

## An Assessment of Customer Satisfaction with GSM Service Quality in Cross River State, Nigeria

Amadi, Christan<sup>1\*</sup> Essien, Eyo Emmanuel<sup>2</sup>  
1.Federal University wukari, Nigeria  
2.University of Calabar, Calabar, Nigeria

### Abstract

This Study investigated the satisfaction of customers with the quality of services delivered by GSM firms operating in Cross River State. The purpose was to determine the influence of network quality, service charge, customer care support as independent variables on the dependent variable (Customer satisfaction). A conceptual model of customer satisfaction was developed for this study. Three hypotheses was formulated and tested for this study. Primary data were collected from 300 GSM subscribers drawn proportionally across the three geographical zones of Cross River State. The questionnaire were validated through face, construct and content, and used for data collection. The reliability of the instrument was ascertained through split-half reliability estimate. The data were descriptively analyzed using tables and figures, while the Pearson product moment was adopted to test the hypotheses. It was found that all the research variables (network quality service charge and customer care support) had a high correlation with customer satisfaction. Arising from these finding, it was recommended that mobile operators should make a conscious effort to upgrade their mobile service equipment symbolic in their telecommunication services, by investing in the necessary material(s) that could boost call quality and coverage. It is also relevant that all the elements in a service quality programme be strictly implemented to the later. Assurance, reliability, empathy, tangibles, and responsiveness are equally important in satisfying customers

**Keywords:** customer satisfaction, service quality, service charge, customer care and GSM service.

### 1. Introduction

Today, what used to be a centrally planned telecommunication monopoly in Nigeria, fierce competition has emerged. The subscribers now have options (MTN, Airtel, Glo, Etisalat) to choose according to their preference. In 2001, Nigeria welcomed the Global System for Mobile Communication (GSM). Its adoption is expected to serve as a practical option to the then analogue (NITEL) system. Also during its introduction in 2001, the main objective was to provide effectual communication services that will support speech quality, roaming, spectral efficiency and so forth. The development of the GSM System into Nigeria was well embraced and found to be relatively efficient at the onset. AS time went on, operators in the industry experienced an unprecedented expansion in customer base which later handicapped the networks to function efficiently. Although this unprecedented growth has brought huge amount of income to both the operators and government through tax and license fees. As revolutionary as GSM may seems to be, many problems mystified their quality of service in recent past. According to Adegoke and Babalola (2011), quality of service is an important key performance indicator that is used in determining the efficiency of an industry in terms of service rendered. That in telecommunication system, accessibility, retainability and connection (voice) qualities are three major factors used in evaluating quality service of an operator.

And for customers in the industry, it is expected that maximum satisfaction be derived from any service paid. This maximum satisfaction has now become a difficult task to achieve in GSM industry. This is so because of the avalanche of complains of poor network in terms of error in connectivity and inter-connectivity with other networks, call termination, drop calls and/or call retention, call set-up failure, service charge, customer care support, instability in power supply and security of infrastructure among others.

However, from extant marketing literature, service quality and customer satisfaction appears to be the most important concept and construct of the marketing theory and practice (Spreng and Mark, 1996). In today's competitive market trend, it is arguably that the key to sustainable competitive advantage dwells in quality service deliveries that will in turn result in customer satisfaction. The limelight of these two concepts (customer satisfaction and quality service) is evidenced by the proliferation of both theoretical and empirical studies on the subject that have abounded over the years. Unfortunately however, among previous customer satisfaction literature, there is currently paucity of both empirical and theoretical framework on customer satisfaction with GSM service quality in emerging economics like Nigeria and Cross River State in particular. This problem serves as a handicap and important information gap, especially in the delivery of effective marketing strategies for GSM firms in Nigeria. Bearing this in mind, the researcher seeks to establish the extent to which network quality, customer care support, service charge among others affect customer satisfaction with GSM services in Nigeria, with Cross River State as a case study.

## **2. Literature Review and theoretical Frame work**

From extant marketing literature, service quality and customer satisfaction appears to be the most important concept and construct of the marketing theory and practice (Spreng and Mckoy, 1996). In today's competitive market trend, it is arguably that the key to sustainable competitive advantages dwells in quality service delivery that will in turn result to customer satisfaction. The limelight of these two concepts (customer satisfaction and quality service) is evidenced by the proliferation of both theoretical and empirical studies on the topic that have abounded over the years.

