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SERVICE QUALITY AND CUSTOMER SATISFACTION OF MOBILE TELECOM SERVICES IN TAMALE, GHANA

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SERVICE QUALITY AND CUSTOMER SATISFACTION OF MOBILE TELECOM

SERVICES IN TAMALE, GHANA

BY

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DECLARATION

Student

I Abdulai Majeed, do hereby declare that except for reference to other people's work which has been respectfully acknowledged, this thesis is the result of my own effort under the supervision of Dr. Africanus Lewil Diedong and that no part of it has been presented for another degree in this university or elsewhere:

Abdulai Majeed   …………………………….   …………………………

Candidate   Signature   Date

Supervisor

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University for Development Studies.

Supervisor's Signature:…………………………………. Date: ……………………

Name: Dr. Africanus Lewil Diedong

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ABSTRACT

The most worrying issue to customers of the Mobile Telecom networks today is service quality and customer satisfaction. A lot of studies have been done in this area with many targeting service quality issues from the service providers' perspective. This has resulted into several measures by these Telecom network companies to improve on the services they render. The National Communications Authority (NCA) has taken several steps in terms of warnings and fines as well as license revocation in recent times to deal with this issue of poor service delivery. This has however not led to the total satisfaction of customers of Mobile Telecom networks. This study assessed service quality and customer satisfaction of Mobile Telecom services in Tamale, Ghana. Both qualitative and quantitative techniques were employed in a mixed methods design. Key informant interviews, questionnaires and focus group discussions were the major sources of data collection tools used for the study. A total of 378 customers of Mobile Telecom networks answered a questionnaire in this study. Two focused group discussions were conducted, one for vendors and the other for customers with each consisting of ten participants. Three key informant interviews were done, one each for the Mobile Telecom networks and the other for the industry regulator, NCA. The quantitative data in this study was analysed using the descriptive statistics function of SPSS while the thematic analysis was used to analyse the qualitative data. The results show that customers perceived service quality and satisfaction in different ways. While most Vodafone customers were satisfied with the service they receive from their network service provider, most customers of MTN were not satisfied. The study finally brought to light, the challenges of both networks in meeting customer satisfaction in Tamale. The study concludes that, certain aspects of the operations of both MTN and Vodafone networks have to be improved in order to meet customer satisfaction in Tamale. The study recommends that customers should take advantage of the Mobile Number Portability (MNP) to switch service providers whilst still maintaining their existing mobile phone number if they realize poor service delivery is not improving. It is recommended that, service providers take steps to improve service quality through effective application of new technology in the current trends in globalization so that the use of mobile phones in the study area would be enhanced as usage patterns expand to capture data with the emergence of smart phones.

LIST OF ACRONYMS

ACMA   Australian Communications and Media Authority

ADP   Accelerated Development Plan

BI   Behaviour Intentions

CAGR   Compounded Annual Growth Rate

CPA   Consumer Protection Agency

CP   Customer Perceptions

CPQ   Consumer Perceived Quality

CS   Customer Satisfaction

EPA   Environmental Protection Agency

GIS   Geographic Information System

GMTI   Ghanaian Mobile Telecom Industry

GSS   Ghana Statistical Service

ICT   Information and Communications Technology

IT   Information Technology

ITU   International Telecommunications Union

LI   Legislative Instrument

MMS   Multimedia Message Service

MNP   Mobile Number Portability

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MTN	Mobile Telecommunications Network
NCA	National Communications Authority
NDAC	Northern Development Advocacy Center
PTT	Ghana Post, Telephone and Telegraph
SDA	Sagnarigu District Assembly
SMS	Short Message Service
SPSS	Statistical Product and Service Solutions
SQ	Service Quality
SSA	Sub Saharan Africa
TaMA	Tamale Metropolitan Assembly
TV	Television
WSIS	World Summit on Information Society
WTO	World Trade Organisation

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INTRODUCTION

1.1 Background of the Study

Mobile Telecommunications services are used on daily basis. Reasons for its use are individual and occupation specific. Getting quality in terms of service is, therefore, a concern for all in society. With the penetration rate for mobile phone usage in Ghana reaching 138.37%, as at the end of May, 2019, compared to the base year 1992 when the penetration rate was 0.3%, quality service issues need to be taken seriously.

Mobile Telecommunication refers to the use of technological devices for the exchange of information, ideas and thoughts through the medium of a mobile phone, telephone or wireless network (ITU, 2013). Before the emergence of technology, man used drums, light signals, and traditional long-distance communication media such as message-carrying pigeons, riders and criers (Nimako & Azumah, 2009). However, in modern times, the use of mobile phones has come to simplify information searching and sharing between and among persons.

Mobile Telecommunications devices are spreading extensively throughout the globe. These are seen as evidence of the latest spate of globalization. Mobile phone usage is extending largely to several parts of the world (ITU, 2013). There are close to four billion end users across the globe, Mobile phones have over-taken every technology before it. This development has been achieved in a quarter of a century (ITU, 2013). Mobile phones are now used by five out of every ten people in the world (Kalba, 2008). Usage patterns show from 12years onwards, people across the world would use Mobile phones.

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Statistics indicate that Mobile penetration rates depend on region by region and country by country with more than 100% in Jamaica and Russia to less than 1% in Papua New Guinea. On regional basis, the penetration rates vary from Europe's 84.53% to Africa's 15.03%. Within the African continent there is consistent variation, with most markets remaining below the 10% penetration rate and growing rapidly. South Africa and some other African countries are above 70%. Ghana's total estimated penetration rate for Mobile Phones is about 138.37% as at May, 2019 (NCA, 2019). This means the trends in Mobile Phone adoption has been increasing over the years.

In line with the above developments, Customer's Service Quality (SQ) and Customer's Satisfaction (CS) issues are a recurrent theme which is a cause for concern for customers of Mobile Telecom networks (Nimako & Azumah, 2009). Customer Satisfaction has gained much attention from scholars and practitioners as it has become one of the cardinal means for achieving quality improvement programmes. It focuses on strategic marketing management in business organisations and has a long-term perspective for growth (Anantha & Arokiasamy, 2013).

The difference between services and goods as far as research in the service industry is concerned is that the nature of services is intangible whereas goods are tangible. This makes measurement of service quality complicated. Service quality measures how much the service delivered meets the customers' expectations in terms of performance (Anantha & Arokiasamy, 2013). Therefore in measuring Mobile Telecommunications service quality, researchers generally use the term perceived service quality. Perceived service quality is seen as a result of the comparison of perceptions about service delivery process and actual outcome of the service delivered by the operating companies to their various end users (Grönroos, 1984; Lovelock and Wirtz, 2011).

The perception of quality is multilateral: quality means different things to different people (Gerson, 1993) and from the perspective of quality's dimensions (input, process and output) and from the perspective of the stakeholders, there are many views of quality (Reichheld, 1996 Arokiasamy & Abdullah, 2013).

Authors in business research such as Parasuraman, Zeithaml & Berry (1988) hold the view that if perceived service is less than expected service, then it means unsatisfactory service quality. But, if perceived service is higher than expected service, then service quality is satisfactory. These authors (Anantha & Arokiasamy, 2013) further posited that there is a negative discrepancy between perceptions and expectations which is what is called-a 'performance-gap', which causes dissatisfaction. It is a positive discrepancy when it leads to consumer delight in service use.

Satisfaction of end users with service quality delivered in Ghana's Mobile Telecommunication Networks (MTNs) is nebulous as there is scanty documentation on the issue (Nimako, Azumah, Donkor & Adu-Brobbey, 2010). Discussions on Telecom developments and investments in Ghana, (Frempong & Henten, 2004 p. 3), holds that, "the goals set by government have only partly been met-especially with respect to the development in rural areas-and the quality of service is still low and has even deteriorated on some indicators. There is, therefore, a widespread dissatisfaction with the general telecom development in Ghana among users as well as policy decision makers and administrators." At present, there have been more customer complaints about poor service quality which has been reported by the National Communications Authority (NCA, 2018). The NCA's measures against these defaulting Telecom operators have been fines and sanctions from time to time.

Before 1994, Ghana's Telecommunication industry was a monopoly by the government corporation, Ghana Post, Telephone and Telegraph. Between 1994 and 2000, the industry was deregulated to a competitive telecom environment that allowed strong internet and Mobile Telecom network providers to operate. This was as a result of the Accelerated Development Program (ADP) 1994-2000 (Addy-Nayo, 2001) when the government announced a five-year comprehensive restructuring of the industry. The main policy objectives of the program were aimed at: achieving a density between 1.5 and 2.5 lines per 100 people; improving public access in rural and urban areas, through the provision of payphone facilities (public and private); and expanding the coverage of mobile services among others throughout the country. The major policy objective of ADP was access and coverage in all parts of the country. However, with extensive coverage, issues about quality will emerge.

Four Mobile Telecom network companies have license to operate in Ghana and two of these offer fixed-line services. The four are MTN, Vodafone, Airteltigo and Glo Mobile. Vodafone and Airteltigo offer additional services in fixed-line connectivity. The former Airtel and Tigo merged in the third quarter of 2018 to become Airteltigo to offer services to their customers. The now defunct Expresso also had their license revoked by the NCA in the first quarter of 2018 for failing to meet their license conditions. These four companies all have customers in the Tamale Mobile Telecom market.

1.2 Problem Statement

Mobile devices are used to serve many functions in our everyday activities including business and solving social problems. The statistics shows close to 100% in Africa and over 130% in Ghana as some increasing mobile penetration rates. However, the quality of service provided by the operating networks remains a matter of concern to everyone in

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society as complaints emerge in the print and electronic media on daily basis. For instance, an article published in the Daily Graphic in August, 2011 outlined the concerns of customers about quality service with the statement that ''many are those who have often complained about the frequent call drops, delays in call set-ups and call congestion'' (Amenyo, 2011). The challenges of customers were further highlighted back in May of 2010 when the Consumer Protection Agency (CPA), an advocacy group in Ghana, asked end users in the country to switch off their phones for at least six hours in protest against "poor services" by the operators. This move was to highlight the difficulties end users go through in the use of their chosen Mobile service (Magdaline, 2013).

In 2013, the NCA asked MTN to submit a compensation plan for all its customers who suffered poor service delivery from August 15th to 20th, 2013. MTN was fined over GH¢ 1 million for inaccurately charging for incoming international calls. During that week in August, 2013, Mobile customers were unable to make calls, top up credit or use data bundles. The situation was described as very frustrating by many (Magdaline, 2013). These complaints have awakened mobile phone service providers such as MTN, Vodafone, Airteltigo and Glo to adopt measures from time to time to satisfy their customers. For instance, since 2009, MTN has spent about US $200million in network upgrade and expansion and in September, 2010 MTN also invested US$ 350million in a new switch technology called "the blade cluster" to improve network quality and customer experience in Ghana (Nimako & Azumah, 2009). The total estimated investment in network upgrade and expansion by Vodafone show that the company spends millions of dollars annually in this regard (Whitehill, 2011).

Despite the promises of good network quality and these measures of constant spending by the networks in upgrading and expansion the companies are taking, subscribers of

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both MTN and Vodafone and the other mobile networks in Tamale still experience poor network service in areas such as "call drops", "misdirection of calls", "out of coverage area notices" and a general difficulty in making calls. The NCA conducts periodic monitoring of quality of service delivered in the telecom sector. One such report based on findings in Northern Region from 10th February to 4th March 2016 was published recently for all operators by the NCA on its official website. The NCA indicated some areas of challenges for customers in petronising the services of these companies. The report showed that the voice service of Expresso is not available in the entire Northern Region and Glo voice service is available only in parts of the Tamale Metropolitan area (NCA, 2016).

The Mobile Network Service regulator, the NCA is supposed to regulate the services of these companies to ensure they deliver quality service to their respective customers. But aside warnings and some fines from time to time, nothing much has been done. (Nimako & Azumah, 2009). Apart from Mobile phones being used for staying in touch, they also serve business and formal purposes. Farmers in Northern Ghana listed challenges like lack of connectivity reception, unplanned end to calls and bad or inconsistent sound when attempting to make calls (Hamdia and Paul, 2014). Concerns about poor quality service are expressed in the print and electronic media on frequent occasions (Amenyo, 2011). Therefore, this study aims to delve into service quality and customer satisfaction issues of the Mobile Telecom services in Tamale.

1.3 Research Questions

1.3.1 Main Research Question

How do end users assess service quality of Mobile Telecom services in Tamale, Ghana?

1.3.2 Specific Research Questions

The following are the specific research questions for the study:

1. What factors determine the quality of Mobile Telecom services in Tamale?

2. How does the quality of service rendered by the Mobile Telecoms affect the businesses of their customers in Tamale?

3. How do standards in customer care align with customers' expectations on the nature of services provided by the Mobile Telecom networks in Tamale?

4. What measures are Telecom Networks in Tamale putting in place to improve customer satisfaction?

1.4 Research Objectives

1.4.1 Main Objective

To assess the service quality and customer satisfaction of Mobile Telecom services in Tamale, Ghana.

1.4.2 Specific Objectives

1. To examine the factors that determine the quality of service of Mobile Telecoms in Tamale.

2. To assess the likely effects of quality service on the businesses of Mobile Telecom network end users.

3. To compare standards in customer care against customers' expectations on the nature of services provided by the Mobile Telecom networks in Tamale.

