

ASSESSING THE IMPACT OF SERVICE QUALITY ON CUSTOMER LOYALTY: A CASE STUDY OF THE CELLULAR INDUSTRY OF GHANA

A.M. Iddrisu^a, I.K. Noonib^b, Fianko^c, K.S., W. Mensah^d

^a *Department of Marketing, University of Professional Studies, P.O. Box LG 149, Accra-Ghana*

^b *Centre for Data Processing and Geo-spatial Analysis, P.O. Box OS 278, Accra Ghana*

^c *Faculty of Business, The Graduate School, Ghana Technology University College. PMB 100, Tesano. Accra-Ghana.*

^d *Faculty of Business, Marshal University College*

ABSTRACT: *The study investigated the relationship between service quality and customer loyalty in the Cellular industry of Ghana. The research was conducted after the introduction of the Mobile Number Portability (MNP) system. The SERVQUAL model was used to measure relationship between service quality and customer loyalty among cellular service providers with customer satisfaction mediating these variables. Survey questionnaire was used to collect 311 data from mobile users who are subscribers of 5 of the major cellular firms in Accra Metropolis of Ghana. The data was analysed using correlation and multiple regression analysis. The findings revealed that service quality variables such as Tangibles, Responsiveness, Reliability, Assurance and Empathy have a positive influence on customer loyalty through customer satisfaction. The result further revealed customer satisfaction has a direct relationship with customer loyalty. The study recommends that mobile operators endeavour to improve the quality of mobile services offered to clients.*

KEYWORDS: Service quality, SERVQUAL model, Customer loyalty, Customer satisfaction, Dimension.

INTRODUCTION

In today's global competitive business environment, service quality has become an important concept in service research. It is virtually impossible for a business organization to survive without building customer satisfaction and brand loyalty (Panda, 2003). Numerous scientific research have empirically proven that service quality significantly influences firms performance (Poretla & Thanassoulis, 2005), improves profit margin (Kish, 2000; Duncan & Elliot, 2002) and market share (Fisher, 2001), boost brand image (Caruana, 2002; Ehigie, 2006) and promote customer loyalty (Qadri & Khan, 2014; Loh et al., 2010).

As a result, past studies have designed and developed different dynamic models to investigate the relationship between customer satisfaction, service quality dimensions and customer loyalty (Lo et al., 2010; Qadri & Khan, 2014). The dimensions are tangibility, reliability, responsiveness, assurance and empathy. In this era cellular service providers in Ghana are fiercely competing by rewarding subscribers with different business activities such as lower switching cost (Qadri & Khan, 2014), instant bonus upon credit topup (NCA, 2011) etc. The cellular industry is one of the fastest growing sectors of the Ghana economy and there is

competition within the sector for greater market share for 6 cellular operators namely, MTN, TIGO, Vodafone, Airtel, Expresso and Glo. Despite high penetration into the industry, potentially to drive competition which influences service quality, complaints from subscribers on poor service quality has increased in recent times (NCA, 2011). The country's cellular watchdog, the National Communications Authority (NCA) has threatened to sanction cellular service providers who compromise on service quality. Furthermore, the introduction of the Mobile Number Portability (MNP) was viewed as a measure by NCA to promote competition and improve upon service delivery. The number portability initiative, allows a subscriber to willingly transfer the mobile number from the current cellular services provider to another service provider with ease without losing the number. This initiative supports Lymperopoulos et al., 2006 and Panda (2003) who asserted that satisfaction is a customer perception about service quality by firms. So in order to retain the existing customer and attract new ones, cellular companies' needs to periodically identify the factors influencing customer loyalty achieved through satisfaction. Customer loyalty is a more certain way of improving firms performance and having competitive advantage. In developing customer loyalty, companies need conduct series of business activities and surveys. Customer satisfaction is significant for cellular companies to develop programs to boost customer loyalty (Ali et al., 2009; Lee, 2001; Qadri & Khan, 2014). Few of such studies have been conducted in developing world. For example, Lo et al., (2010) investigated in a Malaysia banking sector relationship between service quality and customer loyalty. The findings show that improvement in service quality can enhance customer loyalty. Ali et al. (2009) and Qadri & Khan (2014) both found relationship between customer satisfaction and switching cost with customer retention in the Cellular industry in Pakistan. Both studies found customer satisfaction to have little with customer retention. In Nigeria, Ojo (2010) found a positive relationship between on service quality and customer satisfaction in the cellular industry. Despite, these studies, there is a dearth of relevant literature on developing economies, and there is the need for a study to cover this literature gap. This study seeks to investigate the relationship between service quality and customer loyalty in Ghana's cellular industry using the SERVQUAL instrument developed by Parasuraman et al., (1991).

The SERVQUAL instrument comprised of 10 dimensions with 97 items which was later reduced to 5 dimensions with 22 items. The dimensions are tangibility, reliability, responsiveness, assurance and empathy.

