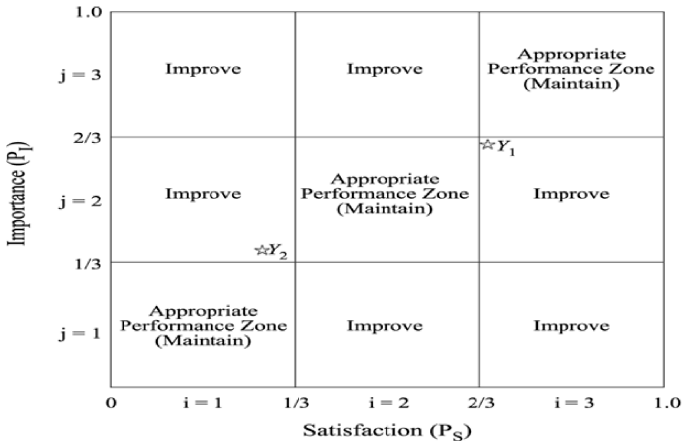


Figure 2. Service quality performance matrix (Hung *et al.*, 2003)

This paper provides empirical study towards solving the challenge for the hotel management to determine the satisfaction level of their most important service quality dimensions so as to improve service quality levels. This we posit that it will enable the hotel owners to retain existing customers and attract new ones at a lower cost. The rest of the paper provides literature review covering the concepts of service quality, the link between service quality and customer satisfaction in section 2. Section 3 details the methodology while section 4 provides the key findings. Lastly section 5 details the discussions and recommendations and suggestions for future research are provided.

Literature Reviews

This chapter analyzes the important literature related to the study. The study focuses on the effect of service quality management on customer satisfaction in the hospitality industry. The independent variable is service quality management, which incorporates the dimensions of tangibles, responsiveness, reliability, empathy and assurance. The chapter reviews literature on these dimensions and how management can measure service quality for effective management. The dependent variable is customer satisfaction whose achievement depends on how well customer expectations are met.

The concept of Service Quality in the Hospitality Environment

Several scholars have viewed services as deeds, performances, activities or processes. As Parasuraman (1986) noted, services are behavioral entities which are intangible, perishable, inseparable, and heterogeneous. These attributes imply that services cannot be accurately measured and maintained by a firm (Harvey, 1998). The key concern arising here is that management has to ensure that the overall quality of service maximizes benefits while minimizing cost. Jiju, Frenie, and Sid (2004) noted that service quality incorporates the concept of meeting and exceeding the expectations of the customer.

Grönroos (1984) is of the view that, service quality could be further divided into technical quality and functional quality, which he viewed as fundamentally different. Technical quality answers what the consumer obtains and functional quality answers how the consumer obtains it. Actually, functional quality can only be recognized subjectively; therefore, obviously functional quality cannot be evaluated objectively like technical quality (Cheng-Nan & Shueh-Chin,

2002). In other words, technical quality is the practical result of service and functional quality indicates the process of carrying out the service (Grönroos, 1990). Service quality make-up does not just involve the results but includes the methods and procedures used to convey the service. Many researchers support this notion (Bolton and Drew, 1991; Weng, 1996).

Pariseau and McDaniel (1971) stressed that in order to attract customers, a manager has to serve their needs and retain them. According to Bowden and Marton (1998), quality is a natural expression of capability in a workplace. Quality issues should not be something separate from, or added to, the work that is carried out in an organization. It is therefore probable that management's option is to ensure that the overall quality of service maximizes benefits while minimizing costs. Hill (1995) also argued that it is difficult for service providers to differentiate their offerings from those of competitors, while it is equally difficult for consumers to evaluate a service before it is acquired and consumed.

Jiju, Frenie, and Sid (2004) noted that service quality incorporates the concept of meeting and exceeding the expectations of the consumer. Quality is seen in various perspectives. Some scholars view quality in terms of value; others say it is conformance to specifications (Reeves & Bednar, 1994; Kandampully, Mok & Sparks, 2001).