4. To recommend measures Mobile Telecom Networks in Tamale can put in place to improve customer satisfaction.

1.5 Justification for the Study

Theoretically, this study has been necessitated by the fact that existing literature in the Telecom industry have studied customer satisfaction with service delivery quality but the problem still persists in the Tamale Mobile Telecom services industry. Therefore, the study attempts to add relevant insights into the literature on service quality and customer satisfaction in Telecommunications in urban and rural areas with particular reference to the Tamale Metropolitan Area.

Practically, there is little improvement for the customer in terms of quality service delivery. This study is relevant in this direction because the views of customers on this topic would provide an insight into what concrete measures can be put in place to improve service delivery.

In terms of policy relevance, Telecom services customers and vendors in the Mobile Telecom industry can rely on findings in this study to inform policy decisions as far as the service providers' efforts are concerned to satisfactorily meet the demands of their end users.

1.6 Scope of the Study

This study covered the city of Tamale in the Northern Region of Ghana. This is because the city has a large population of Mobile phone users, vendors as well as operators and from whom data was gathered for the purpose of this research. Tamale is also the capital of the Tamale Metropolitan Assembly located in the Northern Region and shares boundaries with several other districts. By virtue of its location, the findings of this research can be generalized to the other parts of the country.

This study was done in the study area because the over reliance on service quality studies from the perspective of service providers makes the concerns about poor service delivery persistent. It is therefore necessary to find out what exactly customers of mobile telecom services see as quality service based on their satisfaction.

The study spanned about twelve months across 2018 and 2019 within the study area. This presented an opportunity to collect data during this period as well as validate the data collected and analyzed.

1.7 Organisation of the Study

This study is organized into five chapters. The first chapter deals with the general introduction of the study. Chapter Two looks at the review of relevant literature on the topic of the study. The third chapter focuses on the profile of the study area and methodology. The fourth chapter looks at the presentation of findings and analyses as well as discussions of results. The fifth chapter deals with the summary of the major findings, conclusion and recommendations as well as limitations of the study and areas of further research.

CHAPTER TWO

LITERATURE REVIEW

2.1Introduction

This chapter seeks to discuss the theoretical and conceptual framework of the topic of study. The chapter also reviewed relevant literature from the global, regional, national and Tamale on end users expectations and satisfaction of service quality. The review provided grounds for in-depth analysis into issues arising from customer expectations of service quality in the telecom sector.

2.2 Conceptual Definitions

2.2.1 Customers

The term customers are commonly used to refer to end-users of products. Hayes (1997 p. 16) opines that "'customer' is a generic term referring to anybody who receives a service or product from some other person or group of people." Broadly, there are internal and external customers, where internal customers refer to the staff or employees and external customers refer to stakeholders of the organization. Within the external customer group there are several customer categories; clients (vendors), customers and constituents (Nimako & Azumah, 2009). Customers in this regard are people who subscribe to the services of the Mobile Telecommunications networks in Tamale.

2.2.2 Customer Perception

Customer perception is the result of what customers think will happen (expectations), interacting with what customers think did happen (perceptions) in the use of a service over time. If the product's performance falls short of the customers' expectations, the buyer is dissatisfied. If performance matches expectations, the buyer is satisfied. If

performance exceeds expectations, the buyer is delighted. (Kotler, Bowen, & Makens, 1999). Gronroos (1982) & Parasuraman et al., (1985) have proposed that customers perception of service quality is based on the comparison of their expectations (what they feel service providers should offer) with their perceptions of the performance of the service provider. Perceptions of customers are based solely on what they receive from the service encounter (Douglas & Connor, 2003,).

Therefore, customer perceptions as seen above has something to do with satisfaction or otherwise. But a basic difference between the two is that they are dependent on each other. In this study, customer perceptions of concern were on service quality gaps/determinants in the Mobile Telecom services and customers awareness about them. This is seen in the main objective of the study.

2.2.3 Customer Satisfaction

This is a "psychological concept that involves the feeling of well-being and pleasures that results from obtaining what one hopes for and expect from an appealing product and/or service." (WTO, 1985). It is again seen "as an attitude-like judgment following a purchase act or a series of consumer product interactions." Yi, (1990) as cited in Lovelock and Wirtz, (2007). Stated differently, it is "a customer's post-purchase evaluation and affective response to the overall product or service experience" (Oliver, 1992). In this study, the aim was to identify what customers of Mobile Telecom networks in Tamale refer to as their satisfaction through the services they receive. How these services affect their business, income and the status of their switching intentions were areas considered.

Customer satisfaction has been considered to be based on the customer's experience on a particular service encounter, (Cronin & Taylor, 1992) it is in line with the fact that

service quality is a determinant of customer satisfaction, because service quality comes from outcome of the services from service providers in organizations. Some researchers have found empirical supports for the view of the point mentioned above (Anderson & Sullivan, 1993; Fornell et al., 1996; Spreng & Macky, 1996); where customer satisfaction came as a result of service quality. In relating customer satisfaction and service quality, researchers have been more precise about the meaning and measurements of satisfaction and service quality. Satisfaction and service quality have certain things in common, but satisfaction generally is a broader concept, whereas service quality focuses specifically on dimensions of service (Wilson et al., 2008). Although it is stated that other factors such as price and product quality can affect customer satisfaction, perceived service quality is a component of customer satisfaction (Zeithaml et al. 2006 p. 106-107 as cited in Arokiasamy & Abdullah, 2013). This theory complies with the idea of Wilson et al. (2008) and has been confirmed by the definition of customer satisfaction presented by other researchers. Service quality is a focused evaluation that reflects the customer's perception of reliability, assurance, responsiveness, empathy and tangibility while satisfaction is more inclusive and it is influenced by perceptions of service quality, product quality and price, also situational factors and personal factors. (Wilson, 2008 p. 78 as cited in Arokiasamy & Abdullah, 2013).

2.2.4 Service and its Attributes

The following are some definitions of service:

- "A service is the non-material equivalent of a good. A service provision is an economic activity that does not result in ownership, and this is what differentiates it from providing physical goods. It is claimed to be a process that creates benefits by facilitating either a change in customers, a change in

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their physical possessions, material/service (economics)." (Nimako & Azumah, 2009).

- "Services" are "acts, deeds, performances, or efforts-have different characteristics from goods-defined as articles, devices, materials, objects or things" (Rathmell, 1966, Berry, 1980 & Lovelock, 2005).

- Service is referred to "as changes in the condition of a person or something in the possession of the customer." (Hill, 1997 Edvardsson, 2005 p. 112-113).

In this study, service was seen as the range of activities that customers of Mobile network companies in Tamale are able to do with their handsets and what they stand to do successfully in terms of satisfaction with their subscribed Mobile service providers.

2.2.5 Service Quality

There are a number of different "definitions" as to what is meant by service quality. Service quality is basically defined from customer's perspective and not the manufacturer's, so it is usually referred to as customer's perceived quality. The concept of Consumer-Perceived Quality (CPQ) was first defined by Gronroos in 1982, "As the confirmation (or disconfirmation) of a consumer's expectations of service compared with the customer's perception of the service actually received." Service quality is also seen as the extent to which a service meets customer's needs or expectations, (Asubonteng, Karl, McCleary & John 1996). Parasuraman (1988), Zeithaml (1996) & Berry (1995).

- Service quality is a form of attitude, related, but not equivalent to satisfaction, that results from a comparison of expectations with perceptions of performance. Expectations are viewed as desires of customers that is what

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they feel a service provider *should* offer rather than *would* offer. (Parasuraman, Zeithaml & Berry, 1988, Nimako & Azumah, 2009).

Service quality of the Mobile Telecom Operators was examined in terms of what the service providers offer their customers to meet their satisfaction in terms of services and what the customers wish to be offered in their day-to-day usage of these services, hence expectation.

2.3 Theoretical Framework

Different theories have been used to explain service quality in business operations and research (Nitin, Deshmukh & Prem, 2005). Theories such as the SERVQUAL, SERVPERF, Performance Only Model, IT Alignment Model, Gap Model among others. Some of these theories and models on service quality and customer satisfaction were reviewed to provide some useful explanations to concepts related to this topic.

2.3.1 Servqual Model

The SERVQUAL is founded on the view that the customer's assessment of SQ is paramount. This assessment is conceptualized as a gap between what the customer expects by way of SQ from a class of service providers (say, all opticians), and their evaluations of the performance of a particular service provider (say a single Specsavers store). SQ is presented as a multidimensional construct. In their original formulation Parasuraman et al. (1985) identified ten components of SQ, these are: Reliability, Responsiveness, Competence, Access, Courtesy, Communication, Credibility, Security, Understanding/knowing the customer and Tangibles. In this study, these components are aligned to gaps in service delivery by the service providers based on the Gaps Model.

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Previous studies in this area primarily focused on functional quality aspects (i.e., pertaining to service delivery process or how the services are delivered) and inadequately addressed technical quality aspects (i.e., issues concerning what is actually delivered), (Abdulai & Ansah, 2014). However, researchers in mobile communication (Wang & Lo, 2002; Johnson & Sirikit, 2002) have emphasized that technical quality attributes play an important role in forming service quality perceptions of customers. In light of this, extended SERVQUAL (Seth et al, 2008) instrument determines service quality structure by combining both functional as well as technical quality (i.e., network quality in cellular mobile context) attributes (Abdulai & Ansah, 2014).

Notwithstanding its growing popularity and widespread application, SERVQUAL has been subjected to a number of theoretical and operational criticisms which are detailed below: Paradigmatic objections: SERVQUAL is based on a disconfirmation paradigm rather than an attitudinal paradigm; and SERVQUAL fails to draw on established economic, statistical and psychological theory. The Gaps model: there is little evidence that customers assess service quality in terms of Perception minus Expectation (P – E) gaps. Process orientation: SERVQUAL focuses on the process of service delivery, not the outcomes of the service encounter (Arokiasamy & Abdullah, 2013).

2.3.2 Evaluated Performance and Normed Quality Model

Teas, (1993) raised a number of criticisms against the conventional disconfirmation model that, it has theoretical and measurement problems in the measurement of service quality (SERVQUAL as in Parasuraman et al., 1988). The criticism relates to conceptual definition ambiguity; theoretical justification of expectations in the measurement of service quality; the usefulness of the probability specification in the Evaluated

Performance (EP) measurement; and link between service quality and consumer satisfaction/dissatisfaction.

Teas, (1993) proposed the following two frameworks of service quality: Evaluated performance (EP) framework and Normed quality framework. The EP framework assumes that an individual evaluates an object with perceived certainty and that the object has a constant amount of each attribute also with Minkowski space parameter equals to unity. This assumes that perceived product/service ability to deliver satisfaction can be conceptualized as the product/services relative similarity with the consumer's ideal product features.

Normed quality framework states that if the object is defined as the excellence norm, that is the focus of revised SERVQUAL concept, statistical equations can be used to define the perceived quality of excellence norm in terms of the similarity between the excellence norm and the ideal object with respect to several attributes. This model was therefore touching on areas that an improvement was needed with regards to the SERVQUAL model.

2.3.3 Performance only Model

This model presupposes that performance instead of "performance - expectation" determines service quality. Service quality is evaluated by perceptions only and without expectations and without importance to weights. The authors investigated the concept and measurement of service quality and its link with consumer satisfaction and purchase intentions. They compared estimated different scores with perception to conclude that perceptions only are a better predictor of service quality. They challenged the framework of SERVQUAL instrument developed by Parasuraman et al., (1985) that it confounds satisfaction and attitude. As a result they developed a measurement instrument based on

performance only and called it SERVPERF. By this they portray that service quality is a form of consumer attitude and the performance only measure is an enhanced means of measuring service quality. They stated that service quality can be conceptualized as "similar to an attitude", and can be operationalised by the adequacy and importance model.

2.3.4 Technology Acceptance Model (TAM)

Technology acceptance can be defined as a user's willingness, agreement, acceptance and continuous use of information technology and can be categorised into attitude acceptance and behaviour acceptance (Arning & Ziefle, 2007). Attitude toward using, intention to use and actual use in TAM are indicators of technology acceptance. However, TAM can only be a relative indicator because data is self-assessed and not able to assess actual use (Legris et al., 2003).

Technology Acceptance Model (TAM) was proposed by Davis et al. in 1989 based on the theory of reasoned action and aimed to develop a model for explaining and predicting users' acceptance of a certain information system (Davis, Baagozzi & Warshaw, 1989). From the perspective of TAM, perceived ease of use and perceived usefulness are assumed to be related to the acceptance of a computer or technology system. Perceived usefulness is a belief that a user anticipates that work efficiency can be enhanced by a particular application system; whereas perceived ease of use is a belief that a user expects to not put much effort into making use of a particular system (Chang, et al., 2012).

TAM assumed that: a) the actual use of the computer system is determined by a users' behavioural intention to use; b) users' behavioural intention to use is determined by attitude toward using, and perceived usefulness; c) users' attitude toward using is

determined by perceived usefulness and perceived ease of use; and d) perceived ease of use affects perceived usefulness, which also mediates the effect of perceived ease of use on attitude toward using (Davis et al., 1989).

TAM assumed that external variables affect perceived usefulness and perceived ease of use directly, and perceived ease of use and perceived usefulness mediate the technology acceptance. However, there were many studies finding that external variables not only affected the technology acceptance indirectly by perceived ease of use and perceived usefulness, but also affected technology acceptance directly (Burton-Jones & Hubona, 2006; Moon & Kim, 2001; Ong & Lai, 2006; Yoon & Kim, 2007). TAM considers SQ as being an end result of a customer's initial intention to accept a technology such as mobile phone use. TAM highlights the parameters that normally influence people's choice of a service provider such as in the telecom industry. Therefore, SQ only becomes an issue for discussion after accepting a technology.