Objectives of the Study

The general objective of the study is to investigate the relationship between service quality and customer loyalty in the cellular industry in Ghana.

Specifically, the study seeks to:

- i. Examine the applicability of cellular service quality dimensions on customer loyalty
- ii. To examine the relationship between cellular service quality dimensions and customer loyalty
- iii. To determine the relationship between customer satisfaction and customer loyalty

Research Questions

1. Can cellular service quality dimensions be applied to examine customer loyalty

2. What is the relationship between service quality dimensions on customer loyalty in the Cellular service providers in Ghana?
3. Is there any relationship between customer satisfaction and customer loyalty in Ghana's Cellular service industry?

LITERATURE REVIEW

Service Quality

Service quality as a multi-dimensional construct commonly based on customer judgements about service supplier and customer interactions and service itself (Cronin and Taylor, 1992; Babbakus and Boller, 1992; Zeithaml *et al.*, 1996). According to Parasuraman *et al.*, (1988), service quality is seen as the difference between customers' expectations and perceptions of service with the view of building a competitive advantage. This indicates that delivering quality service means conforming to customer expectations on a consistent basis and could be assessed by probing whether perceived service delivery meets, exceeds or fails to meet customer expectations (Cronin and Taylor, 1992; Oliver, 1999).

According to Sargeant and West (2001), it is obvious that the perceptions of service quality and commitment are related to loyalty, but each of the aforementioned factors, may have a different impact on customer loyalty in a particular market. There are two kinds of reasons that can determine relationship breakdown between the customer and the organization - the natural causes (customer demand extinction) and artificial causes (inadequate product specifications, insufficient quality of service level) (Sargeant and West, 2001). It is obvious that in order to increase customer loyalty the organization must seek to eliminate both natural and artificial customer exit reasons.

Service quality analysis makes an impact on the development of the customer loyalty concept – service quality can be regarded as one of the most frequently analyzed customer loyalty determinants. Tangible and intangible constituents of service quality were important in evaluating either customer view of an organization or customer trust in an organization (Doney and Cannon, 1997; Garbarino and Johnson, 1999). It has been defined that service quality is very important for customer satisfaction, and by it service quality impacts customer loyalty (Cronin and Taylor, 1992; Oliver, 1999). It can be stated, that the limitation of service quality studies is the inconsistency in determining the link between service quality and customer loyalty. Some studies have found that service quality determines customer satisfaction and affects customer loyalty through satisfaction (Cronin and Taylor, 1992; Rust and Oliver, 1994). Other studies, in contrast, have justified the influence of customer satisfaction on the quality of service (Bolton and Drew, 1991).

Howat, Crilley, and McGrath (2008) attributed the approach of research into service quality to American and Nordic schools of thought. The approach of American school of thought to service quality is best revealed in SERVQUAL model developed by Parasuraman *et al.*, (1985). In conceptualizing the basic service quality model the authors identified ten key determinants of service quality: access, communication, competence, courtesy, credibility, tangibility, reliability, responsiveness, security and understanding the customer. Later the authors grouped SERVQUAL dimensions into five and added assurance and empathy dimensions (Parasuraman *et al.*, 1988). The approach of the Nordic school of thought is reflected in Grönroos (1990)

works where the author analyses service quality as a construct with two components – technical (or outcome) and functional (or process). The technical component of quality shows the outcome obtained by the client by using the service whereas the functional component reflects the relation between the customer and the organization and the assessment of the service environment (Grönroos, 1990). Technical and functional quality components have been analysed and dealt with the many authors - Brady and Cronin (2001) distinguished service environment as a quality component, Kang and James (2004) proposed to see service environment as a functional factor. It is obvious that both technical and functional quality components should be analysed in the loyalty studies.

Dimensions of service Quality

From their path breaking exploratory research in 1985, Parasuraman, Zeithaml and Berry developed the SERVQUAL instrument and laid down a conceptual framework for the measurement of service quality. The SERVQUAL instrument has become the most dominant instrument for measuring service quality and it originally comprises 10 dimensions with 97 items but later reduced to 5 dimensions with 22 items in 1991. The five dimensions are tangibles, reliability, responsiveness, assurance and empathy.

Tangibles entail the physical evidence of the service. Specifically, the concept explores the physical facilities of the service provider, the appearance of personnel, the tools and equipment used to provide the service including other customers in the service facility. Tangibles are used by firms to convey image and signal quality (Zeithamal et al, 2006).