Research has demonstrated that consumers are reluctant to complain about poor professional service (Gronhaug & Arndt, 1980; Quelch & Ash, 1981), but these same consumers are becoming increasingly more value conscious. In a bid to excel in quality delivery, service firms are adopting the concept of total quality management (Dotchin & Oakland, 1994; McDaniel & Louargand, 1994). The growing interest in total quality management is motivated by organizations need to cope with an increasingly desperate set of economic circumstances, and tremendous pressure from their customers to update and improve the quality of their services (Brigham, 1993; Ewell, 1993)

Managing Service Quality Dimensions

Atul and Injazz (1995), Zeithaml, Parasuraman, and Berry (1990) identified five quality dimensions which link specific service characteristics to consumer expectations of quality. These five basic dimensions are tangibles (physical facilities, equipment, and appearance of personnel); reliability (ability to perform the promised service dependably and accurately); responsiveness (willingness to help customers and provide prompt service); assurance

(knowledge and courtesy of employees and their ability to convey trust and confidence); and empathy (caring, individualized attention provided to customers).

Hokey and Hyesung (1996) noted that communicating service quality begins with an understanding of the aspects of service quality that are most important to customers. To them the determinants of service quality include reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles. They added other service characteristics such as the availability of complimentary items (like toothpaste, a tooth brush, a comb, soaps, shoeshine cream), hotel/tour guide information unique to the hotel industry, room values and front-office services (cleanliness, atmosphere, comfort, quality and sufficiency of room fixtures (like towels, hangers, and a hair drier), size of a guest room, availability of complimentary items, and price).

Front-office services can also be sub-divided into seven attributes. These include courtesy, recovery from service failures (i.e. handling of complaints), responsiveness such as convenience of reservation, promptness of check-in/check-out, and hotel/tour guide information, and tangibles such as variety/quality of sports/recreational facilities (for example, swimming pools, and aerobic exercise rooms) and efficiency of a business centre (e.g. fax machines, personal computers, and copiers).

Courtesy involves politeness and friendliness of hotel staff and other contact personnel. Since the hotel service is rendered in interaction with customers, courtesy of the contact personnel is an important service quality indicator. Furthermore, when guests have specific problems with a hotel such as an unclean room, poor temperature control, or poor phone service, their problems should be resolved in a proper manner. Simmerman (1992) stressed that proper complaint handling would retain or even build customer loyalty. Thus, handling of complaints also forms part of quality service.

The Link between Service Quality and Customer Satisfaction

Gabbie and O'Neill (1996) observed that in today's hospitality environment, the true measure of company success lies in an organization's ability to satisfy customers continually. Increasingly customers are demanding value for money in terms of both price and the quality of product/service being offered. In order to ensure market success, hospitality organizations of all types are being forced to stand back and take a long, hard look at the way they are currently doing

business. As such, failure by management to interpret customer desires accurately can result in loss of business and possible bankruptcy for some.

There has been some confusion regarding the differences between service quality and satisfaction (Storbacka, Strandvik, and Grönroos (1994). Satisfaction would, according to Liljander and Strandvik (1994), refer to an insider perspective, the customer's own experiences of a service where the outcome has been evaluated in terms of what value was received, in other words what the customer had to give to get something. According to Hunt (1977), satisfaction is an evaluation that an 'experience was at least as good as it was perceived to be'. One way to achieve strong relationships and, thus, long relationships is to ensure that customers are satisfied.

The proposition is that dissatisfied customers will defect; the relationship ends. Several researchers have proposed that this is a simplification of the matter (Zeithaml, et al., 1993). Customers seem to have a zone of tolerance, which according to Zeithaml et al. (1993) can be defined as the difference between an adequate and a desired level of service. According to Kennedy and Thirkell (1988), customers are prepared to absorb some unfavorable evaluations before expressing them in terms of net dissatisfaction.

Satisfaction is a response to a discrepancy between prior expectations and perceived performance after consumption (Oliver, 1988). Service quality has been found to have a direct impact on satisfaction (Kandampully et al., 2001). This direct impact of service quality on satisfaction has led to suggestions that customer service is the key operational variable and that, if service quality is improved, customer satisfaction, and hopefully, profitability will be improved (Getty & Thompson, 1994). The relationship between service quality and customer satisfaction can best be understood if the methods of measuring customer satisfaction are appreciated.