2.3.5 It Alignment Model

This model describes the use of IT for improving service quality which is also reflected in customer satisfaction. It was developed through a number of case studies from a variety of sectors (banking, courier, manufacturing, transportation and service industries). The model seeks to correct the deficiency that occurs when organizations investment in information technology (IT) mainly aims at productivity of efficiency of gains but little on improving customer service and long run customer retention and loyalty. This model (shown below) links the service and the information strategies of the organization.

Figure 2.1: IT Alignment Model of Service Quality

Opportunities

```
┌─────────────────────────┐                    ┌──────────────────┐
│ Service Strategy        │◄───────────────────│ IT Applications  │
│                         │                    │                  │
│ Reliability Communication│                   └──────────────────┘
│ Responsiveness Security │                             ▲
│ Competence              │                             │
│                         │                             │
│ Access,  Understanding  │     ┌──────────────┐        │
│ the customer            │     │ Alignment    │        │
│                         │     │ Process      │        │
└─────────────────────────┘     └──────────────┘        │
         │                                               │
         ▼                                               │
┌──────────────┐      ┌──────────────┐      ┌──────────────────┐
│ Service      │─────►│ Information  │─────►│ IT Strategy and  │
│ Delivery     │      │ Requirement  │      │ Architecture     │
│ System       │      │              │      │                  │
└──────────────┘      └──────────────┘      └──────────────────┘
```
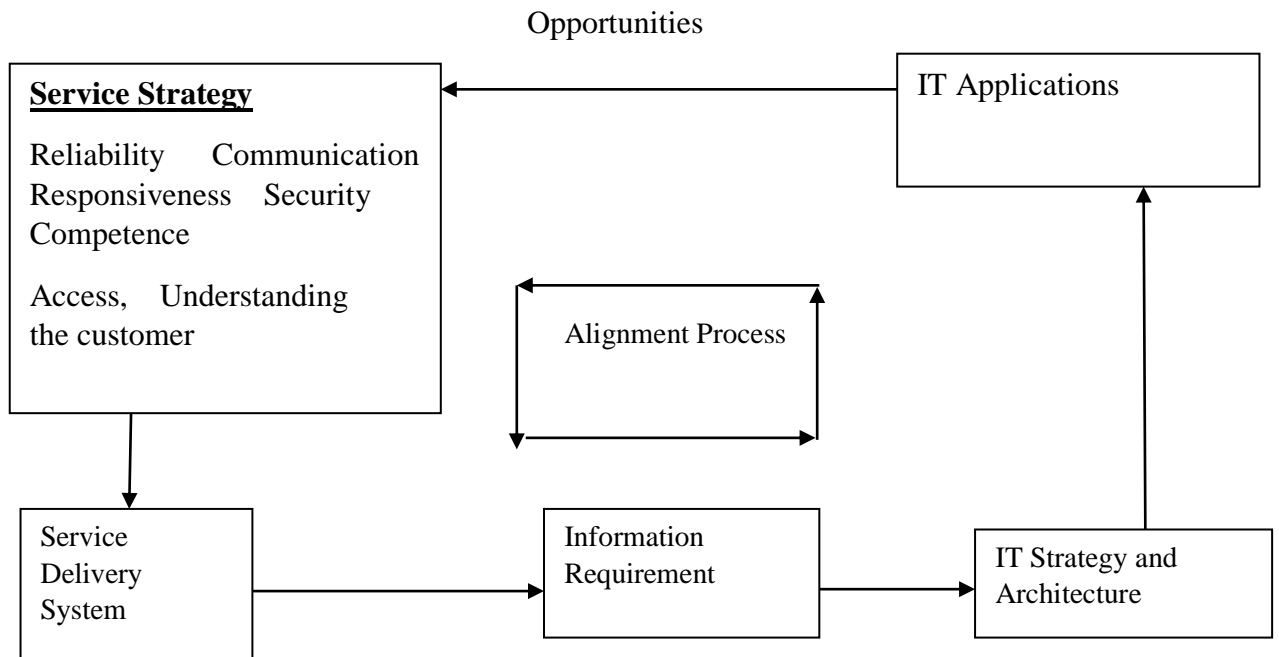
Source: Berkley and Gupta, (1994)

The model emphasizes that it is vital for IT- based organizations to closely co-ordinate and align information system (IT) strategies to service quality. It explains the service - strategies alignment process. It demonstrates through case studies, where IT had been used and could be used for quality control, and to improve specific service quality dimensions such as reliability, responsiveness, competence, access, communications, security, understanding and knowing the customers.

In the Tamale Metropolitan area of the Northern Region of Ghana, the telecom service providers are involved much in applications of IT and other technological innovations to the detriment of providing exactly what their respective customers will need in terms of call and message delivery quality. Calls and short message services are an area identified as the people's primary use of mobile phones in the study area from the available literature on the study topic in the Tamale Metropolis.   For instance, mobile technology has rapidly developed from first generation (1G), second generation (2G), third

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generation (3G) to beyond third generation (3.5G) and now fourth generation (4G) mobile technology that uses digital wireless technology that supports faster display of multimedia and global roaming. Added to several "giveaways" by these networks, yet the network call quality is still a major concern to many subscribers.

2.3.6 Gap Model of Service Quality

The study adopted the Gap Model of Service Quality by Parasuraman, Zeithaml & Berry, (1985).

These authors constituted this model to analyze the dimensions of service quality that provides an important framework for defining and measuring service quality. They developed the GAP Service Quality Model (Figure 1) through the findings from exploratory research that contains in-depth and focus group interviews. GAP Service Quality Model showed the major findings achieved through the executive interviews and focus group interviews about the service quality concept. The gaps revealed were shown in the marketer side (GAP 1, GAP 2, GAP 3, GAP 4), and the GAP 5 which was formed by the focus group interviews was in the end users side of the model. The GAP relations and names were shown below (Parasuraman, Zeithaml & Berry, 1985; Lovelock & Wirtz, 2011):

GAP 1: Customer expectation-management perceptions gap, *The Knowledge Gap*.

GAP 2: Management perception-service quality specifications gap, *The Policy Gap*.

GAP 3: Service quality specifications-service delivery gap, *The Delivery Gap*.

GAP 4: Service delivery-external communications gap, *The Communications Gap*.

GAP 5: Expected service-perceived service gap, *The Service Quality Gap*.

Lovelock (1994) added the sixth gap to the model as GAP 6: Service Delivery and Perceived Service, *The Perceptions Gap*. According to the responses of focus group

participants, the judgments of high and low service quality depended on how consumers

perceived the actual service performance in the context of what they expected, and GAP

5 showed the expected service-perceived service gap. After the gaps modeling, the

determinants of service quality that consumers used when interpreting the quality were

described (Emel, 2014 p. 83, Sanjay and Garima, 2004 p. 27).

Figure 2.2: Gap Model of Service Quality
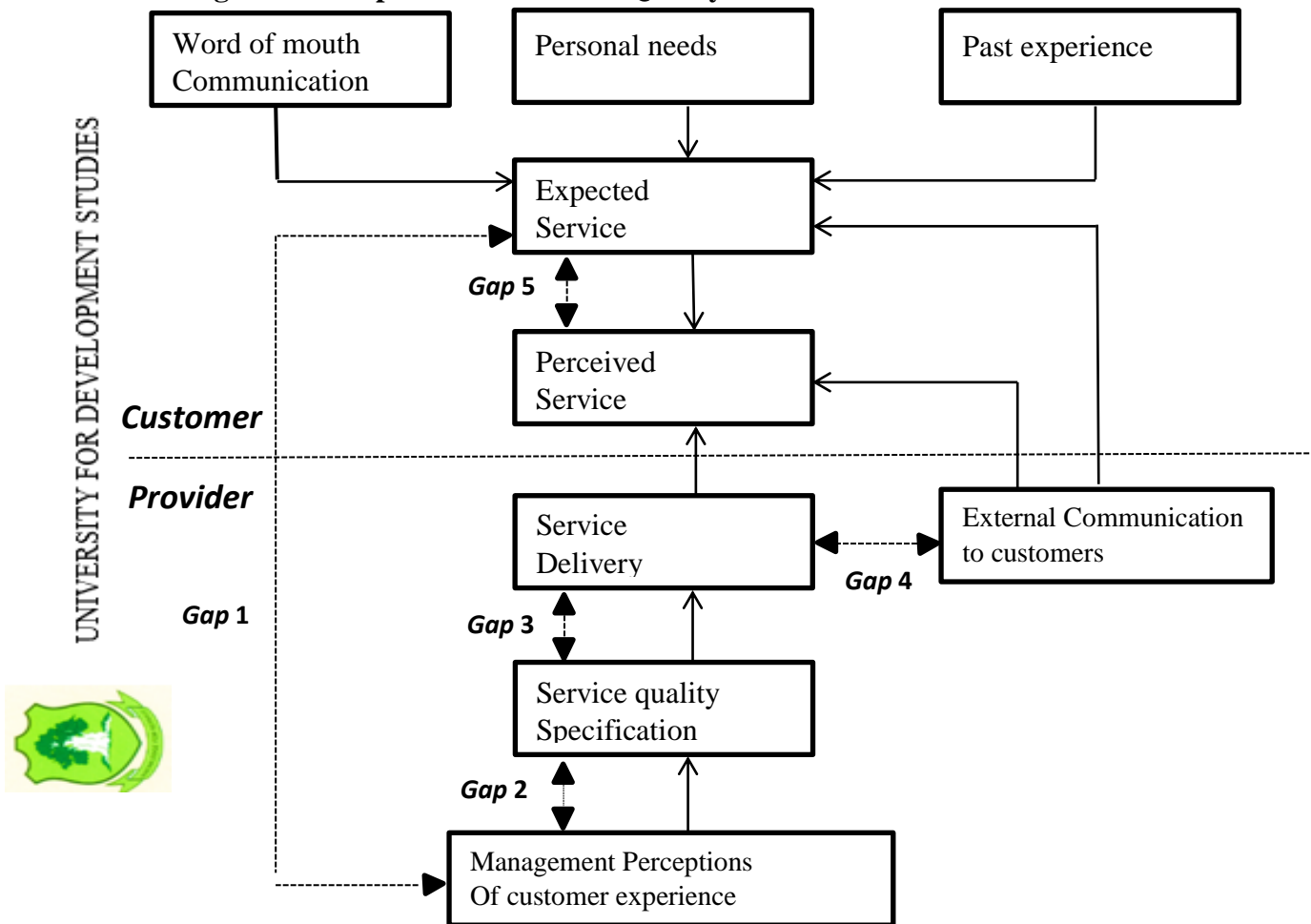
Source: Adopted from Parasuraman, Zeithaml and Berry, (1985)

This model was adopted because the gaps identified in this model are what shapes and

determines customer perception in the Mobile Telecom industry. Therefore, the study

sought to find out whether customers of Mobile Telecom networks in Tamale have an

idea about service quality gaps/determinants as presented in the Gaps Model. And if they

do, how do they assess the performance of their Mobile Telecom company in relation to

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their knowledge about the gaps/determinants. A specific section in the customers' questionnaire was designated for this.

The gaps model sees the idea of service quality or otherwise to be the interplay between the various gaps. Gap 1 entails the management perceptions of customer experience leading to Gap 2 which is customer service quality specifications. This leads to the service delivery system in gap 3 having interplay with gap 4 which is the external communications to customers. The gap 4 leads to two adjoining gaps in gap 5 which is perceived service and then a further gap 6 which is expected service. The customer's word of mouth communications, personal needs and past experiences all depend on the quality of service enjoyed from the service provider. The weakness of the model is that it equates service quality to awareness about service quality gaps. But literature shows that poor service delivery goes beyond merely knowing about gaps.

2.4 Customer Expectations and Satisfaction in a Global Perspective

The Mobile Telecommunication industry has gone through rapid changes in the last twenty years all over the world. The industry was monopolized by government owned mobile network service providers until the late 1980s. This was partly as a result of the big infrastructure needed to deliver telephone services to households and communities. The monopoly status of the industry allowed the service provider to charge exorbitant rates and made abnormal profits. However, with time, concerns about state monopoly in the telecom industry needed a paradigm shift. This thinking brought in deregulation which culminated in competition among the telecommunications companies (Bandaranayake, 2005 as cited in Goni, 2011).

The widening gap in access to Mobile services and Information and Communication Technologies (ICTs) informed the United Nations (UN) to work with the International Telecommunication Union (ITU) formed in 1865 to refocus its activities on promoting universal service and access of ICTs using its ICT telecom wing (ITU, 2013). Subsequently, the United Nations funded the popularly acclaimed World Information Society Conferences of 2003 in Geneva and 2005 in Tunis with the aim of bridging the digital divide in ICT access and usage including mobile phones among countries. The conferences established 17th May every year as the World Summit on Information Society (WSIS) day (ITU, 2013). In 2017, the event was delayed and only took place in Geneva, Switzerland from June 12th to 16th. Following these developments there was recognition that policy demands of countries on the digital divide are not the same. It also came out clearly that the differences in physical access and services required different policies by countries to make ICTs more accessible, affordable and usable based on the needs of countries (Philippines DOTC, 2000).