The service dimension of *reliability* measures the consistency of performance and the dependability of the service. According to Zeithaml et al. (2006) reliability is “the ability to perform the promised service dependably and accurately” or “delivering on its promises” Does the firm perform the service right at the first time? Does the firm honours it promises? These are some of the questions which need to be answered by service providers if they are to achieve reliability. The accuracy in billing, proper record keeping and performing the service at the designated time all constitute an attempt to achieve reliability. *Assurance* entails the knowledge and courtesy of employees and their ability to convey trust and confidence. It also includes competence, courtesy, credibility and security. Andaleeb and Conway (2006) noted that assurance may not be so important relative to other industries where the risk is higher and the outcome of using the service is uncertain. For instance, in the medical and healthcare industry, assurance is an important dimension that customers used as criteria in assessing a hospital or a surgeon for an operation. The trust and confidence may be represented in the personnel who connect the customer to the organization (Zeithaml et al., 2006). *Responsiveness* concerns the willingness or readiness of employees to provide service (Parasuraman et al., 1985). This dimension is concerned with dealing with the customer’s requests, questions and complaints promptly and attentively. A firm is known to be responsive when it communicates to its customers how long it would take to get answers or have their problems dealt with. To be successful, companies need to look at responsiveness from the view point of the customer rather than the company’s perspective (Zeithaml et al., 2006).

Empathy entails caring and provision of individualized attention to customers by personnel of the firm (Zeithaml et al., 2006). In this respect, the customer feels unique and special. In an attempt to develop empathy, personnel of the firm should endeavour to know the names of their customers, their preferences and needs and take steps to satisfy them. Small Scale enterprises

through the provision of customized services to clients are in a better position to achieve empathy than large firms.

Customer Satisfaction

In service management literature customer satisfaction is viewed as the result of a customer's perception of the value received in a transaction or relationship – where value equals perceived service quality relative to price and customer acquisition costs (Heskett *et al.*, 1990) – relative to the value expected from transactions or relationships with competing vendors (Zeithaml *et al.*, 1996). Customer satisfaction refers to the extent to which customers are happy with the products and services provided by a business. Gaining high levels of customer satisfaction is very important to a business because satisfied customers are most likely to be loyal and to make repeat orders and to use a wide range of services offered by a business. Gerpott *et al.* (2001) noted customer satisfaction is measured by that a customer's estimated experience of the extent to which a provider's services fulfil his or her expectations. A number of benefits are associated with customer satisfaction; satisfied customers buy additional products, are less influenced by competitors and stay loyal longer (Zineldin, 2000).

Ovenden (1995) caution organizations to pay particular attention to the way they treat their customers since some customers may not openly display their dissatisfaction with the kind of treatment meted them immediately. One important component in the concept of satisfaction is complaint management. Nyer (2000) investigated the relation between consumer complaints and consumer satisfaction and found that encouraging consumers to complain increased their satisfaction, and this was especially the case for the most dissatisfied customers. Research has also found that the more intensely a customer complains the greater the increases in satisfaction. Johnston (2001) argued that complaint management not only results in customer satisfaction, but also leads to operational improvement and improved financial performance.

Customer Loyalty

Customer loyalty can be defined in two distinct ways. First, loyalty is an attitude. Different feelings create an individual's overall attachment to a product, service, or organization. These feelings define the individual's (purely cognitive) degree of loyalty. The second definition of loyalty is behavioural. Examples of loyalty behaviour include continuing to purchase services from the same supplier, increasing the scale and or scope of a relationship, or the act of recommendation (Yi, 1990). Customer loyalty is developed over a period of time from a consistent record of meeting, and sometimes even exceeding customer expectations (Teich, 1997). Kotler *et al.* (1999) asserted that the cost of attracting a new customer may be five times the cost of keeping a current customer happy. Furthermore, Gremler and Brown (1996) noted that the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service exists.

Bloemer & Kasper (1995) hold a contrary view about customer loyalty. According to the authors, Loyalty may be interpreted as true loyalty rather than repeat purchasing behavior, which is the actual re-buying of a brand, regardless of commitment. Zeithaml *et al.* (1996) states loyalty is a multi-dimensional construct and includes both positive and negative responses. However, a loyal customer may not necessarily be a satisfied customer. Colgate *et al.* (1996) also noted that it is not always the case that customer defection is the inverse to

loyalty, while Levesque and Mc Dougall (1993) suggested that, “even a problem is not solved, approximately half of the customers would remain with the firm”.

Empirical Literature

Rahaman et al. 2011, explored service quality of the private commercial banks in Bangladesh. The findings from their study revealed that, one of the primary causes of service quality design failure is the lack of understanding of the evolving need and preferences of targeted customers.

Ihaamie (2010) examined the level of service quality, expectation and perception of the external customers towards the Malaysian public services using the SERVQUAL instrument. The study found that tangible is the most important dimension. It also has the lowest scores of perception. On the other hand, service quality gap is neither the lowest nor the highest. Finally, these external customers have the highest expectation on the reliability of the Malaysian public service.

