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SERVICE QUALITY PRACTICES AS A CRITICAL ANTECEDENT TO CUSTOMER SATISFACTION

EVIDENCE FROM KENYA'S MOBILE PHONE SECTOR

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Abstract

Service quality management literature shows plausible but mixed relationship between service quality and customer satisfaction. Empirical evidence linking service quality to customer satisfaction has yielded mixed results. Furthermore, Past studies only focused in establishing quality-satisfaction relation in high contact services setting like in banking, hospitality and learning institution context. Consequently, little is known on the aspect of the above relationship in low contact services which is highly integrated with technology as in the case of mobile phone services in Kenya. The study therefore sought to establish the effects of service quality practices on satisfaction levels of mobile phone subscribers in Kenya. The study used a proportionate stratified sampling technique to select a sample of 384 respondents on a population of 32.2 million subscribers. The study finding revealed that the R² for service quality practices was 0.609, p<.05, indicating that service quality practices account for 60.9% of variance in the customer satisfaction among mobile phone firms in Kenya. The study added to



new knowledge by developing acceptable measurement scale and using it analyzing the effect of service quality practices on satisfaction of mobile phone service users, as a low contact service which is highly integrated with a technology.

Keywords: Service Quality Practices, Customer Satisfaction, Low Contact Service, Mobile Phone Firms

INTRODUCTION

Service Quality

Service quality can be perceived as the result of customers' comparison of their expectations about a service and their perception of the way the service has been performed (Gronross, 1984; Caruana et al; 2000). Further, when all service quality features such as tangibility, responsiveness, empathy, assurance and reliability are effectively implemented; it may result in enhanced satisfaction of service clients (Gronross, 1984, Parasuraman et.al 1988; Azman, 2009). With regards to mobile phone services, service quality relates to issues to do with net quality which includes indoor and outdoor coverage, smoothness of connectivity along the effective delivery of other value added service (Gerpott et.al, 2001). Since mobile phone market is in a highly competitive service sector, service quality becomes a very critical success factor for gaining sustainable competitive advantage that will translate into customer satisfaction and profit for the firm. However, according to Buttle (2006), the conceptualization, dimensionality, operationalization and measurement of the service quality practices has been problematic as there exist no universally acceptable scale to measure service quality along its diverse nature. Even though many marketing scholars (Zeithaml, Parasuraman and Berry, 1990; Bitner and Hubert, 1994; Sureshchandar et al., 2002) suggested that the 22 items scale of the SERVQUAL model are reasonably good predictors of service quality in its wholeness, Zeithaml et al., (1990) observed that up to date, researchers are not in agreement yet over whether to use SERVQUAL scale or functional/technical measure of service quality. Moreover, getting precise measure of service quality is quite a challenging undertaking. This in part can also be attributed to variability inherent in the service that tends to defy standardization of service quality standards (Gibson, 2009). This therefore has caused many researches involving the study of service quality practices to generate mixed and inconsistent results due to the conflicting views about the dimensionality of service quality constructs. Therefore, with this apparent lack of acceptable measurement scale, more so in the context of Kenya's mobile phone services, the status of service quality practices with regards to mobile phone services remain unclear.

Customer Satisfaction

Customer satisfaction relates to the extent to which a product's perceived performance matches a buyer's expectations (Kotler and Armstrong, 2012). Kotler (2006) observes that modern organizations are endeavoring to become customer oriented by adopting customer-driven initiatives that seek to build long-term profitable relationships with their customers. Consequently, there is a paradigm shift in focus from merely satisfying customers to achieving ultimate customer delight thus making customer satisfaction to gain more attention from both practitioners and scholars in recent times (Nimako et al., 2012). Since customers play a vital role in the success of an organization (Agbor, 2011; Lee and Ritzman, 2005) they should be placed first in management priorities. The status of customer satisfaction with regard to mobile service quality worldwide is varied. At global level for instance, a survey conducted in Europe indicates that customer satisfaction levels with regard to service quality provided by mobile phones firms are inconsistent across Europe (Oracle white paper, 2011). Furthermore, consumers want operators to improve the quality of services offered. Moreover, the global trend in mobile phone market indicates that consumers today are very willing to switch between mobile operators. There is therefore need to increase brand loyalty through increased personalization of customer services. Therefore today, the critical need for and importance of quality improvement in the telecommunication industry continues to be a loudly voiced customer demand (Oracle white paper, 2011). In African, customer satisfaction level with regard to service quality delivered in Ghana's mobile Network is reported to be moderately low at 43.5% (Nimako et al., 2012). This indicates that customer satisfaction was neither equal to, nor better than the desires and expectations of customers. In Kenya however, the status of customer satisfaction with respect to the Kenya's mobile services remains unknown due to limited research in the area.