### **2.1 Customer Satisfaction**

Kotler and Armstrong (2006) opined that customer satisfaction is derived when a new product consumed by the consumer meets his expectation. This means that consumers have their individuals expectations, which if met by the seller makes them feel satisfied. These expectations according to Hoch and Diegthon (1989) are desired product/service outcomes and include pre-consumption beliefs about overall performance or the levels or attributes possessed by product/services. Hawkins, Best and Coney (2001) view Consumer satisfaction from a broadened perspective, and state that creating satisfied customers, and thus future sales require that customer continue to believe that your brand meets their needs and offer superior value after they have use it. That is; you must deliver as much as or more value than your customer initially expected, and it must be enough to satisfy their needs. Satisfaction can be associated with feelings of happiness, relief acceptance, excitement, achievement, and delight, and dissatisfaction can be related to feeling of tolerance, distress, regret, agitation, outrage, sadness and lamentations. The need for service providers to satisfy their customers need not be over emphasized as consumers remain the bedrock of every business. Satisfied customers buy and buy again. They are loyal customers; they preach the goodness about a satisfied brand to others and lure them to buy.

To this end, four major theories that will help us appreciate the concept of satisfaction/dissatisfaction are here examined (Contrast theory, Attributory theory, Equity theory, Expectation disconfirmation theory)

#### **2.1. 2 Contrast theory**

The Contrast theory presumes that when product expectations are not matched by actual performance, the contrast between expectation and outcome will cause the consumer to exaggerate the disparity (Engel and Blackwell, 1982; Howard and Sheth, 1969; Cardozo, 1965). As a result, individuals may shift their evaluation away from expectation if those expectations are inconsistency with reality. According to this theory, an understatement of product performance will lead to perceived performance higher than an actual performance, whereas overstatement will lead to perceived performance lower than objective performance. That is perception of product performance are enhanced with positive disconfirmation, and lowered by negative disconfirmation. This perceived performance is primarily a function of disconfirmation. Here, disconfirmation is defined as the performance minus expectations so that positive disconfirmation occurs when performance exceeds expectation.

#### **2. 1. 3 Attributory Theory**

Wiener (1980 and 1985) proposes the attribution theory. The theory is used to determine how and when dissatisfaction occurs. Its essence is to understand how individuals find explanation or causes of behavior. A consumer who bought a product and suddenly discovered that it failed to fulfill his needs is likely to be dissatisfied. Attribution theory comes into play when he tries to find explanation to the cause of his dissatisfaction. According to the theory, three key factors influence the nature of this explanation. Stability, focus and controllability. Dissatisfaction is likely to occur if the cause is perceived to be permanent, marketer-oriented and under volition (Hoyer & Maccinis, 1997)

#### **2.1.4 Equity theory**

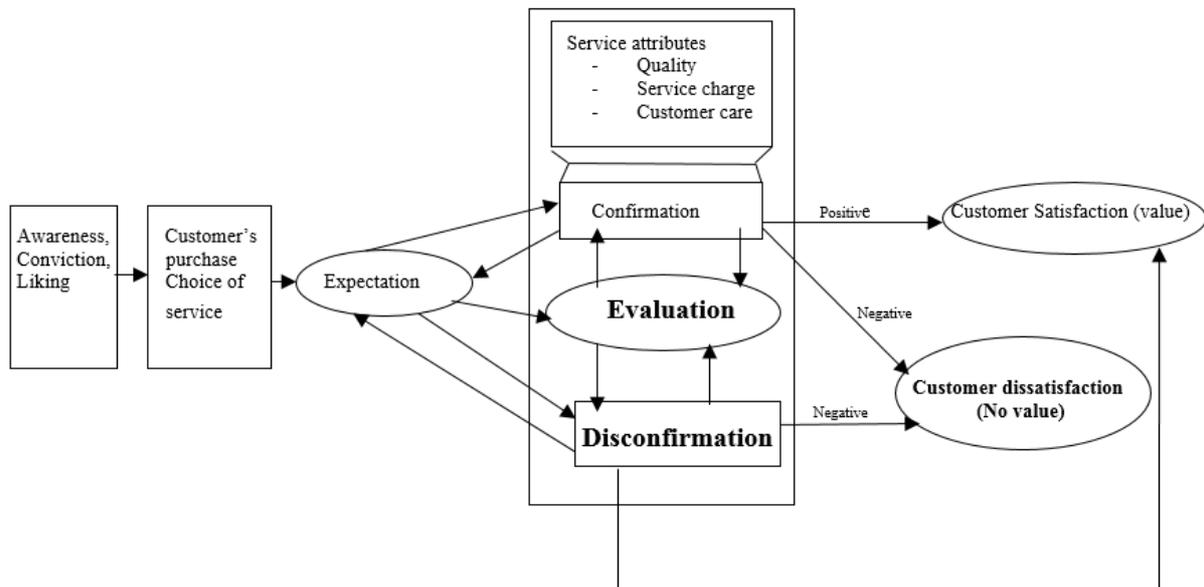
Fisk and Young (1985); Swan and Oliver (1995) proposed the equality theory. This theory advocates a balance between inputs made by consumers and outputs derived from sellers of goods/services in exchange. It preaches fairness in an exchange transaction.