Ojo (2010) investigated the relationship between service quality and customer satisfaction in the telecommunication industry with a focus on Mobile Telecommunication Network (MTN) Nigeria. A total of 230 respondents participated in the study. Regression analysis and Pearson product moment correlation coefficient were employed in analyzing the data. The study revealed a positive relationship between service quality and customer satisfaction. The researcher therefore recommended that organizations should focus more attention on service quality, because of its effects on customer satisfaction. To ensure that customer satisfaction level is high organization must first of all know the expectations of the customers and how they can meet such expectations. Customer satisfaction helps in customer loyalty and retention. It has been discovered that the cost of attracting new customer far exceeds the cost involved in retaining existing ones.

Kheng et al, (2010) employed the SERVQUAL model developed by Parasuraman et al., 1988 with five dimensions to evaluate the impact of service quality on customer loyalty among bank customers in Penang, Malaysia. Customer satisfaction was used as an intermediate variable. The findings show that improvement in service quality can enhance customer loyalty. The service quality dimensions that play a significant role in the equation are reliability, empathy, and assurance. The findings indicate that the overall respondents evaluate the bank positively, but still there are rooms for improvements.

Sammons (1982) conducted an exploratory study of customer satisfaction of fine dining restaurants in Singapore. The paper seeks to find out the service dimensions of service quality, which lead to higher levels of customer satisfaction. The findings from the study indicated that the service dimensions of assurance, empathy and tangibles are the most important to customers' evaluation of service quality, and thus, may have a positive influence customer satisfaction.

METHODOLOGY

The research used survey design relying on quantitative data to test the hypotheses generated for the study. The population frame is customers or subscribers from the 5 major cellular service providers in Ghana, namely MTN, Tigo, Airtel, Vodafone and Expresso.

Both primary and secondary data were used in the study. Primary data were collected through questionnaires. The questionnaire was written in the English language, pre-tested and edited before distribution to the respondents. The SERVQUAL instrument developed by Parasuraman *et al.*, (1991) was used to measure service quality. The SERVQUAL instrument comprised of 10 dimensions with 97 items and later reduced to 5 dimensions with 22 items. The SERVQUAL contains information on both customer expectation and perceived performance by firms. But for the purposes of this study, the performance only approach to service quality was adopted which contains five main SERVQUAL dimensions. The dimensions were Tangibles, Reliability, Responsiveness, Assurance and Empathy. A 5-point Likert scale with the range of 1 (strongly disagree) to 5 (strongly agree) were used for the measurement. The questionnaire incorporated two groups of questions. The first section in the questionnaire was about the demographic background of the respondents. The second section of the questionnaire was intended to define how the respondents qualify the service quality and loyalty.

Furthermore, two other constructs were developed to measure customer satisfaction and customer Loyalty. The items on customer satisfaction and customer loyalty constructs were adapted from Zhang & Feng (2009). The study used Cronbach's alpha to verify the internal consistency of each construct in order to achieve reliability. The internal reliability result of 0.7 and above implies an acceptable level.

The study chose the Accra Metropolis as the research area due to the fact that it has better telecommunication facilities and competition between the cellular service providers seems to be very fierce in the area as compared with other parts of the country. Besides, the Accra metropolis contains a heterogeneous population of mobile phone users with diverse socio-economic background and may be considered a representative sample of the population of mobile phone users in Ghana. Self-administered questionnaire was used to gather data from subscribers of the various cellular service providers. A total of 400 questionnaires were distributed to customers of the service providers but 311 questionnaires were filled and returned. The general response was positive with 77.8% response rate.

Then, SPSS software was used to analyse the collected data and perform statistical analysis. Data was analyzed using both the descriptive and analytical techniques. Descriptive statistics (using mean, standard deviations) was employed to analyze data from the questionnaire and the results were tested with non-parametric tests of significance.

To perform trend analysis using Pearson correlation and multiple regression analysis, a set of hypothesis was developed for the independent variables (service quality dimensions) and dependent variable (customer satisfaction and loyalty). The 5 dimensions were the predictors of customers' satisfaction and customer loyalty were considered as the components of the independent variable (service quality) to establish their effect on customer satisfaction and customer loyalty using the Pearson correlation and multiple regression analysis.

Research Hypotheses

Major hypothesis:

The dimensions of service quality are effective in creating customer satisfaction and customer loyalty in cellular industry.

Minor hypothesis

Hypothesis 1_a: There is significantly positive relationship between Tangibles and Customer Loyalty.

Hypothesis 1_b: There is significantly positive relationship between Tangibles and customer satisfaction.

Hypothesis 2_a: There is significantly positive relationship between Reliability and Customer Loyalty.

Hypothesis 2_b: There is significantly positive relationship between Reliability Customer satisfaction

Hypothesis 3_a: There is significantly positive relationship between Responsiveness and Customer Loyalty.

Hypothesis 3_b: There is significantly positive relationship between Responsiveness and customer satisfaction.

Hypothesis 4_a: There is significantly positive relationship between Empathy and Customer Loyalty.