The Mobile Phone Industry in Kenya

Kenya's mobile phone sector, though growing in investment at adoption rate of 80.5 % by 2014 and contributing 12% growth in GDP in 2014, is however experiencing numerous challenges holding back its growth. Sectorial report by Communication Authority of Kenya (CAK) in 2013/2014 revealed that fraud on customers, frequent service interruptions, numerous customer complaints, limited network coverage in some parts of Kenya are some of the stakeholders' concerns. Besides, CAK have rated all the four mobile phone operators in Kenya as noncompliant in terms of set target for quality of service in 2013/2014 period. Attempts to resolve these concerns concentrated with little success on policy issues instead of firm's internal management activities like service quality practices. Hence, the status of service quality practices and its contribution to customer satisfaction in mobile phone sector in Kenya has remained unknown. Furthermore, Past studies only focused in establishing quality-satisfaction relation in high contact services setting like in banking, hospitality and learning institution sector. Consequently, little is known on the aspect of the above relationship in low contact services which is highly integrated with technology as in the case of mobile phone services in Kenya.

LITERATURE REVIEW

Empirical evidence linking service quality to customer satisfaction has yielded mixed results. For instance, many studies have linked service quality and customer satisfaction as having direct relationship (Lai et al., 2009; Wu and Lang, 2009; Kuo et al., 2009; Baker, 2000). However, many other studies have depicted weak and insignificant link especially in mobile phone sector (Nimako et.al 2010; Uddin and Bilkis; 2012; Agbor, 2011). Consequently, the cause of this mixed results remain unknown. Moreover, some reviewed studies (Wang and Sheh, 2006; Shashzad and Saima, 2012; Abdullah and Rozario, 2009; Agbor, 2011) relating service quality and customer satisfaction, have either used small sample size or convenience sampling technique thereby rendering their results unfit for generalization. Globally and particularly in Jordan, USA and South America, empirical studies (Namanda, 2013; Odhiambo, 2015; Suleiman, 2013; Walfried et. al, 2000; Mohammad and Alhamadani (2011) while using wellknown measure of service quality (SERVQUAL), focused on establishing the relationship between service quality and customers satisfaction among banking clients, which is in high end market and regarded as high contact service. Their study however, failed to shed light on aspects of quality-satisfaction relationship as in the case of low contact services offered by mobile phone firms with technological interface. In Africa and more specifically in Ghana, Nimako et al., (2000) studied the effect of service quality on customers satisfaction in Ghana's Mobile Network but omitted the use of SERVQUAL scale thereby limiting the conceptualization and dimensionality of the study. In Kenya, most studies (Auka, 2012; Nyaoga et al., 2013; Odhiambo, 2015; Kimani, 2014) have focused on sectors like banking, aviation and tertiary learning institutions which are regarded as high contact service setting with intense clientservice provider interaction. Therefore, none of the above reviewed studies analyzed the effect of service quality practices on satisfaction of mobile phone service users, as a low contact services which is highly integrated with a technology. Consequently, little is known on the status of service quality practices and its consequences on satisfaction levels of the mobile phone subscribers in Kenya. Therefore, information on mobile phone services in Kenya is lacking.

Hypotheses for the study

 H_0 : $\beta_i = 0$ Service quality has no significant influence on customer satisfaction among Kenya's mobile phone firms.