According to this theory, Consumer's inputs could be in the form of quality, price, time etc while seller's inputs include quality manufacturing, selling effort and financial plan. However, seller's output could be a fair profit. For equity to take place, the consumer must perceive a fair dealing in his exchange transaction with the seller.

#### **2.1.5 Expectation Disconfirmation theory**

Disconfirmation is the most central construct to the study of satisfaction/dissatisfaction. It occurs when there is a disparity between prior expectations and actual performance. Expectations in this case are desired goods/services outcomes and include preconception beliefs about overall performance or the levels of attributes possessed by a products/service (Hoyer and Maccinnis, 1997). Performance is the yardstick for determining whether expected outcomes have been achieved or not. Performance can be objective or subjective. If it is objective, then the assessment is based on actual performance, but if it is subjective, then it is based on individual feelings. Disconfirmation occurs when performance is evaluated to be more than expected, then a positive disconfirmation has occurred and satisfaction is derived. If performance is lower than expected, negative disconfirmation has

occurred and dissatisfaction results.



Source: adapted from Hoyer & Maccinis, 1997

Fig 1: Conceptual model of customer satisfaction

The diagram above reveals that consumer decision making process starts with awareness, conviction, liking of a product or service (poter 1961). This leads to the actual purchase which involves choice of service/product. The model shows that consumers have expectations, which they compare with the performance of goods/services. Expectation according to Kurtz and Clow (1998) forms the basis for evaluation of satisfaction in the post purchase stage. Where perceived performance matches expectations, the result is confirmation, where there are differences between expectation and outcome disconfirmation occurs. Positive confirmation occurs when products/services performance exceeds expectation. Satisfaction results from positive disconfirmation or confirmation of expectations and dissatisfaction the negative disconfirmation

## 2.2 Service Quality

Service quality describes a rational of differences between expectations and competence along the important quality dimensions. Parasuraman, Zeithaml and Berry (1985) considered ten conditions useful for customers assessment of quality service; Reliability, Responsiveness, tangibles, communications, creditability, security, competence courtesy, understanding the customer and the service accessibility. Almost along the same line, Zethaml, Parasuraman and Berry (1999) propose a service scale (SERVQUAL). SERVQUAL is a broadly speaking instrument that has five dimensions: Reliability, Responsiveness, Empathy, Assurance and Tangibles. These variables were found to have a significant positive correlation with quality service. This variable continues to be widely referenced in marketing studies of customer satisfaction and consumer preference (Kotler and Armstrong, 2006). The SERVQUAL model is a diagnostic tool used to measure customer service and perceived satisfaction. Reliability is the service company's ability to deliver promise on time. In this study, we focused on three factors (network quality, service charge and customer care support) that could predict quality of service provided by GSM service providers. Network quality is defined as call quality perceived by customers, which include call clarity when calling and receiving and network coverage. Service charge (pricing) is the cost of refilling credits variety of refill cards, affordability of refill cards and speed of refilling. Customers care support defined as complaint management system which include promptness (ability to get attendance quickly), attitudes (response of the attendance) and competence (ability to provide solution).

### 2.2.1 Service quality Gap

A gap is the difference, imbalance or disparity which is determined to exist between customer's perception of firm's performance and their prior expectation. Service quality (SQ) perceived by customers is therefore as a result of customers expectation (E) of services that the organization should offer versus their perception of the performance (P) delivered by the organization.

Service quality (SQ) = customers perception (P) minus customers expectation. Management of service quality largely depends on managing the gabs between expectations and perception of customers (Zeithaml and Bitner, 2003). The goals of the firms are to maximize the gab between (P) and (E). Rowley (1997) pointed out that previous researchers such as Lehtinen and Lehtinen (1982); Groroons (1988) also applied gap principles similar to that propose by parasuraman et al (1985).

**2.2.2 Call Retention/Call Drop:** Call retention is the competence to retain a GSM call after it has been set up, while dropped calls is a situation whereby an initiated call is suddenly terminated while conversation is ongoing.