Hypothesis 4_b: There is significantly positive relationship between Empathy and customer satisfaction.

Hypothesis 5_a: There is significantly positive relationship between Assurance and Customer Loyalty.

Hypothesis 5_b: There is significantly positive relationship between Assurance and customer satisfaction.

Hypothesis 6_a: Is there a positive effect that customer loyalty is mediated by customer satisfaction towards service quality.

Hypothesis 6_b: Is there is positive effect that high customer satisfaction will lead to customer loyalty.

Hypothesis testing

After verifying the reliability of the constructs, the study proceeded by constructing a summated scale for each construct by taking the average of items within a particular construct. The summated constructs are then used for correlation analysis and multiple linear regressions.

The correlation matrix of the constructs was computed using pair wise correlation to investigate the relationship between the variables. The correlation coefficient measures the strength of relationship between two variables.

The regression testing of hypotheses were performed in according with Baron & Kenny (1986) proposed 4 steps. The hypotheses were performed in 4 separate analysis test:

First step: Customer satisfaction as a dependent variable and dimensions of service quality as independent variables.

The trend analysis using regression analysis was performed using multiple regression function with the general regression equation is of the form:

$CS_t = \alpha_0 + TG_t + RS_t + RB_t + AS_t + EP_t + \varepsilon_t$ Where CS_t - Customer Satisfaction; TG -Tangibles; RB -Reliability, AS -Assurance, EP - Empathy. α_0 is a constant parameter while ε_t is the error term.

Second step: Customer Loyalty as a dependent variable and customer satisfaction as an independent variable.

The regression was fitted between customer satisfaction and customer loyalty as follows; $CL_t = \alpha_0 + CS_t + \varepsilon_t$ Where CL is Customer Loyalty and ε_t is an error term.

Third and fourth step: Customer Loyalty as dependent variables and dimensions of service quality as well as customer satisfaction as independent variables.

Finally, the study regressed customer loyalty on the five service quality dimensions. $CL_t = \alpha_0 + TG_t + RS_t + RB_t + AS_t + EP_t + CS_t + \varepsilon_t$

RESULTS

Descriptive statistics of respondents

Frequency Distribution of Responders Based on Gender

The findings from Table 1 shows that out of a total of 311 respondents, majority of participants are males (61.74%) and the remaining were female (38.26%) suggesting that there are more males participants than female participants.

Table 1: Frequency distribution based on gender

Gender	Frequency	Percentage
Male	192	61.74
Female	119	38.26
Total	311	100

Source: Field data computation (2014)

Frequency Distribution of Respondents Based on Education

The findings show (Table 2) 28.94% of the participants have had education up to the Tertiary level, 26.05% have Senior high school or its equivalent, and 18.97% have had at least Junior high school level and no education respectively. Only 7.07% of the participants have at least primary school.

Table 2: Frequency distribution based on Education

Educational level	<i>Frequency</i>	<i>Percentage</i>
Tertiary	90	28.94
SHS/TECH/VOC	81	26.05
JHS	59	18.97
Primary	22	7.07
None	59	18.97
Total	311	100

Frequency Distribution of Responders Based on Age

The findings from Table 3 show that the modal age group is 26-35 which has 79.4% of the total participants. Also 14.3% of participants between the ages of 36-45 years and 6.3% fall within the ages of 18-25 years.

Table 3: Frequency distribution based on Age

Age	<i>Frequency</i>	<i>Percentage</i>
18-27	132	42.44
28-37	103	33.12
38-47	27	8.68
48-57	34	10.93
Above 58	15	4.82
Total	311	100

Frequency Distribution of Responders Mobile Network

The results from Table 4 show that majority of sampled customer are MTN (41.1%) followed by Tigo (20.58%), Vodafone (18.97%), Airtel (9.97%) and Expresso (9.32%). The result from Table 5 means that MTN network is widely used but have the less than 50% market share.

Table 4: Respondents working experience

Telecom Networks	Frequency	Percentage
MTN	128	41.1
Tigo	64	20.58
Vodafone	59	18.97
Airtel	31	9.97
Expresso	29	9.32
Total	311	100

Descriptive Statistics of Reliability test of constructs

The reliability of the measures was assessed using the inter-item consistency measure of Cronbach's alpha. The alpha for all independent and dependent variables ranged from 0.70 to 0.83 and equal to or exceeded the minimum acceptable value of 0.7 (Table 5). The findings indicate high level of internal consistency among the items in each construct and as such each construct is reliable. Therefore, no item was deleted.