Developed countries in a bid to bridge the divide prioritized service quality based on the need to promote customer service satisfaction whereas developing countries prioritized access over service since majority of their citizens still lacked physical access to ICTs including mobile telecommunications network systems (Panos, 2004). In recent times however, complaints of users about poor service quality in developing countries is now compelling governments of these countries to incrementally implement a number of universal service policies to strengthen previous reforms in the telecom sector. This includes among other things, the establishment of regulatory authorities and bodies to monitor and take appropriate actions when necessary on the performance of Mobile Telecom networks.

These regulatory authorities monitor the activities of Mobile Telecom networks and the quality of service they deliver using a form of a standard that must be met. Sanctions in the form of warnings, fines and in some cases license revocation are measures adopted to ensure good service quality delivery. For instance, the National Communications Authority for the case of Ghana and the Australian Communications and Media Authority (ACMA) for Australia do these regulating activities in their respective countries. Some of these mandatory International Mobile Roaming Standards monitored by the ACMA are; telecommunication companies are required to: inform customers, on arrival at an overseas destination, about the charges applicable for the providers' international roaming services at that destination; give end users an opportunity to choose 'to roam' or not, among others. The ACMA further adds requirements such as: any other matters considered appropriate including measures to allow end users to monitor and manage their roaming usage and costs at the overseas destination.

In terms of Mobile phone use and gender, Ling (2004), found that in Norway, youths use mobile phones to engineer broader gendered patterns of traditional telephony. And in Israel, gender roles shape how Israelis perceive the role of mobile phones in their lives (Lemish & Cohen, 2005). In India, gendered perceptions of modesty contradict with phone ownership and use also influences sharing (Steenson & Donner, 2009). Green and Singleton (2007) said that gender influences perceptions of 'mobile talk' in the Pakistani-British community, which labels women's conversation as 'gossip'.

These developments put the customer at the centre of the discussion in service quality and ICT usage and access in both developed and developing divides. The only contrast is in the approach in terms of service quality for developed countries and access for developing countries such as Ghana. However, access to ICTs and mobiles also propels concerns about quality because they go together. But what are the expectations of

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customers about service quality in Ghana, the Northern Region and the Tamale Metropolis specifically? This question forms the major essence of this chapter on literature review.

Across the world, Telecom organisations have begun realigning their strategies towards customer expectations of service quality because it helps in developing strategies that lead to customer satisfaction, Saravanan & Rao, (2007 p. 437). According to Gummesson, (1994), this shift in strategy makes service companies now aim at goods without much emphasis on services to a focus on services albeit paying attention to the goods also. This emphasizes the importance of service marketing to most service industries. This is also why retailers, like most services perceived service quality as being of high interest to researchers according to Magi & Julander, (1996 p. 33).

The focus of this study is very important in business research such that companies around the world need to understand in order to remain competitive in business and if possible, grow. Measurement of these constructs should be known by companies especially from customers' perspective in order to better understand their needs and hence satisfy them. Service quality is essential as it leads to higher customer satisfaction, profitability in usage, reduced cost in operation, customer loyalty and retention over time for companies operating in the service chain (Daniel & Berinyuy, 2010). Therefore, the idea of service quality hinges on customers expectation based on the range of activities they can do with their chosen service provider or the services they can enjoy when they settle on a service. And this has become part and parcel of the service orgnisation's resolve to attain more patronage on their available services. The aim of the earliest attention on services available in the Mobile Telecom networks dwelling on access will now move towards quality because as more and more people across the sex and gender

divide gain access, quality too becomes an overriding issue worth investigating especially from customer expectations and satisfaction.

2.5 Customer Expectations and Satisfaction in Africa

The demand for mobile phones across the African continent has been big and increasing going forward. Studies in the Mobile Telecom industry have shown that less than 3% of the population had access to a telephone about two decades ago, but the number of mobile phone subscribers has grown past half a billion, which is over 7% of the population. The number of subscribers is currently increasing substantially where one in every three people you meet, uses a Mobile phone. This is expected to continue over the next few years. The sudden upsurge of the markets is attributed to liberal regulatory environments created by governments, where operators have been given freedom to respond to customer needs. Throughout the world, the industry players understands that the next 1billion end users will be won by companies that develop business models that work for poorer people in Africa. This makes available big chances for companies to deliver pro-poor services to the many poor people in Africa (Nigel Scott, Jonathan & Britt, 2004).

The importance of Mobile phones to African countries is seen in the following ways:

- It improves the efficiency of markets, promotes trade and commerce, reduces the effects of disasters and contributes to empowerment;

- It assists Governments to earn foreign exchange as operators pay taxes;

- It leads to efficiency of service delivery to the poor (e.g. weather information, market prices etc), or opened opportunities for new services e.g. tracking of diseases.

- It is used to maintain social capital (Nigel Scott, Jonathan & Britt, 2004).

For decades, the poor in Africa tended to use public access lines and Mobile phones were shared among a number of people. This resulted in low tele-density records and restricted the level at which the poor could access telecommunications services. Research shows that in very remote rural Africa, eight out of every ten households use Mobile phones. What promotes the growth in the use of Mobile phones is that they are 'mobile' and can be used in remote areas with marginalized facilities. Also, the mode of pay-as-you-go system of Mobile phone credit and the fact that scratch cards are presented in low amounts such as below $1 is suitable to the economic ability of many people in Africa. It is also known that Mobile phones offer potentially cheap means of communicating, more specifically through the use of text messaging and 'beeping' (a practice of dialing a number and when it rings at the other end, you truncate the line for the other person to call back thereby paying the cost (Nigel Scott, Jonathan & Britt, 2004). In Ghana it is called "flashing".

Available literature affirms that currently, establishing social contacts is what motivates Mobile phone usage amongst rural people in the continent. "Chatting" and "keeping in touch" looks to be the way to go in Mobile phone usage. The positive contributions of Mobile phones to Africans is building social ties and extending kinships. Mobile phones help in time management, assists in flexibility of transactions thereby improving resource efficiency. All the above leads to improvement in household income and reduction of risk of loss in places around the continent of Africa (Nigel Scott, Jonathan & Britt, 2004).

The practice of leaving intentional missed-calls, or 'beeping', (Donner 2007; Sey 2007) is a clear case of the improvisation of the use of Mobile phones that users in the continent have added as an extension. This helps in reinventing the range of uses,

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deepening cultural practices and enhancing social relations among people in Africa. In Ghanaian context, leaving an intentional missed call is referred to as 'flashing' as it is called 'beeping' in other African countries.

Authors such as Pertierra (2007), Solis (2007), Ellwood-Clayton (2014) have demonstrated how Short Messaging Service (SMS) has been helping Filipinos in the beginning and later African countries extend their social networks through what they called 'blind solicitations'. In this case, intentional wrong numbers are sent messages with the aim of starting a networking conversation with an unknown person with a romantic agenda in mind. In other parts of the world, studies have shown that Mobile phone usage play a key role in relationships and romance as highlighted in songs emanating from Jamaica (Batson-Savage 2007).

Mobile phones are not just for the elite but also the poor households in remote parts of the village in the continent of Africa. The only problem of concern is about their use in terms of service quality and the future of the sector. It has to be said that it has been a difficulty making projections in the sector- a decade ago it would have been difficult to project the current uptake of mobile phones in Africa. In three decades from now, projections are pointing towards mechanisms that will permit families in Africa to be able to have a Mobile phone with all functions. But in considering the myriad of functions Mobiles could be put to, there is a sense of a challenge that may see the poor unable to keep up because of the increasing sophistication manufacturers are putting into mobiles culminating in price hikes of these devices.

The impressive upsurge in mobile telecommunications in Africa, particularly among the poor, is a surprise to the companies. This made them to extend their coverage to urban areas instead of rural areas in the continent. The aim in the urban areas was to gain more

subscribers which they did from the evidence on the ground. However, this has not stopped them from coming up with offers targeting the poor in Africa. Based on experience, some smart companies have adopted tailor-made services to serve subscribers in whichever way they can. An example is Vodafone's Community Services in South Africa in which they see "voice" as the 'killer' application"(Nigel Scott, Jonathan & Britt, 2004).

The success of the mobile phone in Africa is so because it has survived where landlines have not reached. The Mobile phone is used even in rural dwellings where there is no electricity. The access to Mobile phones in Sub-Saharan Africa has surprised many in the sector (Souter, 2005; Meso, Musa, & Mbarika, (2005); James & Versteeg, (2007); Carmody, (2009). Even though urban people have been the first to take up the technology, the urge for companies to catch up on the low income group has materialized. These Mobile users are emerging stakeholders in social and technical systems which help to shape the technology. Rural people's adoption of Mobiles doesn't look different from urban dwellers usage patterns. However, the usage patterns of these two divides emanates from maintaining contacts with each other from their respective places of abode.

Researchers examining the gender dynamics of Mobile phone use in the third world and rural Africa have reported a balanced mix between access, use modules and effects on inhabitants living apart from each other. A few of the meager studies show women traders in Nigeria use their Mobile phones to do buying and selling in the marketplace (Jagun and Heeks, 2007). The studies further show a disparaging difference in access and use by the gender divide. In a study of more than ten African countries, Gillwald, Anne and Christoph (2010) reported that more than half of them had more men than women owning phones and the former spend more than the latter. Abraham (2008) observed two

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classes of women phone owners and reports them as women phone owners with credit in them and those without credit in them making them incapable of communicating. Wakunuma (2007) says that mobile phones have worsened the already existing gender gaps in Zambia with more men than women benefitting from phones. Comfort and Dada (2008) further report that Nigerian women find mobile phones as a double-edged sword which gives a sense of control at a cost.

The need for continued expansion of coverage is high on the agenda of Mobile Telecom companies and to do this service providers will need to spend more in infrastructure specific to coverage such as towers or cell sites in remote areas. This will improve their coverage in Sub-Saharan Africa (SSA) which has a low connection rate in Africa. In terms of coverage, SSA is still below the 100% mark which is the global average. Frost & Sullivan (2017) in an industry forecast to 2021 have projected that the tower service wing of the sector will reach $991.7 million. This is forecasted to go up to over $1billion by 2021 (Mokenela, 2017).

Growth in the Mobile Telecom business is expected to be carried through by third-party tower companies (towercos), who will partner mobile network operators (MNOs) and other service companies to serve customers. The issue of third party arrangements is rife in the Ghanaian Mobile Telecom network companies as operators are not self-sufficient. New research has analyzed the Mobile Telecoms tower industry in SSA and concluded that a few of the performing markets such as Ghana, Tanzania, Kenya, Nigeria and South Africa have issues that need to be checked to ensure they thrive. Issues of the nature of the sector, market performance and potentials for the future together with competition are supposed to be prioritized to enable players benefit (Mokenela, 2017).

However, looking at the urge to connect more rural districts in Africa, tower companies (towercos) may profit more from partners at a low cost and high convenience. For towercos to perform they must depend on each other and evidence shows that this interdependence is ineffective comparatively to world-wide standards. To realize an upsurge in the market of the sector, towercos will need to go into contracts with the bigger MNOs to cut the cost of production or do outright sales to them (Mokenela, 2017).

These developments in the Mobile Telecom industry are primarily targeted at service quality attainment issues. The fact that MNOs are partnering towercos to improve coverage and hence quality service is an indication that service quality issues as articulated by customers are given attention by the telecom operators. The question however, remains as to what customer expectations are, regarding service quality that they will need from their network service providers. On the other hand, the extent of coverage and reach might not necessarily translate into quality service delivery unless otherwise confirmed by existing users of the service in question.

2.6 Customer expectations and satisfaction in Ghana's Mobile Telecom Industry

It has been close to thirty years now since Ghana's Mobile Telecom Industry (GMTI) has been at the fore-front of the industry in Sub-Saharan Africa (SSA). The telecom sector in Ghana has successfully enrolled a number of expatriate service providers after competition was allowed in it in 1994 with the coming into force of the Accelerated Development Programme (ADP). At present Vodafone and Airteltigo serve fixed line customers aside the Mobile subscribers. The rest are entirely Mobile service companies. MTN controls about half of the sector as its market share. Vodafone has been on the heels of MTN for a long time now but still remain a distant second. Competition in the

GMTI has awakened players in the sector to work towards the delivery of quality service and to satisfy customers, hence improve market share to ensure survival (Abdullah & Rozario, 2009) Mark and Judy (2011) thinks that it is vital for service providers in the Mobile Telecom networks in general, and GMTI in particular to know about the factors that ensure service quality to retain their end users.

Service Quality (SQ), Customer Satisfaction (CS) and Behaviour Intentions (BI) are all propelled by Customer Perceptions (CP) especially when the current wave of competition in the GMTI has made customers more demanding for diversity in the services that they receive albeit with little results so far. In the GMTI environment, there are not enough observations on customer expectations and satisfaction of service quality according to the literature.

One good thing the deregulation of the Mobile Telecom sector has done is that it has encouraged a favourable few new companies to join the healthy competition further growing the business. This leads to efficiency of gains for the customer in the long run if the existing regulators of the industry do their work well. The current competition in the sector is bringing in several services by the companies with each trying to lure the customers to their side. Aside all these, Mobile telecommunications network companies in Ghana are faced with service delivery challenges and customers continue to raise red flags about the service quality delivered by these companies.

This is why Adjetey (2012) expressed misgivings as to whether Ghanaian telecommunications companies have measures in place to ensure the overall satisfaction of their customers. The belief is that competition in the sector and their exposure to new technology will propel them to work towards improvement in services and bringing on board customer friendly services going forward.