It is common occurrence in Nigeria GSM System that communication is terminated unexpectedly while conversation is ongoing. This is technically called call drops. Reasons for call drops are as listed below:

- Calls may be dropped when mobile phone moves out of coverage area. Once the signal strength between the mobile equipment and the network cannot be sustained, the call will be terminated.
- Calls may be lost due to path loss or shadowing. For instance, in typical GSM System, transmit power is +43Db and receiving power ranges between -60Db to 85Db. If due to path loss, the receiver signal strength drops to -95dB, that call will drop
- Battery power loss: Calls may be lost if a mobile phone at the other end of the call loses battery power and stops transmitting.

**2.2.3 Congestion:** Congestion is a phenomenon in telecommunication system that occurs when more subscribers attempt simultaneously to access the network than it is able to handle. This is a situation where subscriber numbers has completely overgrown network capacity. Reasons for network congestion are:

- Lack of adequate infrastructure – to guarantee efficient network quality, there must be adequate infrastructure equipments to be able to drive the network. Also like size of the equipment must be in tandem with the subscribers base. When subscribers' base overgrows infrastructural equipment, congestion is inevitable.
- Insufficient channels: since there are not infrastructural equipments (e.g. base station), automatically, there will be lack of adequate channels to support network functionality. Channels are normally used to determine number of subscribers that can be allowed to use a base station.

**2.3 Security of Infrastructure.** Due to the volatile nature of some parts of the country, telecommunication equipments are not safe from vandalization and theft. There have been many reported cases of theft and vandalization at base sites. This development has prompted telecoms operators to invest heavily on recruitment of security personnel at their base stations sites. One direct implication of this is that the cost incurred on these security guards goes into the total cost of operation and subsequently leading to increase in call tariff.

- However, the recruitment of security personnel has not deterred the act of theft, vandalization of telecommunication equipment at base sites. In addition, some base stations have been shut down due to these nefarious activities. The technical implication of this is that once a base station is shut down, call transmission for subscribers in that location would automatically be transferred to another nearby base station which will lead to network congestion. Subsequently, subscribers within this area will experience poor quality service.

**Call Set Up Failure:** This is an important parameter used in determining network accessibility. It is the ability of a subscriber to initiate a call and granted access. Technically, during a GSM call setup, a speech call is assigned from SDCCH (Stand alone dedicated channel) to a TCH (Traffic Channels). If the TCH selected suffers from interference, then the message will fail. And the assignment failure message will be sent to MSC. The call will then be re-established.

- According to the earlier survey carried out by N.C.C (2006), all the major operators performed poorly in the area of number of time that users dial before connection is made. The survey shows that only less than half of the subscribers on each of the networks do get their calls through on the first or 2<sup>nd</sup> dial (Airtel- 49%, MTN- 46%, GLO 47%, Etisalat- 45%).

**Instability in power supply:** Recent study revealed that 78% of the total cost of operations by GSM operators goes into provision of generators and its fueling. The epileptic nature of our power supply system in the country had necessitated the over dependence on generators. The direct implication of this is that call tariff will drastically shoot up. Apart from this, it is obvious that the cost of procurement and fueling is so enormous, if our power supply system is stable, this huge amount would have been used in upgrading and optimizing existing base stations in other to improve service quality

## 2.4 Service Charge

In a Competitive business area such as the GSM telecom, service providers are at liberty to compete on price and quality of their services as it is equally necessary for them to meet customer requirement and expectation in their service charge (Melody, 2001). Today, due to stiff competitions in the telecommunication industry, the service providers tend to offer innovative services and competitive prices to attract handful of customers (Haqea, 2011). A Network quality with a lower service charge has a course to attract market and financial performance. Kollman (2000) States that revenue from a number of call minutes verifies the basic commercial success for the network providers. That the success of telecommunication industry to a great extent depends on continuing usage of pricing policies which needs to be considered on several levels. The likely consequence of this is that

offering a high quality price is not sufficient to attract and retain customers in the mobile telecommunication market, but offering the service at an attractive and affordable charge is equally necessary to achieve competitive advantage. Bolton and Drew (1991) revealed that the loyalty of individual customer is influenced by price consideration. In a related findings, Anthanassopoulos (2000), Verki and Colgate (2001) states that pricing was found to have a positive effect on overall satisfaction. According to Xial et al (2004), price fairness describes consumer's evaluation of whether a seller's price quality relationship is justifiable. Customers tend to be loyal when they feel that the price quality relationship is in consonance with the service they receive. Choi et al (2006) found that disloyal customers were more sensitive in the sense that changes in price motivated them to other organization, where as loyal customer were not affected by price changes