The means, standard deviations as well as the skewness of each construct are presented in Table 6. The mean valued for the independent and dependent variables ranges from 3.32 to 3.65 (Table 6). The finding from mean estimation show that, in general customers are not satisfied with the service cellular service providers offered them. The variable with higher standard deviation is Satisfaction (1.14) followed by loyalty, tangibles, responsiveness, empathy, reliability, and finally, assurance (0.69). The differences in standard deviation figure for all variables are small which signify that respondents are consistent in their evaluation. Finally, the standard error of skewness values indicated that the data is negatively skewed. This skewness values corroborate with the mean values which suggest that most of the responses selected by respondents were lower values such as 1 and 2 (1=Strongly disagree; 2 = Agree).

Table 5: Summary of descriptive statistics of variables

Dimensions	Cronbach Alpha	Number of items	Mean	Standard deviations	Skewness
Tangibles	0.72	3	3.5884	0.8517	-0.8606
Reliability	0.76	32	3.3240	0.7219	-0.4534
Responsiveness	0.71	4	3.3923	0.8321	-0.2950
Assurance	0.80	4	3.5466	0.6859	-0.0757
Empathy	0.70	4	3.4574	0.7473	-0.1346
Satisfaction	0.83	4	3.6487	1.1376	-0.4458
Loyalty	0.80	5	3.4296	1.0765	-0.3551

Source: Computed from field data Standard errors of skewness = 1.41

Results of Pearson's Correlations and Regression Analysis

The results of the correlation matrix are presented in Table 6. The findings of Pearson's correlations indicate all the variables are positively correlated to each other at 1% level of significance. This result from pair-wise correlations suggests that there is evidence of relationship between at least two variables. This provides further evidence to investigate using multiple regressions whether significant relationship exist among the variables.

The finding from the multiple regressions is presented in Table 7. The findings showed mixed results. This means that, not all of the coefficients of the Service Quality dimensions are significant at 1% level, thus suggesting significant relationship between variables.

Table 6: Pearson's correlations coefficients

	Tangibles	Responsiveness	Reliability	Assurance	Empathy	Satisfaction	Loyalty
Tangibles	1	0.450*	0.588*	0.435*	0.333*	0.534*	0.456*
Responsiveness		1	0.631*	0.603*	0.547*	0.615*	0.551*
Reliability			1	0.636*	0.486*	0.670*	0.648*
Assurance				1	0.512*	0.637*	0.573*
Empathy					1	0.567*	0.501*
Satisfaction						1	0.763*
Loyalty							1

Correlation is significant at the 0.01 level (2-tailed). Source: Estimated from SPSS 16

Table 7: Results of multiple regressions

	First step	Second step	Final step
Dependent variable	SATISFACTION	LOYALTY	LOYALTY
Independent variable	Standardised coefficients, β		
TANGIBLES	0.216**		-0.019
RESPONSIVENESS	0.226**		0.037
RELIABILITY	0.337**		0.280**
ASSURANCE	0.364**		0.080
EMPATHY	0.308**		0.520**
SATISFACTION		0.722**	0.520**
Steps summary	First step	Second step	Final step
R2	0.771	0.763	0.788
Adjusted R2	0.594	0.582	0.621
Constant	-1.377	0.796	-0.0065
F value	89.178	429.953	429.953

* $p < 0.01$ Source: Computed from SPSS 16.0

DISCUSSION

Regression Analysis shows that tangibles have no significant impact at 0.01 on customer loyalty. This result is consistent to the findings by Lo et al., 2010 but contrary to Sureshchandar et al. (2003). However, Tangibles were found to be positively significance on mediating variable (customer satisfaction). Tangibles recorded the lowest co-efficient (0.216) among the rest of the dimensions for customer satisfaction. This result means, a 1% increase in Tangibles will lead to 21.6% increase in customer satisfaction but do not lead to customer loyalty. This could mean a changing trend and participants may not treat tangibles as an important measurement. The cellular service providers must focus on other tangibles that influence customer loyalty.

The finding from the regression analysis shows that responsiveness has no significant relationship at 0.01 on customer loyalty. Surprisingly, these results are contrary to the prior findings in other studies (Jun & Cai, 2001; Diaz & Ruiz, 2002; Joseph et al., 2005; Glaveli et al., 2006). Customer loyalty remains an important factor that bank has to ensure in order to make profit. Customers, who use a particular cellular service, consider switching network not as a threat because they can keep their number. Customers are more educated and knowledgeable; their demand is also on an increasing trend. In order to stay in the business, cellular need to improvise their customer service campaign. Loyalty program can be used as one of the tools to retain customer. With the emergence of foreign bank, local bank need to improve their service quality by providing more experienced employees to serve the customer in the operations. Results from hypotheses testing also show that responsiveness found to have positive relationship with customer satisfaction this is in line with Glaveli et al. (2006) who highlighted the speed of service delivery enhanced perception of service quality while

Joseph et al. (2005) indicated that “no waiting time” raised customers’ satisfaction level.

Reliability is found to have positive significant impact at 0.01 on customer loyalty.