RESEARCH METHOD

The study used a correlation research design to obtain the empirical data to address the objectives of the study. The study population constitute a total of 32.7 million mobile phone subscribers obtained from the data published by CAK in 2014 which include staffs of those four mobile firms. The four mobile phones firms explored offer services ranging from call, money transfer and data services and include: Safaricom Kenya, Airtel Kenya, Orange Kenya and Essar Telkom.

The study adopted a proportionate stratified sample of mobile phone subscribers drawn from the four mobile phone firm to select a sample of 384 respondents. The distribution of sample respondents under each strata are as follows: Safaricom (251), Bharti Airtel (59), Essar Yu (41) and Telkom Orange (33).

Both primary and secondary data was collected on different aspects of the service quality, service failure, customer communication and their likely impacts on customer satisfaction. Several secondary data sources were used and include: Published sectorial report of 2013/2014 period by CAK, reports by Business monitor International for 2012 and Telecommunication Industry Review reports of 2012 among many. These data sources serve to augment data from the primary sources. Pre-validated self-administered questionnaires with lowest scale reliability at α=0.739 were used to collect primary data while expert review was used to test for content validity.

The analysis involved the use of inferential statistics. Responses for all questionnaires except for demographic profiles were captured on a seven point Likert scale ranging from 1 to 7. Data computation was done with the aid of a statistical software package (SPSS). Spearman rank correlation analysis was used to describe how the variables are related and the strengths of the relationships. Multiple regression model was used to determine whether the sets of independent variables together predict the dependent variable.

ANALYSIS AND RESULTS

Response rate

Out of 402 questionnaires issued to the respondents, a total of 381 questionnaires were obtained, yielding a satisfactory response rate of 99.2%.

Relationship between Service Quality Dimensions and Customer Satisfaction Correlation Analysis

In order to assess bivariate association between independent and dependent variable, Spearman rank Correlation analysis is performed. Since both service quality dimensions and customer satisfaction is measured in Likert scale and hence ordinal, Spearman rank correlation becomes appropriate non-parametric measure of strength of association between these variables (Norman, 2010; Churchill and Iacobucci, 2004). The correlation matrix of all variables was depicted in Table 1.

Table 1: Correlations of Variables with Customer Satisfaction among Mobile Phone Users in Kenya

Variables	N	Correlation with Customer satisfaction (Spearman's rho, ρ)	<i>p</i> -value
Tangibles	381	.381**	.000
Reliability	381	.570**	.000
Responsiveness	381	.553**	.000
Assurance	381	.587**	.000
Empathy	381	.564**	.000

^{**.} Correlation is significant at the 0.01 level (1-tailed)

The results from the correlation matrix in Table 3.1 revealed that customer satisfaction has a significant positive correlation across all the five dimensions of service quality. The association between tangibles and customer satisfaction $\rho = 0.381$, (p = 0.000) is positively weak but significant at 99% confidence level. The association between reliability and customer satisfaction $\rho = 0.570$, ($\rho = 0.000$) is moderately positive and equally significant. Similarly, the association between responsiveness and customer satisfaction $\rho = 0.553$, ($\rho = 0.000$) was found to be moderately positive and sufficiently significant at 99% confidence level. The association between assurance and customer satisfaction $\rho = 0.587$, ($\rho = 0.000$) was found to be moderately positive and equally significant. Lastly the association between empathy dimension of service quality and customer satisfaction $\rho = 0.561$, ($\rho = 0.000$) was found to be moderately positive and significant. These results concurs with those of Wang and Shieh (2006) whose findings also indicated that the overall service quality has a significantly positive effect on customer satisfaction. Among the five dimensions of service quality except for responsiveness (r=0.195, p> 0.1), all of them have a significant positive effects on customer satisfaction (Wang and Shieh, 2006). This result implies that as service quality is enhanced across its five dimensions namely: Tangibles, Reliability, Responsiveness, assurance and empathy, the customer satisfaction level increases.