## 2.5 Customer Care Support

Customer care support can be defined in terms of management of customer complaints or how queries about a company service are treated. Albrecht and Zemke (1985) stated that between 54 and 70 percent of customer who make complaints regarding a company service offering will no doubt repeat the purchase of its product/service if their complaint was resolved. That the percentage will increase to 95% if the customer feels that the complaints were timely resolved. Customers whose complaints were satisfactory resolve will tell an average of five people about the treatment they received. Hart, Hasket and Sasser (1990) indicate that when a service provider has agreed to assume responsibility to customer's complaints and resolve same, the customer's tendency to hold fast to that company's service would be very high. McNeal (1994) reveals that about 5 percents of a company's customers who were dissatisfied with the management of their complaints easily tell their friends and associates about their experience vis-a-vis their services. Thus, service provider ought to have knowledge or at a regular interval determine how well their customers are treated. Ovenden (1995) argued that companies need to know how well her customers are treated. That customer hardly complains, but when they do, it might be too late to retain such customers. In a related development, Levesque and McDougall (1996) stated that if customer complaint is not satisfactory handled, it has an effect on the customers attitude towards the service providers, even though the study did not lend credence to the hypothesis that good customer complain management leads to increase customers satisfaction. That satisfactory problem recovery leads to an equal level of customer satisfaction as if a problem had not occurred.

Better understanding of this fact is that a customer assesses service performance based on their past experience, benefits received; service quality and well queries and complaints are treated.

### Hypotheses of the Study

H1: There is a significant positive relationship between network quality and customer satisfaction with GSM services in Cross river state

H2: GSM service charge has a significant influence on their customer satisfaction Cross river state

H3: There is a significant relationship between customer care support and customer satisfaction with GSM services Cross river state

## 3. Research methodology

The design of the research is descriptive in nature. Specifically, the cross sectional survey and the exploratory research design was adopted for this study. It is cross sectional in the sense that, the opinions and views of the subject on the research concept and construct was measured at one point in time from a representative sample selected to describe the population of the study<sup>7</sup>

As a preliminary approach, the researcher carried out an exploratory research, which was however used to gain background information about the general nature of the problem, and define the problem more precisely and also generate hypotheses for the study.

The population of the study comprised of all GSM service subscribers in Cross River State, Nigeria. There is no formal statistical data or literature on the population of GSM subscribers in Cross River State. Because of this, the researcher resorted to the use of top man formula, which according to Hair et al (2005) is suitable for the selection of respondents for which the populations are unknown.

The sample size was determined using the top man formula as presented by Hair et al (2005)

$$n = Z^2 \times Pq / E^2 \quad (1)$$

Where

n = Sample size

z = degree of confidence (1.96)<sup>2</sup>

p = Estimate of expected population proportion having desired characteristics based on prior information

Q = Estimate of expected population not having the characteristics of interest

E = Estimated error margin (assumed to be 0.05)<sup>2</sup>

In a pilot survey of 40 respondents by the researcher, twenty four (24) of the respondents interviewed indicated

that the variables outlined in the pilot survey instrument are strongly considered for their satisfaction with GSM service quality. A strong positive response of twenty-four (24) out of forty (40) equals 60 percents. The estimated sample size was determined thus:

$n = (1.96)^2, p=0.6, Q=0.4, E= (0-05)^2$  .Therefore  $n = 1.96^2 \times 0.6 \times 0.4 / 0.5 = 369$ . The sample size of 369 was proportionally prorated among the three geopolitical zones, with the south zone making up for more percent because it is observed to be more GSM-user densely populated than the central and north zones. The sample was systematically drawn from the three geo-political zones as follows, the University of Calabar from the southern zone, 179 respondents, Ikom local Government Council from the Central Zone, 95 respondents and Obudu in the Northern zone, 95 respondents.

The study was cross sectional in design and was conducted using self administered questionnaires. Of the 369 questionnaires distributed to respondents, only 300 of the returned copies were properly filled out and used for this study. This represents a response rate of 81.3 percent. All measures followed the five point likert scale procedures, and were adapted from extant literature.

To determine the validity and reliability of the measuring instruments, firstly, necessary indices were extracted by using the research literature for each of the components mentioned in the hypotheses, then the propose amendments were made and the questionnaire was edited by a number of research experts in marketing management and research, particularly in the subject of service marketing. Their comments were used as a basis of correction in the final copies of the questionnaire.

To ensure that the instrument measures what it purports to measure, the split-half reliability technique was adopted to test the reliability. Two halves of the collected data were statically analyzed using the Pearson product moment correction analysis. The obtained 'r' value was corrected using spearman brown prophesy formula. The split half of the research variables yielded from moderate to high correlation coefficient that ranged from 0.62 to 0.93. These correlations coefficient were considered good enough measure for the intended variables. The split half reliability estimate have been presented in Table 1

Table 1: Split half reliability estimate for variables in GSM service quality and customer satisfaction questionnaire.