According to investments in Ghana, Samuel and Arnold (2014) reported that "the goals set by government have only partly been met especially with respect to the development in rural areas – and the quality of service is still low and has even deteriorated on some indicators. There is, therefore, a widespread dissatisfaction with the general telecom development in Ghana among users as well as policy decision makers and administrators." The National Communications Authority (NCA) has reported more complaints from customers about poor services of Mobile Telecom network companies more than any other service industry in its periodic publications on Cellular Mobile Consumer Satisfaction Survey for 2012/2013 (Samuel & Arnold, 2014). If this trend continuous, relationships even in marriage, businesses and internal controls at work places will continue to be affected.

This trend of continuous complaints from customers about service quality necessitated the adoption of Mobile Number Portability (MNP) back in 2011 by the NCA which took effect on 7th July, 2011. MNP is a mechanism to check poor service quality that ensures that customers of Mobile Telecom networks switch to a different network whilst still keeping their mobile phone number. Its introduction was seen as a way of giving more power and control to the customer to decide which mobile network operator they want to receive services from. However, MNP has contributed less in checking poor service quality in the telecom sector. This has therefore kept industry watchers in awe about what exactly needs to be done to propel decent and quality service delivery in the GMTI. Perhaps if customers' voices are heard in studies like this one, the industry operators can turn the tide to a more favourable one in service delivery and customer satisfaction.

2.7 Customer Expectations and Satisfaction in Northern Ghana

The role of Mobile telecommunications in today's technology driven world cannot be over-emphasized. It plays a key role in businesses in the Northern Region of Ghana. Nigel, McKemey, Kevin, Batchelor & Simon (2004 p. 14 & 15) intimated that if one expected majority of calls to be about business and the economy, further studies has shown that it is social issues among the poor in Africa that ranks highly in the use of Mobile phones. Further social issues espoused such as calls to inform community members about funerals or festivals followed by calls to family members in cities to ask for money are in a high order rank than government matters.

These remain the people's primary reasons for using mobile phones in northern Ghana. Based on these, quality service delivery that will enhance the various reasons for the usage of mobile phones remains paramount to the people. Studies in this area have been widespread on service providers resolve to improve service quality but little on what customers actually want in return for petronising the services of mobile telecom networks they choose. Therefore, customer expectations and satisfaction of service quality has to be looked at in detail to ascertain the various reasons that propel people's drive to use mobile phones.

On the gender dimension, more men (55.5%) than women (44.5%) own mobile phones in Northern Ghana. This is however prevalent in the rural areas but in the city centres, there are competing statistics and disparity in the gender of Mobile phone use. The unique thing about Mobile phones is that ownership is tantamount to usage because it is an easy ICT tool in terms of use.

2.8 Customer Expectations and Satisfaction in Tamale Metropolis

Mobile telecommunication is very important in the modern world. The Tamale Metropolis has access to telecommunication service providers such as Airteltigo, Vodafone, MTN and Glo. Broad band internet and data services are also available in the Metropolis and serves as a link to the worldwide web, (TaMA, 2016). With these operators, inhabitants have experienced mixed fortunes in service delivery that they have enjoyed over the years. The expectations and satisfaction of these customers regarding service quality are what this study aims at ascertaining in terms of the kind of services customers hope to receive from their chosen service provider.

The NCA's periodic publications on Industry Information-Telecom Subscriptions for January, 2016 have included packets of service quality drawbacks from the Tamale Metropolitan area. Whilst some of these findings genuinely identifies some operators to be non-existent in locations they claim to be, others flatly relates to poor service delivery for which occasional fines are slapped on these network operators. At other times, customers are made to benefit based on compensation packages that the network operators are made to pay for poor quality service. For instance, the National Communications Authority's annual report in 2017 showed that the voice service of Expresso was not available in the entire Northern Region prior to the revocation of their license a year later even as they claimed it was and Glo voice service was indeed available in parts of Tamale Metropolitan area (NCA, 2017). Meanwhile, publicity lines from these network companies can claim they are available everywhere in the Northern Region. It therefore means that, aside from the publications from the industry regulator, the Mobile network companies themselves may not give a true picture of the reality on the ground about their operations.

Mobile phones are a useful technology to inhabitants of the study area because Hamdiya and Paul, (2012), found out that mobile phones were predominantly used by farmers of Kanvilli, a suburb of Tamale in linking up with family/friends and requesting for farm inputs. This enhanced communication and saved time. However, farmers were faced with challenges of poor services such as no reception, calls ending unexpectedly and poor sound/breaking up of sound. These are the range of service quality drawbacks that this study unraveled based on customer satisfaction.

Inhabitants in the study area therefore rely on Mobile networks services for agricultural uses, business and social networking which were areas this study unearthed in terms of the kind of services customers needed based on their perception/expectation. Some few studies in the telecom industry in the Tamale Metropolis targeted service quality in general with little attention on service quality from customers' perspective.

Even though the Tamale Metropolitan area is urban, challenges with service quality in the Mobile Telecom network industry is prevalent. The NCA frowns on all poor service quality issues customers' face in the Telecom industry based on this development. With service quality parameters such as: service availability, service accessibility, service reliability, billing performance and help/ enquiry services among others, which are all calculated in percentages, the NCA monitors service providers. NCA hopes that each of the Mobile Telecom network service providers is able to meet about 90% of each of these parameters (NCA, 2018). Periodic assessments are carried out by the authority to ascertain whether service providers are able to meet these parameters based on which sanctions are applied if the need arises.

In the Tamale Metropolis inhabitants use Mobile lines extensively among the various occupation and age categories. Some people in the metropolis use more than one line

whilst others use only one line. However, no matter the number of lines being used, the reasons for use are similar if not the same across board.

2.9 Summary

Service quality and customer satisfaction have had their routes in the various adoption mechanisms of the developed and developing world. Whilst the developed world turned their attention to prioritise service quality much earlier after their early adoption, the developing world has only made issues of service quality a priority and a focus area recently. This is because the developing world started by emphasizing on access rather than service quality per se. This was done by the state owned corporations who only ensured that mobile communication systems and other Information and Communications Technologies (ICTs) were accessible as much as possible to the populace. Therefore, the timing of the adoption of these ICT technologies had an influence.

From the review, trends emerged that in Ghana, attention needed to be given to service quality after ensuring access over some time. The physical access to ICT also did transcend the gender divide with more men than women having physical access. Issues about the economy also featured heavily in this foregoing development because service organisations needed sophisticated infrastructure to improve access and enhance quality service delivery to their customers. This is seen in the beginning where only state owned companies with the huge financial muscle could venture into this area of ICT service provision.

In Africa, Mobile Telecom network companies have tended to tailor their services towards the needs of households in the continent. The adoption of pro-poor services have re-echoed the interest in the use of mobile services because based on the high adoption

rates of Africans, services of mobile telecom networks are increasingly gaining grounds because the availability of low denomination scratch cards that meets the financial level of the poor. Telecom network companies do not also need to incorporate gender into their service delivery, as the mobile phone, from available literature is seen to be a 'gender neutral' tool.

The literature has also showed that Mobile phone use has gone down well with Africans. With social uses on top of the wish list of most customers of Mobile Telecom networks in Africa, service quality concerns are rife and high up on the agenda of telecom companies. This has seen the Mobile Telecom network companies merging and forming partnerships in some cases such as Towercos in Sub-Saharan Africa to be able to stay up the ladder of high performance to meet customer expectations.

Despite these mergers and partnerships however, there are still customer complains about service quality which is becoming a recurrent theme in discussion focus and research in the marketing literature. The Ghanaian Mobile Telecom networks are involved much in this tag-of-war in the face of rising competition among them. Growth in the Mobile Telecom industry goes along with technology. This is because the sector has gone through from first generation (1G) up to second generation (2G), to about beyond third and fourth generation (3.5G and 4G) Mobile Telecom systems.

Mobile Number Portability (MNP) comes to mind when service quality issues are being discussed. It is among the measures that the NCA for the case of Ghana consider as a mechanism to check non-performing telecom network companies. Introduced in Ghana back in July, 2011, MNP offers customers the ability to switch to another Mobile Telecom network while still holding on to their mobile phone number. However, the main aim of MNP in Ghana has only partly been met since its introduction into the

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industry about seven years ago. Industry trends publication on Quarterly Statistical Bulletin on Communications in Ghana by the NCA for the third quarter of 2017 showed a decline of about 6.86% ported numbers during the quarter under review, from 225,085 in the previous quarter to 209,646. This seemingly low impact that the MNP has made in the period under review can be attributed to about two reasons. One is the level of awareness of customers about MNP and the other is the high rate of illiteracy among Mobile phone users especially in the rural areas. Perhaps if customers had been aware of it much more and if literacy levels among Mobile phone users were high, then it is possible its aim would have been achieved.

The NCA's provision of service providers being able to achieve about 90% of service quality parameters is not achieved by the Mobile Telecom network companies in the Tamale Metropolis. Recent studies have shown packets of poor service in the area.

It's therefore important to carry out this study to add to the literature the views and opinions of customers of Mobile Telecom networks about their expectation and satisfaction with the service they receive from their service providers.

CHAPTER THREE

METHODOLOGY

3.1 Profile of the Study area and Methodology

This chapter brings to light the research design employed for this study. The study made use of the mixed methods technique to collect data and analysis was done based on the concurrent mixed method design perspective. In this technique, both qualitative and quantitative data are gathered from field and analysis is done concurrently taking into consideration the different data collected. This design is preferred because it leads to collecting different types of data to provide an understanding of a research topic such as this one. Explanations to some numeric information in the quantitative data are given further clarity in the qualitative data.

3.2 Profile of the Study area

The Northern Regional capital of Tamale emerged as a growth point for Northern Ghana upon independence in 1957, and has since become the third largest urban centre behind Accra and Kumasi. Tamale has the second highest annual population growth rates after Kumasi Metropolitan Area (Fuseini, Yaro and Yiran, 2016). It is also the capital of the Tamale Metropolitan Assembly (TaMA). The TaMA is one of the 26 districts in the Northern Region located in the central part of the Region and shares boundaries with the Sagnarigu Municipal to the North-West, Mion District to the East, East Gonja Municipal to the South and Central Gonja to the South West. The TaMA was established by Legislative Instrument (L.I. 2068) which elevated the then Municipal Assembly into a Metropolis in 2004. At present, it is one of the six Metropolitan Assemblies in the country and the only Metropolis in the three Northern Regions namely: Upper East, Upper West and Northern Regions, (TaMA, 2016, GSS, 2014).

The TaMA is located within latitudes 9°16′N and 9°34′N and longitudes 0°34′W and 0°57′W. The Metropolis has a total estimated land size of 646.90180 sqkm (GSS, 2010). The relative location of the TaMA is such that it is bordered to the north by Savelugu-Nanton Municipality; to the east by Mion District; to the south by East and Central Gonja Districts; to the west by Tolon District and to the north-west by Kumbungu District. In 2012, the Sagnarigu District Assembly (SDA), now Sagnarigu Municipal was carved out of the then TaMA which constituted the TaMA due to rapid growth of the metropolis (Fuseini, Yaro & Yiran 2016). Figure 1 below illustrates the TaMA.

Figure 2.3: Map of Tamale Metropolitan Assembly
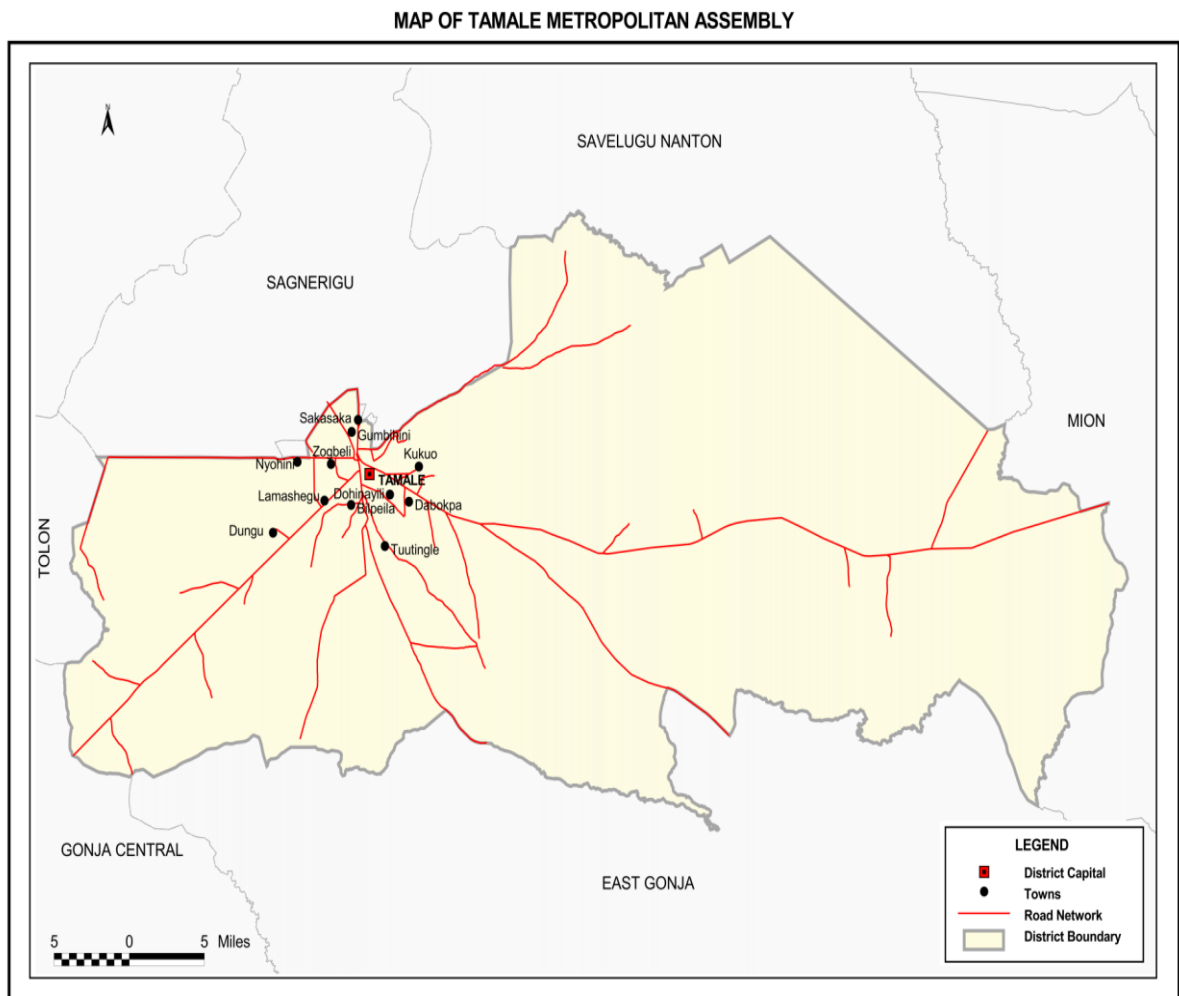
Source: Ghana Statistical Service, 2014, GIS