Regression Analysis

However, due to the inherent weakness in correlation results especially the third variable problem (tertium quid) and the difficulty in determination of causality (Field, 2005), there is therefore need to exercise caution when interpreting correlation results. The correlation results could not reveal other measured or unmeasured variables affecting the results. In an attempt to overcome this serious shortcoming with correlation results and in order to test a null hypothesis, a multiple regression analysis between the five indicators of service quality as independent variables and customer satisfaction as dependent variable was run. Therefore, the coefficient of determination, R² was relied on to overcome the problem of determining causality as it indicates the amount of variability in one variable that is explained by the others. The construct scores were estimated by obtaining the average response score of all items per case under each construct. The detailed results for the multiple regression analysis involving all indicators of the service quality and customer satisfaction are presented in Table 2, Table 3 and Table 4 and discussed in the following subsections.

Table 2: ANOVA Results on the relationship between Service Quality measures and Customer Satisfaction

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	482.715	5	96.543	116.932	.000
1	Residual	309.612	375	.826		
	Total	792.327	380			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Assurance, Reliability

Table 2 presents ANOVA results of the Service quality-customer satisfaction model. The data test revealed that F (5, 375) = 116.932 at p = 0.000 < 0.05, an indication that the model fits well the given data.

Table 3: Summary of Service Quality-Customer Satisfaction Model

Model	R	R Square	Adjusted R	Std. Error of	Change Statistics				Durbin-	
			Square	the Estimate	R Square	F	df1	df2	Sig. F	Watson
					Change	Change			Change	
1	.781	.609	.604	.90864	.609	116.932	5	375	.000	1.842

a. Predictors: (Constant), Empathy, Tangibles, Responsiveness, Assurance, Reliability b. Dependent Variable: Customer satisfaction

The Service quality-Customer satisfaction model summary in Table 3 shows that the proportion of variance in the customer satisfaction explained by the independent variables (all five dimensions of service quality) is 60.9% or R²=0.609. According to Cohen (1988), 60.9 % of variation explained by the model is regarded as a large increase. The other variation in customer satisfaction of 39.1% was explained by other external factors outside this model. The difference between R²=0.609 and adjusted R²=0.604 is 0.005 and shows that the suggested model generalizes quite well as the adjusted R² is too close to R². According to interpretation by Field (2005), shrinkage of less than 0.5 depict that the validity of the model is very good. The value of Durbin-Watson is 1.842, which is close to 2, an indication of the lack of serial correlation.

Table 4: Estimated Regression Coefficients for Variables in Service Quality-Customer Satisfaction Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
-	В	Std. Error	Beta	-		Tolerance	VIF
(Constant)	678	.301		-2.252	.025		
Tangibles	060	.054	043	-1.093	.275	.672	1.488
Reliability	.143	.055	.129	2.620	.009	.431	2.321
Responsiveness	.039	.048	.036	.806	.421	.526	1.900
Assurance	.419	.055	.318	7.623	.000	.600	1.667
Empathy	.559	.049	.473	11.370	.000	.601	1.664
Dependent Variable: Customer satisfaction							

Table 4 shows that out of the five independent variables, three independent variables which include: Reliability ($\beta = 0.143$, p = 0.009); Assurance ($\beta = 0.419$, p = 0.000) and Empathy ($\beta = 0.000$) 0.559, p = 0.000) had positive significant effects on the customer satisfaction. The β statistics is interpreted ranking measures of these independent variables, whereby the higher the magnitude of the β values, the more influence the variables has on the customer satisfaction. The unstandardized β coefficient of reliability shows that a unit changes in the level of reliability causes 0.143 standard deviation in customer satisfaction level and the change is significant as shown by the p-value while a unit change in assurance and empathy causes 0.419 and 0.559 standard deviation in customer satisfaction levels among mobile phone firms respectively. Other variables such as Tangibles ($\beta = -0.060$, p = 0.275) and Responsiveness ($\beta = 0.039$, p = 0.421) had insignificant negative effects and positive effects on the customer satisfaction levels among mobile phone firms respectively. The coefficient of a constant term was at ($\beta = -0.678$, p =0.025< 0.05) and is significant. The VIF values ranged from 1.488 to 2.321 and these are within the range recommended by Pan and Jackson (2008), and Rogerson (2001). Therefore, the regression results indicated that there was a statistically significant positive relationship between the service quality and customer satisfaction in a mobile phone sector in Kenya thereby rejecting H_o: β_i =0, Service quality has no significant influence on customer satisfaction among Kenya's mobile phone firms. The study developed analytical model shown below for predicting customer satisfaction level among mobile phones firms stated in the form of:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \epsilon_i$$