Variables	No of items	Half	X	SD	$r^{1/2^{1/2}}$ *	$r^{**}$
Network quality	5	1 <sup>st</sup>	13.2	.52	0.45	0.62
	5	2 <sup>nd</sup>	13.4	2.95		
Service charge	5	1 <sup>st</sup>	12.1	3.9	0.87	0.93
	5	2 <sup>nd</sup>	12.1	3.84		
Customer care	5	1 <sup>st</sup>	13.6	2.72	0.69	0.82
	5	2 <sup>nd</sup>	13.2	2.74		
Customer satisfaction	5	1 <sup>st</sup>	12.7	2.58	0.85	0.92
	5	2 <sup>nd</sup>	13.7	3.47		
	5	2 <sup>nd</sup>	13.7	3.47		

\* Correlation value between the two halves

\*\* Correlation value after correction with spearman Brown formula (n = 40)

#### 4. Result and discussions

The first hypothesis stated the nature of the relationship between network quality and customer satisfaction with GSM services.

Table 2: correlation analysis between network quality and customer satisfaction with GSM services

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r	r crit
Network Quality (x)	1150	488,900	96,850	0.94	0.113
Customer satisfaction (y)	300	21,500			

$P > 0.05$ ;  $df = 298$ , critical r value 0.113

Correlation coefficient of 0.94 supports the hypothesis that there is a direct positive relationship between network quality and customer satisfaction with GSM services. This finding is supported by many studies in extant literature about the relationship of network quality and customer satisfaction with GSM services. Gerpoth et al (2001); Turel and Serenko (2006) showed that network quality and customer satisfaction with GSM services are inseparable.

These findings lend credence to Ovenden (1995), which revealed that network quality leads to

satisfaction. Customer retention is central to the development of business relationship, and this relationship depends on customer's satisfaction (Desai and Mahayan, 1988).

Table 2 presents the summary of data analysis and correlation result to determine the significance of the relationship between service charge and customer satisfaction with GSM service

Table 3: correlation result between service charge and customer satisfaction with GSM services

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r	rcrit
	$\sum y$	$\sum y^2$			
Service Charge	690	48.900	41,750	0.33	
Customer Satisfaction	300	21,500			

$P > 0.05$ ;  $df = 289$ , critical r value 0.113

Statistical analysis showed a positive relationship between service charge and customer satisfaction with GSM services. This finding is consistent with Kollmann (2000), which states that a network with a lower service charge (price) has a tendency to attract a market and financial performance. That offering a high quality price is not sufficient to attract and retain customers in the mobile telecommunication market; offering the service at an alternative and affordable price is equally necessary to achieve competitive advantage. Bolton and Drew (1991) revealed that the satisfaction and loyalty of individual customer is affected by price considerations. Choi et al (2006) found that disloyal customers were more prices sensitive in the sense that changes in price motivated them to move to other organization, whereas loyal customers were not affected by price. However, the findings contradicts that of Venn and Fore (2005), who concluded that service charge had little influence on customer satisfaction, and is meaningless without aligning it with other mobile service in their study of the German mobile telecommunication industry.

Table 4: correlation analysis showing relationship between customers cares support and customer Satisfaction with GSM services.

Variables	$\sum x$	$\sum x^2$	$\sum xy$	r	rcrit
	$\sum y$	$\sum y^2$			
Customer care support (x)	1070	419.100	89.950	0.94	0.113
Customer satisfaction (y)	300	21,500			

$P > 0.05$ ,  $df = 298$  critical r value 0.113

Result of the analysis showed that customer satisfaction with GSM service has a direct & significant relationship with the care & support they receive from mobile service providers. This is in agreement with the findings of Kim (2000), who investigate 50 respondents in Korea mobile communication on customer care support, that customer care support had significant influence on customer satisfaction. A similar study by Albrecht & Zemke (1985) showed that between 54 percent & 70 percent customer whose problem are properly handled, will do business again with the company & this figure increases to 95 percent if the customer feel that their complain was resolved promptly.

## 5. Conclusion

Network performance is the most important parameter for measurement of quality of service. Poor performance of a telecom network would induce customer dissatisfaction toward operator. It is evident from this presentation that the quality of service rendered by these operators is far below expectation. So urgent and proactive actions should be taken by the operators towards improving network performance. If this is done, customers could enjoy the best quality in terms of call success rate, voice quality, network availability.