Measuring service quality and customer satisfaction

Zeithaml et al. (1990) developed five dimensions of evaluating quality in hotels. The first is tangibles, which refers to physical facilities, equipment, appearance of personnel, etc.; the second is reliability which is ability to perform the promised service dependably and accurately; third is responsiveness which is willingness to help customers and provide prompt service. The fourth is assurance, the knowledge and courtesy of employees and their ability to convey trust and confidence; and five, empathy that is caring, individualized attention provided to customer.

This has been deemed appropriate for use in the service arena and Parasuraman, Zeithaml and Berry (1988) developed and validated an instrument for measuring service quality using PZB model. They proposed that the consumer's opinion of quality is formed by an internal comparison of performance with expectations.

Quality service is defined as that in which the consumer's perception of service performance meets or exceeds their expectation of what the service firm should do. The key to service quality then is to meet or exceed consumer expectations. One problem with this model is that there may often be discrepancies between the consumer's expectations and the provider's model of what constitutes quality service. The provider may be working hard to deliver some aspect of service to which the consumer is indifferent. Conversely, consumers may be basing their opinion of quality on some factor which the provider assumes is unimportant. There are many methods of measuring service quality and customer satisfaction and these include among others:

Service Quality Measurement

The SERVQUAL model is the best-known service quality measurement model (Parasuraman et al., 1985). The model utilizes the gap between customer perceptions and expectations of service quality to determine perceived service quality. Based on the service quality gaps, businesses can determine the service quality improvement plans to improve customer satisfaction.

Hung et al. (2003) proposed that customer pre-determined expectations on important service quality elements (importance) and customer perception after service transactions (satisfaction) help to determine the levels of customer service quality. Numerous studies in Taiwan have applied importance and satisfaction surveys rather than the SERVQUAL model in analyzing customer satisfaction (Yang, 2003b).

Simultaneous Use of Importance and Satisfaction Service Quality Attributes

Chen et al. (2007) asserts that low satisfaction attributes are those that require improvement but selecting low satisfaction attributes is not, the best improvement approach. Rather, there is need to improve those quality attributes that customers regard as important and have low satisfaction. Therefore, if one wishes to improve actual customer satisfaction, one must perform importance-level and satisfaction-level surveys simultaneously. Many scholars have applied the two indicators to propose various kinds of models, as follows.

Importance-satisfaction model (I-S model)

The customer measures the quality of goods or services based on the several attributes or elements (Berry et al., 1990; Deming, 1986). Since the customer evaluates product or service quality by considering several important attributes, firms must take actions to improve the important attributes with lower satisfaction levels. This is the rationale of the I-S model. Chen et al. (2007) noted that low-quality attributes should not be the only considerations when designing improvement plans. In the I-S model, all quality attributes are mapped into the performance control matrix, and improvement strategies are determined according to the region of each attribute.

While the I-S model combines both satisfaction and importance quality attributes; according to Chen et al. (2007) the model has its shortcomings: for the items located in the “surplus area”, meaning their satisfaction far exceeds importance; resources are over invested but such items are not listed among the items for improvement; and when the quality attributes lie on the borderline between two different areas, superior ratings become a very difficult decision as the attributes lie in the “excellent area” or the “to be improved area”. As a result, the service performance matrix was developed.

Service Quality Performance Matrix

Hung et al. (2003), proposed the performance matrix which consisted of nine performance zones that represent the effectiveness of various system-improvement items. The nine zone matrix was formed from a scale of least satisfaction through moderate satisfaction to most satisfaction and on the other hand a scale from least important through moderately important to most important. The three zones where importance equaled satisfaction formed the “Appropriate Performance Zone” (APZ). The zones outside APZ require improvement. If importance is greater than satisfaction; resources to be invested must increase to improve satisfaction. If importance is less than satisfaction; resources to be invested should be decreased to prevent waste.

Chen et al. (2007), noted that although the performance matrix helps businesses distinguish between superior and inferior service elements, imperfections still exist. For example, when the quality attributes lie on the borderline of APZ, superior ratings become a very difficult decision.