By adding regression coefficient as was shown in Table 4, this was later transformed into:

$$\hat{\mathbf{Y}}$$
 = - 0.678 - 0.060 Tangible + 0.143 Relaibility + 0.039 Responsiveness + 0.419 Assurance + 0.559 EmpathyEq.1

t= (-2.252) (-1.093) (2.620) (0.806) (7.623) (11.370)

S.E= (.301) (.054) (.055) (.048) (.055) (.049)

 R^2 =0.609 or 60.9%

DISCUSSION OF RESULTS

From the aforementioned results, the following discussions can be adduced. Firstly, the findings of the current study have received enormous support from theoretical literature. For instance, Oliver (1980) acknowledges that customer satisfaction is the direct consequences of service quality. Moreover, Lai et al, (2009); Wu and Lang, (2009); Kuo et.al, (2009) have all advanced the argument that with the improvement in service quality, customer satisfaction will be enhanced. Others like (O'Neill and Palmer, 2003) have concluded that in a highly competitive market place, service quality becomes a very critical success factor for gaining a sustainable competitive advantage in the marketplace which will then translate into customer satisfaction.

Empirically, the findings of the current study concurs with other studies (Zeithaml et.al, 1996, Gerpott et.al, 2001, Kuo et.al, 2009; Lin and Wang, 2006) that also revealed positive link between service quality and customer satisfaction in Korea, Germany and Taiwan respectively. More support for the findings in other service context were provided by several studies (Stergios et al., 2012; Lai et al., 2009; Wu and Lang, 2009; Baker, 2000) which have all found positive link between service quality and customer satisfaction in Europe, Asian and American experience. Furthermore, the results of the study by Naik et al., (2010) confirmed that service quality has influenced customer satisfaction by 45.8% in the retail units in the South Indian State of Andhra Pradesh. In addition, partial support for the current study was given by (Kim, Moreo and Yeh, 2004) who despite not using SEVQUAL model found that service quality have significant influence in customer satisfaction in restaurant setting. Finally, case-based study (Lin and Wang, 2006) found to have a significant positive relationship on user satisfaction (R²=0.410, P=0.000) in Chang Jung Christian University library in Taiwan. This finding is plausible because

of the complementary nature of the five dimensions of service quality. That is to say that service quality exerts more influence if all the five dimensions are aggregated into a composite variable than if each element is disaggregated.

However, the finding of this study is at variance with other studies (Nimako et.al 2010; Uddin and Bilkis; 2012; Agbor, 2011) that have revealed weak and insignificant link especially in mobile phone sector. Still, the study findings at contrast with Walfried et al., (2000) who found that SERVQUAL measure of service quality along its five dimensions did not possess strength in explaining the variance in customer satisfaction in private international Bank. According to Walfried et al., (2000), since private banking is high contact bank where customers expect relatively high level of service, SERVQUAL model was not best suited to measure service quality and satisfaction relationship. Moreover, a survey based study conducted by Shashzad and Saima (2012) has revealed that customer service exerts less influence on customer satisfaction in cellular industry (B=0.160, P<0.001). In addition, more contrasting result are provided by study (Agbor, 2011) whose case-based study revealed that there was no significant relationship between customer satisfaction and service quality (p = 0.269) in Umea University in Umea. Gibson (2009) attributed such unusual observation to the fact that service executives have either failed to implement service performance standards to address customer needs or have erroneously perceived that customers' service expectations were unrealistic and unreasonable. This therefore has created gaps in service delivery process and greatly reduced satisfaction levels in many service industry.