## 6. Recommendations

Having evaluated the parameters that attributed to poor quality of service by operators, the following under listed methods are suggested toward improving network performance:

1. Operators should upgrade and optimize all existing base stations. If this is done, it will check call set up failures due to rise in traffic volumes.
2. Install additional base stations across the country. This would create room for the network to handle more traffic.
3. Building additional switching centers across the country and increase capacity to handle more traffic.
4. If a particular base station is to be taken off-line (either for schedule maintenance, repairs, upgrades etc), all neighboring base stations should have their communication power level increased. This will increase their coverage area, thereby reducing congestion and drop calls.

5. Operators should invest heavily in transmission network development and have a proper radio planning. This would ensure increased network resilience, improved bandwidth utilization and alleviation of capacity bottleneck.
6. Operators should continue to give back to the society aimed at enhancing social security. Because no amount of security personnel can deter hoodlums from attacking base station sites. Also if government can create a major job for its citizens, poverty level would be reduced and a lot of boys and girls will be taken off streets. Hence, we would have a secured environment.
7. Mobile operators should endeavor to offer reasonable service charge and price discount. Constant survey that will indicate customer perception of the value for money vis-à-vis their service should be carried out
8. Mobile operators should further improve their quality of customer care support through personnel training and provision of better customer friendly equipment. The questure will afford the customer care personnel the opportunity to acquire the require skill and knowledge to offer a constant high standard of service delivery in relation to complaint management and queries
9. It is further recommended that as a service provider, it is important that quality of service of the firm be reassessed on regularly interval with a view for improvement if necessary. It is also relevant that that all the elements in service quality programme be strictly followed and implemented to the later, that is, assurance, reliability, empathy, tangibles and responsiveness are equally important in satisfying customer
10. Incessant power failures should be addressed by the government. This will stop the over-dependence on generator for power supply. If this is achieved, call tariff would drastically go down.

## References

- Albrecht, K. and Zemke, R. (1985) *Service America* Illinois: Dow Jones Irwin
- Adegoke, A.S and Babalola, I.T (2011). Quality service analysis of GSM telephone system in Nigeria. *America journal of scientific and industrial research* 2(5), 707-712
- Anthanassopulos, A. D. (2000). Customer Satisfaction Cues to Support Market Segmentation and Switching Behavior. *Journal of Business Research* 47(3), 191 – 207
- Bolton, R. N. and Drew, J. H. (1998). A Multistage Model of Customers Assessment of Service Quality and Value. *Journal of Consumer Research* 17, 275 – 284
- Cardozo, R. N. (1965). An Experimental Study of Consumer Effort, Expectation and Satisfaction. *Journal of Marketing Research* 2, 244 – 249
- Choi, D. H., Kim, C. M., Kim, S. and Kim, S. H. (2006), Customer Loyalty and Disloyalty Internal Retail Stores: Its Antecedents and its Effect on Customer Price Sensitivity. *International Journal of Management* 23(4), 925 – 943
- Dessai, K. K. and Mahajan, V. (1988). Strategic Role of Affect – Based Attitudes in the Acquisition Development, and Retention of Customer. *Journal of Business Research*. 12 (8), 72-81
- Fisk, R. P. and Young, C. E. (1985). Disconfirmation of Equity Expectations Effects on Consumer Satisfaction with Services. In Hirsch Heman, E. *Association for Consumer Research* 10, 398 – 409
- Gerpott, T. J., Rams, W. And Schindler, A. (2001) Customer Retention, Loyalty and Satisfaction in the German Mobile Telecommunication Market. *Telecommunication Policy* 25 (4), 249 – 169.
- Groroons, C. (1988) Service Quality: The Service Criteria of Good Perceived Service Quality. *Review of Business* 9: 10 – 13.
- Hair, Jr. J. F. R., Black, B., Babin, B., Anderson, R. E. and Taltam, R. I. (2005). *Multivariate Data analysis*. California: Prentice Hall
- Hart, C. W. L., Haskett, J. L. & Sasser, E. W Jr. (1990) Customer Satisfaction & Retention. The Experience of Individual Employees. *Managing Service Quality* 14(1) 40 – 57.
- Haques, A., Rahamanl, S. and Rehamanl, M. (2010). Factor Determinant of the Choice of Mobile Service Providers: Structural Equation Modeling Approach on Bangladesh Consumers. *Business and Economics Research Journal* 1(3), 17 – 34
- Hawkins, D., Best, R. J. and Coney, A. K. (2001) *Consumer Behavior: Building Marketing Strategy* New-York: Irwin/McGraw Hill Companies
- Hoch, S.J. and Deighton, J. (1989) Managing What Consumer Learn from Experience. *Journal of Marketing* 53 (2), 1 – 20.
- Howard, J. A & Sheth, J. N. (1969). *The Theory of Buyer Behavior*. New-York. John Wiley & Sons.
- Hoyer, W. D. And Mcchims, D. (1997). *Consumer Behavior*. New – York: Houghton Mifflin Company.
- Kim, H. (2000) the Churn Analysis and Determinants of Customer Loyalty in Korea Mobile Phone. *Korea Information Review* 8, 1 – 18.
- Kollman, T. (2000). The Price/Acceptance Functions: Perspective of a Pricing Policy in European