Establishment of Service Quality Performance Model

To determine the best strategy for improving service quality and customer

satisfaction, Chen et al. (2007) applied a Performance - Evaluation Matrix (Lambert and Sharma, 1990) and a service - quality performance matrix (Hung et al., 2003) to develop the service quality performance model. This model and methodology was applied in this study and applied in a developing country Uganda.

Method

In light of the fact that hotels serve customers from different origins, the population that was included in the study included customers to the health clubs, carnivals, bars, restaurants, lodging, and parties. The researchers engaged with the management of the hotels to give a hint on the population that forms their clientele. There was need for categorizing customers so that each category gets represented in the study and this reduced bias. The overall population was about 2000 people. This was determined basing on the average number of guests that visited the 30 facilities every day. A sample size of 392 respondents was used. This was determined using Krejcie and Morgan's (1970) table for determining sample size.

Out of the six customer categories (health clubs, carnivals, bars, restaurants, lodging, and parties), the reception group was not chosen because of the logistical constraints involved in reaching them. The removal of the reception group reduced the sample size to 238.

In order to measure validity of the questionnaire and interview guides, the research team met with the staff of 5 hotels to agree on whether the right questions are addressed. The questionnaire was pre-tested on 30 respondents and Cronbach Alpha test values were found to be above .7 as shown in the table 1, which implied that the items were reliable enough for the study.

To determine the best strategy for improving service quality and customer satisfaction, the service quality performance model developed by Chen et al. (2007) was adopted. This model combines the performance - evaluation matrix developed by Lambert and Sharma (1990) and the service - quality performance matrix developed by Hung et al. (2003). Chen et al. model was adopted for this study because it is more accurate and mathematically more robust than the other models discussed. The priority of improvement objectives derived from questionnaire items that did not fall into the Appropriate Performance Zone (APZ) of the performance matrix were determined. The "Bigger the Better Approach" was adopted in recommending which attributes

hotels needed to be improved first to enable efficient service delivery.

The actual analysis was carried out using STATA in processing the data, SPSS in establishing the reliability of the scales while Ms. Excel was used in measuring area (Ai), Performance Upper Control Limit (PUCL) and Performance Lower Control Limit (PLCL) using relevant equations.

Table 1. Reliability tests for individual service quality dimensions

Service Quality Dimension	Importance	Satisfaction
Tangibles	.82	.95
Reliability	.75	.82
Responsiveness	.76	.78
Assurance	.76	.80
Empathy	.72	.90

Results

The presentation of the findings is in line with the objectives of the study which were; to determine the level of importance of selected service quality attributes among hotel customers; to determine the level of satisfaction with selected service quality attributes among hotel customers and to recommend the key service quality attributes onto which hotels should focus their improvement efforts.

Demographic Characteristics of the study

The sample consisted of 109 females (45.8%) and 129 males (54.2%). Most of the respondents were in the age bracket of 31-40 accounting for 32.8% of the total respondents and 23.3% were university graduates followed by those with tertiary education with 8%. The least number of respondents were in the age category of 51-60 with 11.8% with the majority of respondents also having university education accounting for 10.5% followed by those with tertiary education accounting for 1.3%. In addition, the majority of the respondents were married accounting for 52.1% of the total sample used followed by those who were singles with 39.1%.

Determination of the level of importance of selected service quality attributes among hotel customers and the level of satisfaction with selected service quality attributes among hotel customers

To achieve the above objectives, a service quality performance model was used as elaborated in the next section.

Establishment of service quality performance model

To determine the best strategy for improving service quality and customer satisfaction in the Hotels surveyed by the researchers, Chen, et al., (2007)'s service quality performance model was used. To determine the Performance index (Pi) as well as satisfaction index (Si), the following formulae were used:

$$P_i = (\mu_i - \min) \div R \text{ (Index of Importance)} \tag{1}$$

μ_i is mean of importance and \min (which was 1) represents the minimum value on the Likert Scale which ranged between 1 and 5. R represents the range on the Likert scale which ranged between 1 and 5.

$$P_s = (\mu_s - \min) \div R \text{ (Index of Satisfaction)} \tag{2}$$

μ_s is mean of satisfaction and \min (which was 1) represents the minimum value on the Likert Scale which ranged between 1 and 5. R represents the range on the Likert scale which ranged between 1 and 5.