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3.3 Economic Charateristics

The TaMA has tourist sites namely: Tugu Crocodile Pond, the Python Sanctuary, the smock and art craft centre, the German Cemetery as well as a Cultural Centre. These tourists' sites remain undeveloped and therefore do not rake in the needed revenue. Additionally, there are some hospitality infrastructure in the metropolis such as Picorna Hotel, Tohazie, Radach Lodge, Mariam, Las Hotel and Mafara just to mention a few (Tamale Metropolitan Assembly, 2016). The existence of tourist sites coupled with hospitality infrastructure in Tamale makes the use of mobile phones very important to patrons of these sites and the need to solicit the views of customers on how satisfied they are in using the services of Mobile Telecom network operators.

The Metropolis can also boast of a number of financial institutions such as the Agricultural Development Bank, Ghana Commercial Bank, Barclays, Stanbic, Zenith, National Investment Bank, Ecobank, SG-SSB, Access, Prudential, HFC, Fidelity, ARB Apex, Standard Chartered, Sahel Sahara, (Tamale Metropolitan Assembly, 2016). However, aside all of these financial institutions, inhabitants of Tamale patronize the services of mobile money vendors extensively. This makes good quality network a priority because without it transactions will stall.

The tarred roads in the Metropolis facilitate easy commuting from one place to the other. There is no traffic congestion. Most of the farming and the Peri-Urban communities are linked to the marketing centers by feeder roads. The availability of access roads linking farming communities is incentives to the farmers since post-harvest loses are reduced. The major transport services in the area are taxi cabs, mini tricycles (yellow yellow) and other tricycles popularly called 'motor kings' with a main taxi station at the Central Business District (CBD). The State Transport Company, Metro Mass Transit, VIP,

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Imperial Transport, OA Transport and other private bus services link the Metropolis with other cities and towns in the country. The roads in the Metropolis are fairly good especially those that link the Metropolis to other District capitals, (Tamale Metropolitan Assembly, 2016). Aside the availability of relatively good roads the people also relies so heavily on mobile phones for communication to facilitate travels between places because even as one uses any of these transport services, the mobile phone facilitates travels.

3.4 Telecommunication Sector

Communication plays a vital role in modern global world. The Metropolis enjoys telecommunication services from four service providers which are Airteltigo, Vodafone, MTN and Glo. The metropolis has Mobile phone users from 12 years and above. This shows 53.7% have mobile phones. The proportion of males who own mobile phones (55.5%) is higher than that of females which is 44.5%. Only about 7.4% of the population of 12 years and older use internet facilities in the metropolis and a 9.5% of the total households have desktop/laptop computers (GSS, 2014). The total combined customers for MTN and Vodafone in the metropolis was pegged at 79,033 as at the end of February, 2018.

Inhabitants in the assembly therefore rely on mobile networks services for business and social networking which is an area this study aims at unearthing the kind of services customers will need based on their expectation and satisfaction.

The metropolis currently has about nine local frequency modulation (FM) stations and still counting. These serve as instruments in promoting good governance. These stations which include Radio Savannah (91.3 MHz), Justice FM (98.5 MHz), Fiilla FM (89.3MHz), Diamond FM (93.7MHz), North Star FM (92.1MHz), Kesmi FM (107.1MHz), Zaa Radio (99.3MHz), Radio Tamale (91.7MHz) and Bishara Radio

(97.7MHz), apart from promoting democracy and entertainment, also operates on commercial basis by advertising products for the industrial sector. The Ghana Television (GTV), Metropolitan Television (METRO TV), TV Africa, GH One, United Television (UTV) and TV 3 are the major television networks in the metropolis. North TV (NTV) and Sagani TV (STV) are other television stations operating on satellite dish service providers (Multi TV) platform on decoder system and are therefore inaccessible to other viewers outside of that platform. These media houses use Mobile phone as a conduit to reaching out to viewers cum listeners via phone in's and text messaging services during live shows. This means good quality network is a necessity to these people.

3.5 Research Design

Research design is a comprehensive plan for data collection in an empirical research project such as this one in the social sciences. It is considered a "blueprint" for empirical research aimed at answering specific research questions or testing specific hypotheses, and must specify at least three processes: the data collection process, the instrument development process, and the sampling process in its presentation (Anol, 2012 p. 35).

The research design for the study is the mixed methods approach. Mixed methods research is an approach to inquiry that collects both qualitative and quantitative forms of data. It involves the use of qualitative and quantitative approaches, and the mixing of both approaches in a study (Creswell & Plano Clark, 2007). The data collection involves gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews) so that the final database represents both quantitative and qualitative data (Creswell, 2007).

The mixed methods approach is preferred for this study because it leads to collecting diverse types of data that best provides an understanding of a research problem such as

this one. The study deals with a broad survey in order to generalize results to a population while also focusing on detailed qualitative, open-ended interviews to collect detailed views from participants (Creswell, 2007) so that inferences can be deduced from the findings. In these circumstances the advantages of collecting both closed-ended quantitative data and open-ended qualitative data prove to be advantageous to best understand a topic such as this one at hand (Creswell, 2007).

In this study the qualitative and quantitative data were collected concurrently in the form of a concurrent triangulation so that analysis followed the same approach with the aim of arriving at conclusions effectively.

The research philosophy that guided this work is the radical pragmatism. Research philosophy can be defined as the development of research assumption, its knowledge, and nature (Žukauskas, Vveinhardt & Andriukaitienė, 2018 p. 3-15). Pragmatist research philosophy deals with the facts. It claims that the choice of research philosophy is mostly determined by the research problem. In this research philosophy, the practical results are considered important. In addition, according to Alghamdi and Li (2016), pragmatism does not belong to any philosophical system and reality. Researchers have freedom of choice. They are "free" to choose the methods, techniques, and procedures that best meet their needs and scientific research aims. Pragmatists do not see the world as absolute unity. The truth is what is currently in action; it does not depend on the mind that is not subject to reality and the mind dualism. These shaped my thinking about this study.

3.6 Data Collection Methods

Two major sources of data were used in this study. Both the Primary and Secondary data were collected and used for analysis. These were done based on the concurrent mixed methods approach.

3.6.1 Primary Sources

Primary data are a set of data collection process the researcher uses in the field to gather information from respondents. The primary data in this study was collected using a variety of tools. These are structured questionnaires, key informant interviews guide and focus group discussion guide. These tools were used because the use of different tools for data collection assists the researcher to identify inconsistencies in the responses (Twumasi, 2001).

3.6.2 Secondary Sources

This refers to dataset that are already in existence in institutions. The researcher selects variables that are necessary for the study and may come from one source or multiple sources (Margarret & Harrel, 2009).

Secondary data was obtained from newspapers, journals, magazines, radio discussions, bulletins, articles, books, the internet, television and other official sources such as the Tamale Metropolitan Assembly, the National Communications Authority and the Ministry of Communications. Even though some of the information from these institutions were taken online, others required visits to their offices. The service providers too were contacted for data relevant for this study where it was needed.

3.6.3 Key Informant Interviews (KIIs)

Interviews describe the process of interaction between a researcher and a respondent where a series of questions are posed to a respondent in a systematic manner with the objective of addressing a set of research objectives. Interviews are interactions between the researcher and the respondents with the view to investigate and record data meant for analysis (Twumasi, 2001). Researchers employ interviews for various reasons. However, it is mainly used for primary data collection from individuals about their own practices,

beliefs and opinions (Margarret & Harrel, 2009). Interviews are categorized based on the intensity of the interaction and this consist of structured, semi structured and unstructured. The study relied on semi structured interviews which uses a guide with questions that must be covered in a specific order based on the discretion of the researcher. It offers the opportunity for the researcher to probe for detailed information to be collected in a manner that is conversational (Margarret & Harrel, 2009). It is against this background that semi structured interviews were used for this study. In all, three interviews were conducted. Sampled respondents were two (one each) from the Mobile Telecom network service providers and one from the industry regulator, the NCA. This number of respondents for the interviews was chosen because the study was customer based and so the majority of the responses for analysis were gathered from the customers' views. The respondents (Service Providers who were 2 and an industry regulatory staff member) were taken through a well-organized interviewing process in terms of the KIIs; each of the respondents was interviewed at a time chosen by them at their various offices on separate days. While the rest were taken through two separate Focused Group Discussions (FGDs), with one FGD being vendors whilst the other was customers. Their responses were recorded and later transcribed based on which codes were assigned to each theme and used for analysis.

3.6.4 Structured questionnaires

Questionnaires are a good way of demanding responses from respondents with varied opinions from a large group. A set of questions are prepared based on the topic under investigation and given to respondents to answer. It does not always demand a face to face interaction. This means that respondents have the free will to respond to questions without any interference. Questionnaire is an excellent means of gathering statistically quantifiable interaction. In designing a questionnaire, the research problem must be

outlined with clearly stated objectives, clear language devoid of ambiguity (Twumasi, 2001). The questionnaire used for this study had four sections from A to D. Section A was on the biodata of respondents, section B was on physical evidence on the brand of MTN and Vodafone in terms of tangibles as a service quality parameter. Section C sought to get data on factors that determine service quality, section D asked about customer satisfaction of the two comparative networks.

The Communities where respondents were located were Sakasaka, Kukuo and Zogbeli in the urban areas and Kalpohini, Malishegu, Kulnyevula, Wamale and Jarigu in the rural areas. There were 20 respondents in Sakasaka, 200 in Kukuo and 40 in Zogbeli in the urban locations. Kalpohini had a total of 98 respondents, 20 in Malishegu among others.

3.6.5 Focus Group Discussion

Focused Group discussions describes a set of group interaction where a group of respondents believed to be knowledgeable on a topic of study are brought together to respond to a series of questions. It refers to a dynamic group discussions used to collect information (Margarret & Harrel, 2009). In a focus group, about six to ten people who are knowledgeable on the topic of study are called together to engage in a guided discussion (Abawi, 2013). Two (2) focus group discussions were held on the topic under investigation, Mobile Telecom network service using an FGD guide. One focus group was for customers while the other was vendors who deliver services to customers of these networks. These vendors also use the services of the Mobile Telecom networks. Therefore, their responses were very useful for analysis of customer satisfaction. These focus groups were done in order to add to the views gathered from customers in the questionnaire. There were 10 participants in each focus group consisting of customers and vendors.

3.7 Sample Size Determination

The total population of the Tamale Metropolis is 233,252 according to the 2010 Population and Housing Census representing 9.4 percent of the region's population. Of the total population, there are more females 112,143 (50.2%) than males111, 109 (49.7%), (GSS, 2014). Since this study is about mobile phone users, available information indicates that of the population 12 years and above, 53.7% have mobile phones representing about 125, 256 mobile phone users in the metropolis. The proportion of males who own mobile phones (55.5%) is higher than that for females which is 44.5%. However, in terms of usage and choice of subscriber, the total number of subscribers for MTN in the Tamale Metropolis as at February 2018, were 47, 648. That of Vodafone for the same period were 31, 385 consisting of mobile voice subscribers. The total number of mobile phone users relevant for this study in the Metropolis is therefore 79,033. This represents the part of the population that uses the services of mobile phone subscribers MTN and Vodafone representing 33.88% of the total population of the study area. In selecting the sample for the study, the Yamane, (1967) sample size determination formula was used based on the number of mobile phone users on the MTN and Vodafone networks as follows:

$n = \frac{N}{1 + N(\alpha)^2}$ where n is the sample size, N is sample frame (population size), 1 is a constant and α=confidence level.