The result is consistent with previous studies by Nguyen & Leblanc (2001) and Bellini et al. (2005). Reliability was found to be significance on mediating variable (customer satisfaction). This is contrary to a study conducted by Zeithaml et al., (1996) that customers may stay with an organization even it predicts they are dissatisfied because they perceive they have no choice. For Reliability, the findings indicated that a percentage increase in the variable will lead to 33.7% rise in customer satisfaction and 28.01% increase in customer loyalty.

Finding from the study indicates no significant relationship between Assurance and customer loyalty contrary with previous studies including Lymperopoulos et al. (2006) and Ndubisi (2006). However, assurance was found to be a significant prediction of customer satisfaction and this is in line with Ndubisi (2006) arguing the communication is clearly a strong indicator of overall satisfaction and important source of customer satisfaction in any cellular industry. Assurance obtained the highest coefficient (0.364) indicating 36.4% increase in customer satisfaction for a 1% increase in Assurance. However, customer loyalty will show 8.02% for a increase in 1% increase in Assurance.

Empathy has positive significant impact at 0.01 on customer loyalty. This evidence is supported by the findings by Butcher (2001), Ndubisi (2006) and Ehigie (2006). As suggested by Butcher (2001), friendship between customers and particular service employees has a major influence on the development of customer loyalty. The coefficient of empathy is the 0.308 (customer

satisfaction) and 0.52 (customer loyalty) which means a 1% increase in empathy will result in 30.8% rise in customer satisfaction and 52.0% increase in customer loyalty. According to Ndubisi (2006), customer satisfaction can be achieved by offering personalized, flexible and adjustable services to suit the needs of customers. This is in line with the findings of this research that empathy has positive impact on customer satisfaction

In this study, it is also found that satisfaction has mediating effect on the relationships between service quality dimensions (tangibles, reliability, responsiveness, empathy and assurance) and customer loyalty. This result is consistent with studies done by Caruana (2002), Butcher (2001), Ehigie (2006) and Lam & Burton (2006).

On the monitoring side, there is National Communication Authority to oversee the conduct of cellular service providers in Ghana. Customers' information is one that should not be divulged to third party without their consent. However, subscribers receive messages and calls from marketing department of sales to market their products. Cellular companies should control this phenomenon since customers will be unhappy to receive strange information from companies and individuals they do not know.

From this study, it can be noticed that the overall respondents evaluate the cellular positively, but still in positive with mean of more than 4 for every variables. However, there are still rooms for improvements.

IMPLICATION TO RESEARCH AND PRACTICE

Customer loyalty remains an important factor that cellular companies have to ensure in order to make profit by retaining and attracting new customers. Customers, who use a particular cellular service, consider switching bank as a threat. Customer are more educated and knowledgeable, their demand is also on an increasing trend. In order to stay in the business, cellular companies need to improve on their customer service campaign. Customer loyalty programmes can be employed as a tool to retain customer.

Managerial implication of this research is that chief executive officers of cellular companies need effective recruitment and training program to:

- a) Ensure that employees offer professional services,
- b) pay more attention to customer needs,
- and c) void revealing customer information to marketers.

CONCLUSION

Customer loyalty service needs to be evaluated from time to time to provide managers of firms better tools to make informed decisions to meet changing needs of the industry and the complex nature of customers. New technologies must be incorporated as a factor to measure service quality in future researches. A clearer understanding as to the sequence of relationship between service quality, customer satisfaction and customer loyalty can help to ensure better targeting of customer using limited marketing resources.

The respondent coverage was limited to Accra Metropolis and generalisation to a wider population of cellular service providers ought to undertake with great care.

FUTURE RESEARCH

The sample size was relatively small and respondent coverage was limited to Accra Metropolis and generalisation to a wider population of cellular service providers ought to undertake with great care. The study recommends further studies to increase sample size and consider other metropolitan cities outside Accra where infrastructural facilities tend to differ.