The area of performance matrix and the concepts of quality- loss function (Taguchi, et al, 2989) were integrated to set up a control boundary model (Chen, et al, 2007). Performance control upper and lower limits (Chen, et al, 2007) were established according to the coordinates and the area enabling objective diagnosis and judgment of required improvements to be performed. The PCL , $PLCL$ and $PUCL$ were established using the following formulae:

$$\begin{aligned} PUCL &= T + \sigma \\ PCL &= T - 0 \\ PLCL &= T - \sigma \end{aligned}$$

T represents the center line and σ is standard deviation. According to Taguchi et al (1989) in Chen et al. (2007), a large area A with abnormal

coordinates outside *PLCL* demonstrates that importance is greater than satisfaction. When a performance index is moved towards the performance control line, resulting in a negative performance value, resources to be invested must increase to improve satisfaction. On the other hand a large area of abnormal coordinates outside *PUCL* indicates that importance is less satisfaction, implying that resources to be invested here may have to be reduced.

$$\mu = \frac{\sum_{i=1}^n (y_i - x_i)^2}{n} \tag{3}$$

$$\sigma = \sqrt{\frac{\sum_{i=1}^n (y_i - x_i)^4}{\mu^2}} \tag{4}$$

From the above,

$$PUCL = T + \sigma = \sqrt{\frac{\sum_{i=1}^n (y_i - x_i)^4}{\mu^2}} \tag{5}$$

$$PCL = T = 0 \tag{6}$$

$$PLCL = T - \sigma = \sqrt{\frac{\sum_{i=1}^n (y_i - x_i)^4}{\mu^2}} \tag{7}$$

The questions that were used and tabulated showing the values as indicated by the respondents and table 2 shows the values that would be used to determine *PUCL* and *PLCL* the summary of the results.

Table 2. Values used in determining *PUCL* and *PLCL*

The Hotel's service quality attributes	μ_i	μ_s	P_i	P_s	$A_i(y-x)$	$A_i(y-x)^2$	$(y-x)^4$
1. An excellent hotel should have modern looking equipment, e.g. dining facility, bar facility, crockery, cutlery, etc.	3.42	2.74	0.61	0.44	0.170	0.029	0.001
2. The physical facilities, e.g. buildings, signs, dining room décor, lighting, carpet, etc., at an excellent hotel should be visually appealing	3.38	2.72	0.60	0.43	0.165	0.027	0.001
3. Staff at an excellent hotel should appear neat, e.g. uniform, grooming, etc.	3.23	2.68	0.56	0.42	0.138	0.019	0.000

Table 2. Values used in determining *PUCL* and *PLCL*(Continued)

The Hotel's service quality attributes	μ_i	μ_s	P_i	P_s	$A_i(y-x)$	$A_i(y-x)^2$	$(y-x)^4$
4. Materials associated with the service, e.g. pamphlets, statements, table wine, serviettes should be visually appealing in an excellent hotel	3.42	2.58	0.61	0.40	0.210	0.044	0.002
5. When an excellent hotel promises to do something by a certain time, they should do so	3.26	2.4	0.57	0.35	0.215	0.046	0.002
6. When customers have a problem, an excellent hotel should show genuine interest in solving it	3.5	2.74	0.63	0.44	0.190	0.036	0.001
7. An excellent hotel should perform service right the first time	3.07	2.37	0.52	0.34	0.175	0.031	0.001
8. An excellent hotel should provide its service at the time it promises to do so	3.22	2.37	0.56	0.34	0.213	0.045	0.002
9. An excellent hotel should insist on error free service	3.25	2.52	0.56	0.38	0.183	0.033	0.001
10. Staff at an excellent hotel should tell customers exactly when services will be performed	3.35	2.37	0.59	0.34	0.245	0.060	0.004
11. Staff at an excellent hotel should give prompt service to customers	3.24	2.54	0.56	0.39	0.175	0.031	0.001
12. Staff at an excellent hotel should always be willing to help customers	3.25	2.52	0.56	0.38	0.183	0.033	0.001
13. Staff at an excellent hotel should never be too busy to respond	3.21	2.48	0.55	0.37	0.183	0.033	0.001
14. The behaviour of staff at an excellent hotel should instill confidence in customers	3.42	2.46	0.61	0.37	0.240	0.058	0.003
15. Customers of an excellent hotel should feel safe in their transactions	3.32	2.29	0.58	0.32	0.258	0.066	0.004
16. Staff at an excellent hotel should be consistently courteous with customers	3.37	2.37	0.59	0.34	0.250	0.063	0.004
17. Staff at an excellent hotel should have the knowledge to answer customers' requests	3.53	2.52	0.63	0.38	0.253	0.064	0.004
18. An excellent hotel should give customers individualized attention	3.35	2.44	0.59	0.36	0.228	0.052	0.003
19. An excellent hotel should have opening hours convenient to all of its customers	3.23	2.22	0.56	0.31	0.253	0.064	0.004
20. An excellent hotel should have staff who give its customers personal attention	3.42	2.31	0.61	0.33	0.278	0.077	0.006