But N = 79,033 i.e. (31, 385+47, 648) and the confidence level is estimated at 0.05

$n = \frac{79,033}{1 + 79,033\,(0.05)^2} = \frac{79,033}{198.5825} = 397.98 \cong 398.$

However, the study also took into consideration the responses of two (2) service providers that is one (1) each from MTN and Vodafone and one (1) National

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Communications Authority staff making the number 3. Therefore, this figure was added to the above, and a sample size of four hundred and one (401) respondents was used for the study. These were largely customers as well as vendors (dealers) who had information relevant for this study and were purposively selected since they were also users of mobile services as well.

3.8 Sampling Techniques

Sampling is the scientific selection of respondents or subjects from a sample frame. Puopiel (2014) described sampling as selecting a part from a whole. Generally, two sampling types are known and these are probability and non-probability sampling techniques. In the former, each unit of the population is given an equal chance of the selection outcome where as in the latter; the sampling units do not have equal chance of selection (Twumasi, 2001).

When conducting research, one cannot study all of the available subjects at hand due to resource and time constraints (Miles & Heberman, 2002). Denscombe (2003) also stated that, it is not possible for researchers to collect data from all those categories being investigated; however, a researcher attempts to get evidence from a section of the category through sampling techniques (Magdaline, 2013). The Multi-Stage Sampling technique was used in this study. The Systematic Sampling was used to select 44 communities out of a total of 133 communities in the Tamale Metro. Then the next stage saw the proportional quota-sampling being used to select respondents from these communities based on their respective populations. In each of the communities', accidental sampling was used to interview the required number of respondents per community and also during the pilot testing of the tools. The three (3) key informants in this study were selected purposefully using Purposive Sampling. The choice of the

sampling techniques as illustrated above necessitated the use of the multi-stage sampling technique since each stage had its sampling technique to be used.

3.8.1 Target Sample

The Tamale Metropolitan Assembly comprises of the city of Tamale, 17 peri-urban communities and 115 villages (Fuseini, 2014). The Population of the Metropolis is 233,252 according to the 2010 Population and Housing Census representing 9.4 percent of the region's population. Of the total population, there are more females 112,143 (50.2%) than males 111, 109 (49.8%), (GSS, 2014). However, a 2017 population projection puts the total population at a figure of about 250,000. Out of this, about 79,033 are mobile phone users subscribed to the services of MTN and Vodafone in the metropolis as at the end of February, 2018 (NCA, 2018).

3.8.2 Purposive Sampling

In purposive sampling, the sample is intentionally selected according to the needs of the study, which is why it is commonly referred to as 'purposive sampling' or 'purposeful selection'. The cases are specifically selected because they have in-depth knowledge about the issues that are of importance to the topic under investigation (Coyne, 1997, Creswell, 2009 p. 35). This sampling technique was employed to select two (2) respondents among the mobile network service providers and one (1) industry regulatory staff member as key informants from the service providers and the National Telecommunications Authority respectively for interviews. These selections were limited to two for the service providers and one for the industry regulator because the study targeted customers' views and their perceptions about service quality. However, this cannot be done without inputs from the service providers and the regulator but this should not be as high as the responses of the customers. So a great number of the responses were solicited from customers. The purposive sampling was therefore

appropriate in selecting the service providers and industry regulator because the study compared the operating networks services and so they were selected on purpose. (Morse 1994, Lincoln & Guba 2000, Abdulai and Ansah, 2014).

3.8.3 Systematic Sampling

In systematic sampling technique, the sampling frame is ordered according to say a chronological order and elements are selected at regular intervals through the list. Systematic sampling involves a random start and then proceeds with the selection of every kth element from that point onwards, where $k = N/n$, and k is also the ratio of the sampling frame size N and the desired sample size n, and is technically called the sampling ratio. It is important that the starting point is not automatically the first in the list, but is instead randomly chosen from within the first k elements on the list. In this study, the starting point was determined by the throw of a die (Anol, 2012 p. 67). This technique was employed to select 44 communities out of a total of 133communities to collect data for this study as well as select accredited dealers/vendors of the mobile networks based on their respective lists. The number 44 was arrived at based on the one-third method of determining sample size (Puopiel, 2014). Hence, one-third of the 133communities was approximately 44. At this stage, the throw of the dire generated the number 6, so the random starting point was 6 and communities were chosen after every 3rd choice on the list until the 44 was reached. This is appropriate because it gives each community an equal chance of being selected. For the vendors, a list of them was obtained from the service providers so that a similar approach was used to select 10 of them for the focus group discussion. Each focus group discussion was made up of 10 participants because in a focus group, about six to ten people who are knowledgeable on the topic of study are called together to engage in a guided discussion (Abawi, 2013). This is appropriate because the numbers of vendors of the networks are many and varied

and communities are also many in the metropolis and each community and vendor that was selected had relevant information for this study. Morse (1994), Lincoln and Guba (2000), as cited in Abdulai and Ansah, 2014).

3.8.4 Proportional Quota Sampling

In proportional quota sampling, the proportion of respondents in each subgroup should match that of the population (Anol, 2012 p. 69). This technique was employed to select respondents who were Mobile Telecom network customers from the selected communities in Tamale. This selection was done based on the population of each of the communities so that the selected respondents were representative of their community's total population. This is appropriate because it makes the respondent categories to be an inclusive whole and the view of even the minority is taken into consideration. Table 3.1 shows evidence of the proportional quota sampling.

Table 3.1 Proportional Quota Sampling

COMMUNITIES	POPULATIONS	QUOTA (%)	NUMBER OF RESPONDENTS
Sakasaka	485	5	20
Kukuo	10,677	50	200
Kalpohini	7,440	25	98
Zogbeli	1,149	10	40
Malishegu	460	5	20
Others	930	5	20
TOTALS	**20,304**	**100**	**398**

Source: Field Survey, 2019

Table 3.1 shows the proportion and number of respondents in each community per its weightage. About 50% of the respondents were resident in Kukuo, 25% in Kalpohini and

10% in Zogbeli. Also, Sakasaka had 5%, the same as Malshegu and a group of the communities in the rural area with about 5% weightage. It has to be stated that not only does the proportional quota sampling technique have a sample selection that is not random, there is also a potential for selection bias, which can result in a sample that is unrepresentative of the population (Sedgwick, 2012). However, a lot of care was taken to ensure that this does not affect the outcome.

3.8.5 Accidental Sampling

This technique involves a sample being drawn from that part of the population that is close to hand, readily available, or convenient (Anol, 2012 p. 69). This sampling technique was employed to select respondents for the Mobile Telecom network customers after the proportional quota sampling was done to ascertain the number of people to administer the questionnaire to in those specific communities in Tamale. This was done in Kukuo, Zogbeli, Malshegu, Kalpohini, Wamale, Jarigu among others. The technique was also used during the pilot testing of the tools prior to data collection with the aim of testing the instruments in Gurugu and Choggu Yepalsi in the Sagnarigu Municipality. In this technique, preliminary questions about whether people the team met were mobile phone users or not were employed to replace potential respondents who ended up not being in this category. This is appropriate because at the final stage in determining the number of respondents to select for the questionnaire administration, a lot had already been done to ensure a fair representation of all respondent categories.

3.9 Sample Units for THE Study

The sample units for this study are subscribers of both MTN and Vodafone in Tamale. These two networks were selected from the existing four because these are the Mobile Telecom networks market leaders with a total combined share of about 76.06% of the

market share in the metropolis (NCA, 2019). Also, Vendors who are treated as users as well and who have information relevant for the study were part of the sample unit. Two (2) key informants, one from each of the two networks were also interviewed. These are people who demonstrate in-depth knowledge about the topic under investigation by virtue of their status as staff of the Mobile Telecom networks. So their responses were therefore relevant for the topic of the study. The sample units for the study are as follows:

- Subscribers or Customers of the mobile networks in the Tamale Metropolis. These were the main unit of analysis.

- The service providers were contacted for information since it is their services that were being investigated.

- Vendors of the networks in the Tamale Metropolis who have information relevant for the study.

- Regulatory bodies in the Mobile Telecom industry such as the National Communications Authority (NCA).

3.10 Methods of Data Analysis and Interpretation

Quantitative data from the study was analyzed using the descriptive statistics function of the Statistical Package for Social Scientists (SPSS). This software was used to produce tables and graphs. The tables and graphs were used to depict trends and pictorial diagrams for easy analyses. This helps in accuracy of analysis that will help to check the consistency of given responses. Data was also transformed into descriptive statistics for purposes of analyses and interpretation.

Qualitative data was analysed based on thematic analysis through an open coding system from this study. Qualitative data that was transcribed and analysed in this study was

based on the grounded theory or perspective. In this study all the recorded key informant interviews and focus group discussions were transcribed based on codes designed using the objectives of the study. So that during the interpretation stages each code was used to explain each objective it conformed to. What this means is that, the designed codes were used to synchronize portions of the transcribed interviews that conformed to them.

Other Qualitative data relating to customers switching intentions were analyzed by the use of content analysis and intuitive interpretation of responses. Content analysis is the systematic analysis of the content of a text (e.g., who says what, to whom, why, and to what extent and with what effect) in a quantitative or qualitative manner (Anol, 2012 p. 115). Audio data from the focus group discussions (FGDs) were transcribed for analyses and interpretation. These transcribed data were coded based on an open coding scheme in line with the stated objectives of the study. This means that before the transcription was done, issues in the objectives of this study such as service quality and customer satisfaction, service quality factors, effects of service quality on businesses of customers and the like were the basis upon which codes were designed.

3.11 Reliability and Validity of the Study

3.11.1 Reliability Tests

Reliability is the degree to which the measure of a construct is consistent or dependable. Internal consistency reliability measures the consistency between different items of the same construct. If a multiple-item construct measure is administered to respondents, the extent to which respondents rate those items in a similar manner is a reflection of its internal consistency. Reliability of a scale can be estimated in terms of average inter-item correlation, average item-to-total correlation, or more commonly, Cronbach's alpha. Cronbach's alpha is a reliability measure designed by Lee Cronbach back in 1951.

Factors in the scale size in reliability estimation are calculated using the following formula:

$$\propto standardized = K\bar{r}/(1 + (K - 1)\bar{r}$$

Where K is the number of items, $\bar{r}$ is the average inter-item correlation, i.e., the mean of K (K-

1)/2 coefficients in the upper triangular (or lower triangular) correlation matrix (Anol, 2012 p. 57 and 58).

Therefore, before the data analysis and discussions in this study was done, a reliability test was done on the variables used in the scale that was used in the customers' questionnaire. For the purposes of this study, the Cronbach's alpha was employed to verify the internal consistency of each construct in this scale in order to achieve reliability. The results showed an overall Cronbach's alpha of 0.869. This means the scale shows a statistically significant level of reliability of the items. The result of 0.869 and above implies an acceptable level of internal reliability. Further details of the results of the reliability test on this study are shown below.

Table 3.2 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.881	.869	46

Source: Field Work, 2018

Table 3.3 Case Processing Summary

Items		Number	Percentage %
	Valid	398	100.0
Cases	Excluded	0	.0
	Total	**398**	**100.0**

Table 3.4 Summary Item Statistics

Item/Means	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	No. of Item
Item Means	2.604	1.548	3.658	2.111	2.364	.223	46

Source: Field Work, 2018

All of the 378 questionnaires and 5 interview recordings were retrieved from the respondents during the data collection stage. This means the study realized a response rate of 100% and this means that all the respondents were contacted and their data were used for analysis.

3.11.2 Validity of the Findings

Validity of a study refers to the extent to which a measure adequately represents the underlying construct that it is supposed to measure (Anol, 2012 p. 58). Validation of findings is a necessary component of research and was done through data triangulation, use of member checking, use of peer debriefing and external auditors. The researcher engaged in member checking of various responses from the respondents. This was done through return visits to randomly selected respondents in order to ensure that the right data was captured before, during and after the analyses. Independent colleague

researchers were also engaged to offer some professional review of the analyzed data through some debriefing processes and proof readings.

UNIVERSITY FOR DEVELOPMENT STUDIES

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1Introduction

This chapter presents and analyses the results of data acquired from the study. The results are presented and discussed based on the specific objectives of the study. The sub-sections in the presentation of findings are: results and discussions of the background characteristics of respondents, determinants/gaps in service quality and customer satisfaction in mobile telecom networks, factors that determine service quality, value-for-money to customers in their choice of mobile network, effects of service quality on businesses, standards in customer care against customer expectation on services and customer satisfaction issues between MTN and Vodafone.

4.2 Background Characteristics of Respondents

Respondents socio-demographic characteristic considered for the purpose of this study are gender, age and educational background. It also includes employment status, income as well as expenditure on call credit, choice of network service and respondents' location/community of residence.

4.2.1 Gender

The gender characteristics of the respondents in the study show that more than half, that is 218 were females representing 55% whilst males were 183 representing 45%. Figure 4.1 shows the gender distribution of respondents.