REFERENCE

- Andaleeb, S. S. and Conway, C. (2006). "Customer satisfaction in the restaurant industry: An examination of the transaction-specific model" *Journal of Services Marketing*, 20(1), 3-11.
- Aydin, S. and Özer, G. (2005). "The analysis of antecedents of customer loyalty in the Babakus, E., & Boller, G. W. (1992). "An empirical assessment of the SERVQUAL Scale" *Journal of Business Research*, 24(3), 253-268.
- Booms, B. H. and Bitner M. J. (1981), "Marketing Strategies and Organization Structures for Services Firms", in *Marketing of Services*. J. Donnelly and W. George, eds, Chicago: American marketing, 47-51.
- Brady, M. K., Jr., Cronin, J., Jr., & Brand, R. R. (2002), "Performance-only measurement of service quality: A replication and extension", *Journal of Business Research*, 55, 27-31.
- Bryman, A. and Bell, E. (2003). *Business research methods*. New York: Oxford University Press.
- Caruana, A. (2002), "Service loyalty. The effects of service quality and the mediating role of customer satisfaction" *European Journal of Marketing*, 36(7/8), 811-828.
- Colgate, M., Stewart, K., and Kinsella, R. (1996), "Customer defection: a study of the student market in Ireland", *International Journal of Bank Marketing*, 14(3), 23-29.
- Cooper D. R., and Schindler P.S., (2001) *Business Research Methods*, Seventh Edition, New York, McGraw-Hill
- Cronin, J. J., Jr., and Taylor, S. A. (1992) "Measuring service quality: A reexamination and extension", *Journal of Marketing*, 56, 55-68.
- Crosby, P. B. (1979), "Quality Is Free: The Art of Making Quality Certain", New York: New American University.
- Ehigie, B. O. (2006), "Correlates of customer loyalty to their bank: a case study in Nigeria" *International Journal of Bank Marketing*, 24(7), 494-508.
- Fisher, A. (2001), "Winning the battle for customers" *Journal of Financial Services Marketing*, 6(2), 77-83.
- Gerpott, T. J., Rams, W., Schindler, A., (2001), "Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market", *Telecommunications Policy*, 25, 4, 249-69.
- Gremler, D.D., and Brown, S.W. (1996), "Service loyalty: its nature, importance and implications. *Proceedings American Marketing Association*, 171-180.
- Ilhaamie (2010), "Service Quality in Malaysian Public Service: Some Findings" *International Journal of Trade, Economics and Finance*, Vol. 1, No. 1,
- Jankowicz A., (2000), *Business Research Projects*, Third edition, London, Thomson Learning.
- Johnston, R., (2001), "Linking complaint management to profit", *International Journal of Service Industry Management*, 12, 1, 60-9.
- Journal of Marketing*, 60, April, 31-46.
- Kish, J. (2000). "Before your customers leave" *Bank Marketing*, 32(2), 30
- Kotler, P., Ang, S.H., Leong, S.M., and Tan, C.T. (1999), *Marketing Management: An Asian Perspective*. New Jersey: Prentice Hall Inc.

- Levesque, T.J., and McDougall, G.H.G. (1993). "Managing customer satisfaction: the nature of service problems and customer exit, voice and loyalty". *Asia Pacific Journal of Quality Management*, 2(2), 40-58.
- Lewis, R.C. and Booms, B.H. (1983), "The marketing aspects of service quality", in Berry, L., Shostack, G. and Upah, G. (Eds), *Emerging Perspectives on Services Marketing*, American Marketing Association, Chicago, IL, pp. 99-107.
- Lymperopoulos, C., Chaniotakis, I.E., and Soureli, M. (2006). The importance of service quality in bank selection for mortgage loans. *Managing Service Quality*, 16(4), 365-379.
- Newman, K. (2001), "Interrogating SERVQUAL: a critical assessment of service quality measurement in a high street retail bank". *International Journal of Bank Marketing*, 19(3), 126-139.
- No.7/8, pp.910-925.
- Nyer, P.U., (2000) "An investigation into whether complaining can cause increased consumer satisfaction", *Journal of Consumer Marketing*, 17, 1, 9-19.
- Oliver, R. L. (1999), "When consumer loyalty?" *Journal of Marketing*, Vol.63, pp.33-44.
- Ovenden, A., (1995), "Keep your customers happy and your competition will slowly fade away", *The TQM Magazine*, 7, 1, 46-9.
- Panda, T. K. (2003). Creating customer lifetime value through effective CRM in financial services industry. *Journal of Services Research*, 2(2), 157-171.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L.(1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
- Portela, M.C.A.S., and Thanassoulis, E. (2005). Profitability of a sample of Portuguese bank branches and its decomposition into technical and allocative components. *European Journal of Operational Research*, 162(3), 850-866.
- Saunders, N.K.M., Lewis, P. and Thornhill, A. (2000) "Research Methods for Business Students 2nd ed.Simposon, J.(2002), "The Impact of the Internet in Banking: Observations and Evidence From Developed and Emerging Markets," *Telematics and Informatics*, Vol. 19: 315-330, 2002.
- Teich, I. (1997). Holding on to customers: the bottom-line benefits of relationship building. *Bank Marketing*, 29(2), 12-13.
- Turkish mobile telecommunication Market" *European Journal of Marketing*, Vol.39,
- Yi.Y.(1990), "Critical Review of Consumer Satisfaction. Review of Marketing", Vol. 1990, pp. 68-123.
- Zeithaml, V. A. (1981), "How Consumer Evaluation processes Differ between Goods and Services," in *Marketing of services*, J. Donnelly and W. George, eds, Chicago: American marketing, 186-190
- Zeithaml, V.A., Berry, L.L., and Parasuraman, A. (1996). The behavioral consequences of service quality.
- Zineldin, M., (2000), TRM Total Relationship Management, Student litteratur, Lund.