- Telecommunication Markets. *European Journal of Innovation Management* 3(1), 7 – 14
- Kotler, P. and Armstrong G. (2006) *Principles of Marketing* New – York: Prentice Hall
- Kurtz, D. I. and Clow, K. E. (1988) *Services Marketing* New – York: Wiley and Son.
- Lavesque, T. and McDoughall G.H.G (1996) Determinants of Customer Satisfaction in Retail Banking. *International Journal Of Bank Marketing* 14 (7), 12 – 20.
- Lehtinen, J.R and Lehtinen, U (1982) Service quality: a study of quality dimensions unpublished working paper service management institute Helsinki.
- Lonergan, D., Swain, W., Guy, A., Yunus, F., Jackson, J. And Mallinson, K. (2004) Asia – Pacific Region to Drive Global Wireless Revenue. *The Yankee Group Report* Boston: MA
- McNeale, R. M. (1994). *Making Customer Satisfaction Happen* London: Chapman and Hall.
- Melody, W. H. (2001). *Policy Objectives and Models of Regulatory Practices* Denmark: Lyngby.
- Oliver, R. L. (1981). Measurement and Evaluation of Satisfaction Process in Retail. *Journal of Retailing* 57(Fall), 25 – 48.
- Oliver, R. L and Swan, J. E. (1989) Consumer Perceptions of Interpersonal Equality & Satisfaction in Transactions. A Field Survey Approach. *Journal of Marketing* 53 (2), 21 – 35.
- Ovenden, A., (1995). Keep Your Customer Happy and Competition will Slowly Fade Away. *The Tom Magazine* 7(1), 46 – 49.
- Parasuraman, A., Zeithaml, V. A and Berry, L.L (1985) A conceptual model of service quality and its implication for the future Research *Journal of marketing* 49, 41 – 50.
- Parasuramann, A., Zeithaml, V. A. and Berry, L. L. (1988). SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing* 4(Spring) 2 – 40.
- Peterson, R. A. and Wilson, W. R. (1992). Measuring Customers Satisfaction. Fact and Artifact *Journal and the Academy of Marketing Science* 20, 61 – 71.
- Porter, L. W. (1961). A Study of Perceived Need Satisfaction in Bottom and Middle Management Jobs. *Journal of Applied Psychology* 45, 1 – 10.
- Riggs, H. E. (1983). *Managing High Technology Companies*. California: Lifetime Learning Publication.
- Rowley, J. (1997) Beyond Service quality Dimensions in Higher Education and towards a service contract, *Quality assurance Education* 5(1), 7 – 14.
- Sharp, B. and Sharp, A. (1997) Loyalty Programmes and their Impact on Repeat Purchase Loyalty Patterns. *International Journal of Research in Marketing* 14(5) 47 – 486.
- Spreng, R.A.and Mckoy, R.D. (1996) an empirical examination of model Of perceives quality and satisfaction. *Journal of retailing* 72(2), 201-214
- Turel, O. & Serenko, A. (2006). Satisfaction with Mobile Services in Canada. *An Empirical Investigation of Telecommunication Policy* 30, 314 – 331.
- Weiner, B. (1985). An Attributional Theory of Achievement, Motivation and Emotion. *Psychological Review* 92, 548 – 573.
- Weiner, B. (1980). A Cognition (Attribution) Emotion – Action Model of Motivated Behavior. An Analysis of Judgment of Help Giving. *Journal of Personality and Social Psychology* 39(2), 186 – 200.
- Xia, L., Monroe, K. and Cox, J. (2004). The Price is Unfair. A Conceptual Framework of Price Fairness Perceptions *Journal of Marketing* 68(4), 1 – 15.
- Verki, S. and Colgate, M. (2001). The Role of Price Perceptions in Integrated Model Behavior Intentions. *Journal of Service Research* 3, 232 – 240.
- Zathaml, V. A and Bitner, M.J (2003) *Service marketing: Integrating customer focus across firm* New York, McGraw Hill.
- Zeithaml, V.A. Parasuraman, A and Berry, L.L (1990) *Delivery quality service: Balancing customer perception and expectations*, New York: the True press.