However, the findings of past studies (Wang and Shieh, 2006; Shashzad and Saima, 2012; Abdullah and Rozario, 2009; Agbor, 2011) are not without weaknesses relating to the design and methodology of their studies. These weaknesses in design, methodology and dimensionality of their studies have raised concerns as to the applicability, practicality and generalizability of their findings to other service settings. For instance (Wang and Shieh, 2006; Shashzad and Saima, 2012; Abdullah and Rozario, 2009) have all used small sample size while (Agbor, 2011) utilized convenience sampling technique thereby rendering their results unfit for generalization. In other cases, studies (Stergios et al., 2012; Shashzad and Saima, 2012) had many parameters which presented a problem for the collection of required data thus reducing the reliability of their findings. Moreover, studies (Abdullah and Rozario, 2009; Wang and Shieh, 2006, Nimako et al., 2000) did not use proper service quality measurement scale involving SERVQUAL pausing a limitation in terms of the conceptualization and dimensionality of the study. Others studies (Agbor, 2011; Wang and Shieh, 2006) have ignored the views of internal customers in their analysis thereby making it difficult to accurately establish if there is a relationship between the user's expected service quality and managers' perceived service

quality. More fundamentally is the fact that most of the previous studies (Zeithaml et.al, 1996, Gerpott et.al, 2001, Kuo et.al, 2009 and Lin and Wang, 2006) were conducted in a more developed economies in countries like Europe, Asia and USA whose context does not relates or respond to the context and circumstances encountered in the developing country such as Kenya. Finally many studies (Suleiman, 2013; Walfried et al., 2000; Agbor, 2011; Mohammad and Alhamadani, 2011; Abdullah and Rozario, 2009; Wang and Shieh, 2006), have only focused on establishing the relationship between service quality and customers satisfaction among banking sector, hospitality and university services which are regarded as high contact service settings.

However, the current study has a made a major milestone towards by developing and validating service quality measurement scale with enhanced sample size to be used in measuring low contact services. Unlike previously reviewed past studies which largely focused on high contact service setting such as banking and hospitality sector, the current study added to new knowledge by analyzing the effect of service quality practices on satisfaction of mobile phone service users, as a low contact services which is highly integrated with a technology with acceptable measurement scale. It further provided information on mobile phone services in Kenya which are previously lacking.

CONCLUSIONS

The study empirically incorporated and tested the effect of service quality dimensions on satisfaction level of mobile phone service users in Kenya. The study concluded that service quality practice is a critical antecedent of customer satisfaction in a mobile phone services. However, along its five dimensions, only three: reliability, assurance and empathy are the ones that exerted a positive and significant influence on the satisfaction levels. It further imply that the other two dimensions: tangibles and responsiveness are not significantly important in influencing customer satisfaction in mobile phone services. These findings contributed to new knowledge by developing and validating service quality measurement scale with enhanced sample size to be used in the subsequent studies involving low contact services. It also provided new empirical evidence linking service quality practices to satisfaction levels of customer in low contact service settings. It further provided information on mobile phone services quality practices in Kenya which are previously lacking. Further, this finding makes an important contribution in terms of modelling quality-satisfaction relationship as it identifies the variables which can be manipulated to better predict the level of customer satisfaction arising out the quality of services offered by mobile phone firms in the study area.

RECOMMENDATIONS

In view of findings and conclusions of the study, the following recommendations were made. Based on the above conclusion, it is recommended that in order to intensify the influence of service quality practices on customer satisfaction and to satisfy customers who encounter a service problem, service companies should encourage customers to complain (and make it is easy for them to do so), respond quickly and personally, and develop a problem resolution system. The study further recommends that substantial investment be made by mobile phone firms in areas of staff training to countervail possible dysfunctional and unethical employee behaviours that could lead to disappointing customer experiences with regard to the services on offer.

SUGGESTIONS FOR FURTHER STUDIES

Given that the current study is limited to a few organizations in one service industry, however, the assertion that relationship between service quality and customer satisfaction is moderated by customer communication and service failure would need to be validated by further research. Perhaps an effective way to validate this assertion is by focusing future studies on various other unrelated industry players through comparative studies between the players.

The paper examined the effect of service quality on customer satisfaction along the five dimensions of tangibles, reliability, responsiveness, assurance and empathy and found it significantly so at $R^2 = 60.9\%$. However, there could be other factors other than service quality that can influence satisfaction levels of customers in mobile phone sectors. Therefore, there is need to explore other variables that can account for customer satisfaction in future studies.

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