Table 2. Values used in determining *PUCL* and *PLCL*(Continued)

The Hotel's service quality attributes	μ_i	μ_s	P_i	P_s	$A_i(y-x)$	$A_i(y-x)^2$	$(y-x)^4$
21. An excellent hotel should have the customers' best interests at heart	3.32	2.44	0.58	0.36	0.220	0.048	0.002
22. The staff of an excellent hotel should understand the specific needs of their customers	3.31	2.31	0.58	0.33	0.250	0.063	0.004
						1.021	1.043
						0.0464	
						0.0022	
							0.04526
							0.2128

Using the results from the above table Coordinates were plotted for the upper and lower control boundaries using the linear regression equation as shown in the Table 3 below.

Table 3. Plotted Coordinates

PCL	x	0	0.5	1
	y	0	0.5	1
PUCL	$y=mx+c$			
	$C=0.213$			
	$M=1$			
	X	0	0.5	1
	Y	0.213	0.713	1.213
PLCL	$y=mx-c$			
	$M=1$			
	$C=0.213$			
	x	0	0.5	1
	y	-0.213	0.287	0.787

From the calculations the performance matrix is drawn as shown in figure 3.

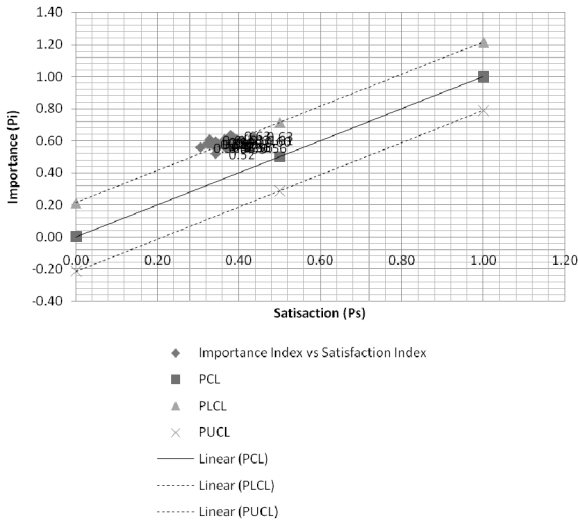


Figure 3. Performance matrix of the case study

Location of abnormal items

The areas (A_i) of the 22 items in the performance matrix above were calculated and mapped into the performance matrix. The abnormal coordinates outside $PUCL$ and $PLCL$ were located after drawing the control lines. There were no abnormal coordinates found outside the $PUCL$. However, thirteen coordinates were found outside the $PLCL$. These are summarized in the Table 4.

Table 4. Prioritization of the hotel service quality attributes

No.	The Hotel's service quality attributes	A_i	Priority
20	An excellent hotel should have staff who give its customers personal attention	0.077	1
15	Customers of an excellent hotel should feel safe in their transactions	0.066	2
17	Staff at an excellent hotel should have the knowledge to answer customers' requests	0.064	3
19	An excellent hotel should have opening hours convenient to all of its customers	0.064	3
22	The staff of an excellent hotel should understand the specific needs of their customers	0.063	4
16	Staff at an excellent hotel should be consistently courteous with customers	0.063	5
10	Staff at an excellent hotel should tell customers exactly when services will be performed	0.060	6

Table 4. Prioritization of the hotel service quality attributes (*Continued*)

No.	The Hotel's service quality attributes	A_i	Priority
14	The behaviour of staff at an excellent hotel should instill confidence in customers	0.058	7
18	An excellent hotel should give customers individualized attention	0.052	8
21	An excellent hotel should have the customers' best interests at heart	0.048	9
5	When an excellent hotel promises to do something by a certain time, they should do so	0.046	10
8	An excellent hotel should provide its service at the time it promises to do so	0.045	11
4	Materials associated with the service, e.g. pamphlets, statements, table wine, serviettes should be visually appealing in an excellent hotel	0.044	12

Discussion

This study used a performance matrix approach to determine which items contributed highly to the level of customer satisfaction and thereby help to determine service quality levels and therefore help in improving service quality in selected hotels in Kampala, Uganda.

The ranking obtained using the performance matrix largely showed that all service quality defects are related to staff abilities to give hotel customers personal attention, having the knowledge to answer customers' requests, having an understanding of the specific needs of their customers, and being consistently courteous with customers and the hotel owners to ensure that customers feel safe in their transactions and having opening hours convenient to all customers. This research has practical implication for service delivery as discussed next.

Location of abnormal items and prioritization

The study revealed that out of the 22 items considered in this study, 13 items fell below the performance lower control limit (PLCL). As table 4 indicates, the 13 items must be improved by the hotel owners in order to improve their service quality. The order of priority as indicated should be followed given the limited resources that do not allow simultaneous improvement on all the thirteen items.

This study indicates that resources should be increased in these items with high ranking in the order suggested by the results like recruiting trained staff

that have the ability to give each hotel customers personal attention, creating conditions that make customers feel safe while carrying out their transactions in any the hotels in order to increase customer satisfaction. This agrees with the finding of Chen et al. (2007), who noted that low satisfaction attributes are those that require improvement but selecting low satisfaction attributes is not the best improvement approach. Rather, there is need to improve those quality attributes that customers regard as important and have low satisfaction. This explains why there is low customer satisfaction in most hotels in Uganda because hotel owners have continued to disregard the importance of hiring trained manpower and instead concentrate on improving the facilities without a corresponding effort of improving on the quality of staff they employ.

Apart from staffing requirements on which this study largely revealed, the ability of hotel owners to have opening hours convenient to all of its customers was ranked number 3 and it shows how customers value this item. In most Uganda hotels, service is limited to certain hours of the day and there is a lot of limitation in the services offered. This limits customer choice in terms of price and availability of service at certain hours. This greatly affects the quality of service since this phenomena affects the possibility of standardized services and highly causes customer dissatisfaction.

The above revelation agrees with what Gabbie and O'Neill (1996) observed that in today's hospitality environment, the true measure of company success lies in an organization's ability to satisfy customers continually. Increasingly customers are demanding value for money in terms of both price and the quality of product/service being offered. In order to ensure market success, hospitality organizations of all types are being forced to stand back and take a long, hard look at the way they are currently doing business. As such, failure by management to interpret customer desires accurately can result in loss of business and possible bankruptcy for some.

Improvement Priorities

Taguchi et al (1989) proposed the evaluation of the quality of products using the loss function approach according to three methods, the nominal-the best (TNB), the smaller-the-better (TSB), and the larger-the-better (LTB). Like Chen et al (2007), we adopted the larger-the-better approach, in which a large loss function area indicates improvement priority.

The above highlight the most important service quality attributes which customers in selected hotels that were under this study are not satisfied with.

Therefore, improvement is needed in the 13 items as indicated in the order of their priority.

Recommendations

In order to improve customer satisfaction, it is noted that hotel owners should strive to consider the following items which deserves priority and in the process improve service quality: Ugandan hotels should employ staff who have the ability to provide customers personal attention, Hotel managers should ensure that customers feel safe while patronizing the respective hotels, Staff should have the knowledge to answer customers' requests, Hotel managers should have opening hours convenient to all customers, Hotel staff should understand the specific needs of their customers and lastly hotel staff should be consistently courteous with customers.

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