Figure 4.1: Gender Distribution of Respondents
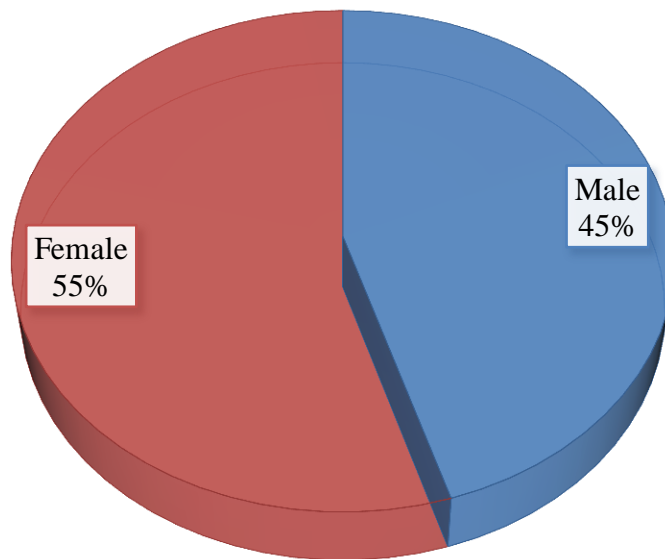
Source: Field Work, 2018

4.2.2 Age

This section covers the age of the respondents who are mobile phone users in the study area. Available literature shows that mobile phone ownership and usage in the Tamale Metropolis are 12 years and above. The age of the respondents in this study shows that most of them, that is 241 representing 59.8% were in the 25-37 years age bracket. Those in the 38-50 years range were 20 representing 5%, the same as the 51-62 years and 62+ groups respectively. The youngest age range of the respondents (12-24) accounted for 100 respondents representing 25.1%. Figure 4.2 illustrates the age categories of the respondents.

Figure 4.2: Age of Respondents
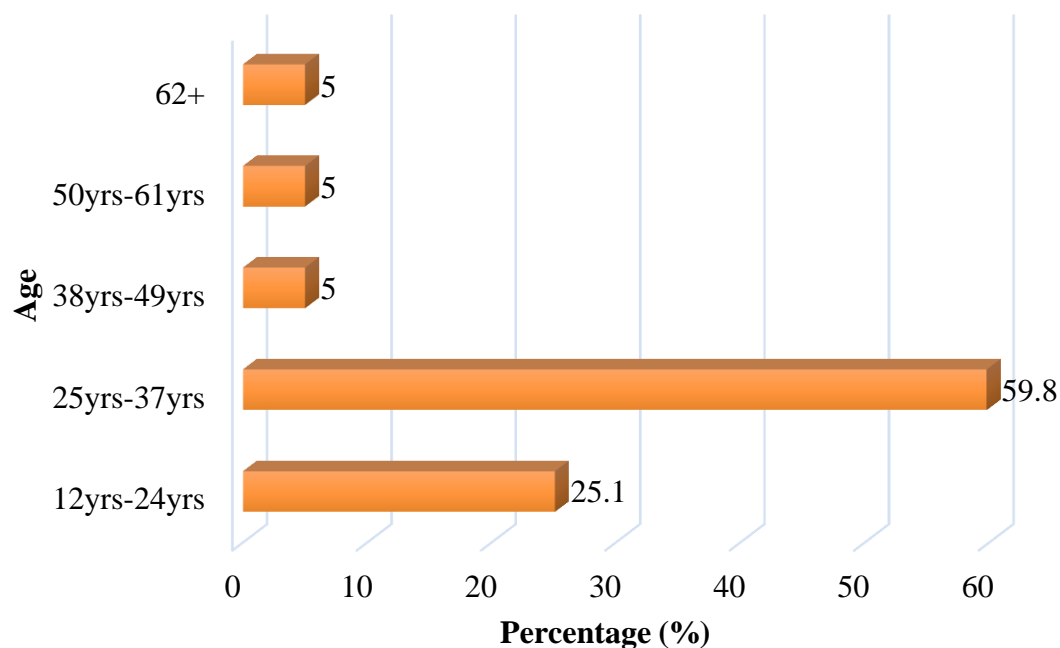
Source: Field Work, 2018

4.2.3 Education

One's level of education has a telling on their ability to use some services from the Mobile Telecom networks since they are driven by technology. All respondents in this study had some level of education. Basic and Senior High School leavers accounted for 20 respondents each representing 5% each of the total contacted respondents. Diploma/Degree holders were the majority of respondents 283 representing 70.4% of the responses whilst Post-Graduate degree holders were 78 representing 19.6% of the respondents. Figure 4.3 illustrates the educational status of respondents.

Figure 4.3: Educational Status
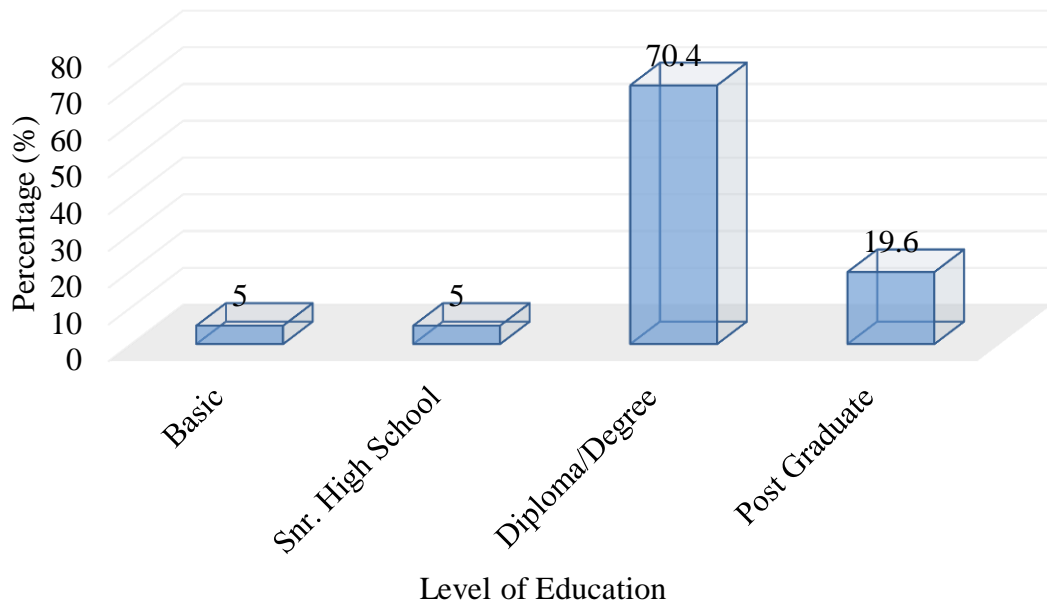
Source: Field Work, 2018

4.2.4 Employment

Out of the total respondents interviewed in this study, about 20 of them representing 5% were unemployed. A total of 160 respondents representing 40.2% were students still pursuing different courses in different disciplines in various institutions of learning. Almost half of the respondents, that is, 181 representing 44.7% are employed and 40 respondents representing 10.1% are retired. Employment is very important when it comes to a person's need for good quality service from the telecom network companies. In fact, poor quality service affects the day-to-day operation of employees and customers at work places. This means majority of the respondents (84.9%) were in positions where quality service and satisfaction was very important in their use of Mobile Telecom network services. Figure 4.4 illustrates the employment status of respondents.

Figure 4.4: Employment Status
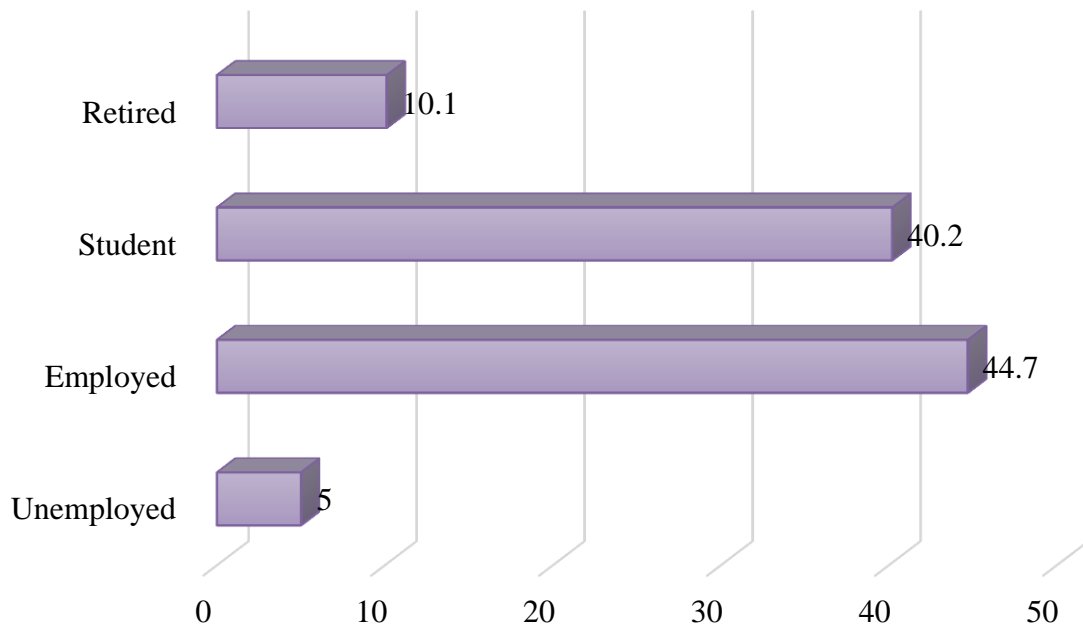
Source: Field Work, 2018

4.2.5 Income

The study revealed that 201 respondents representing 49.7% of the respondents earn an income above GHC1000, closely following are those with earnings of GHC 500-1000 who are 80 and representing 20.1%, those earning below GHC200 are 60 representing 15.1%. The rest are those earning GHC 200-500 who are 40 representing 10.1% and those with other sources of earnings are 20 respondents representing 5%. Income and mobile phone usage are sine qua non. Figure 4.5 illustrates further.

Figure 4.5: Income Level of Respondents
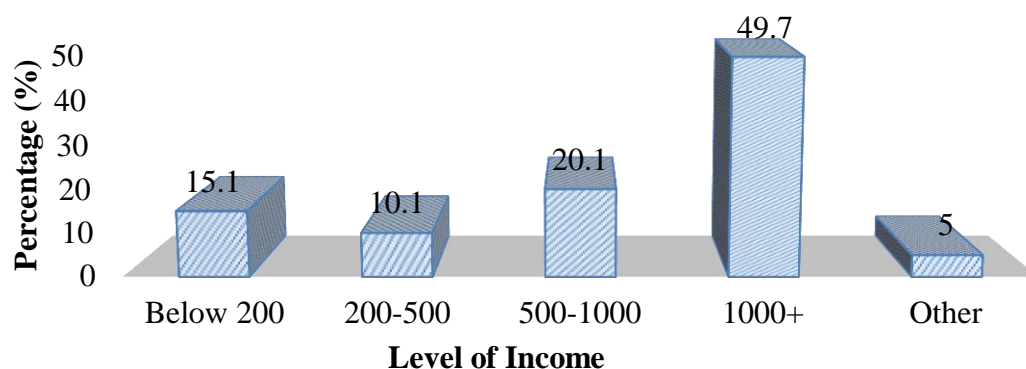
Source: Field Work, 2018

4.2.6 Monthly Expenditure on Call Credit

The commonest mode of spending for mobile phone users is purchases of call credit. The study revealed that the majority of the respondents 190 representing 48% spend below GHC10 on call credit per month. Closely following these, were respondents that spend between GHC 20-30 accounting for 88 respondents representing about 22% of the total number of respondents. Respondents who spend between GHC10-20 on call credit are 80 representing 20%. The remaining 10 percent were shared among those who spend GHC 30-40, 20 respondents representing 5%, those in the GHC40-50 range of spending were next with 12 respondents representing 3% and those above GHC50, were 11respondents representing 2%. The bar graph in Figure 4.6 illustrates the monthly expenditure pattern of respondents.

Figure 4.6: monthly expenditure on Call Credit
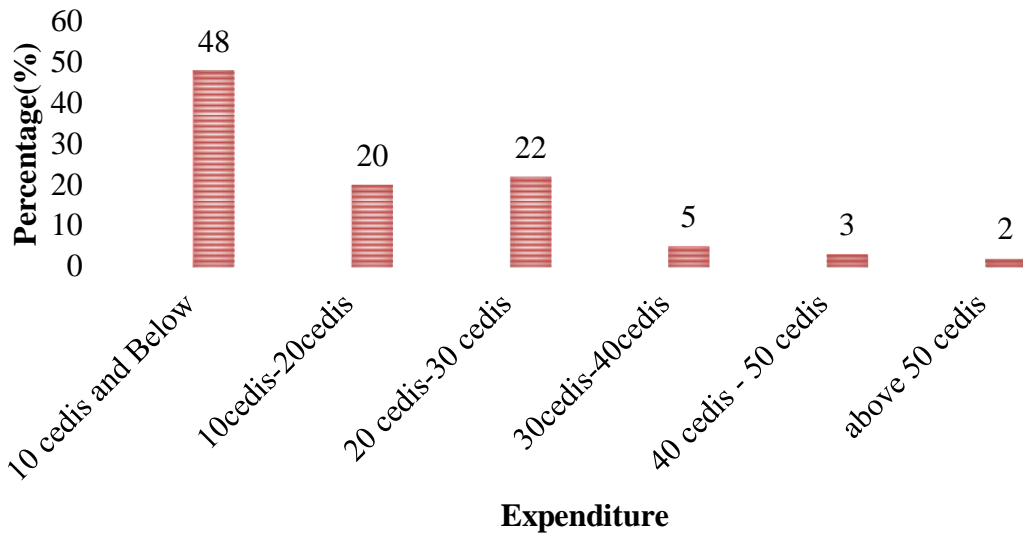
Source: Field Work, 2018

4.2.7 Choice of Mobile Network

Of the total 401 respondents in this study, a specific question sought to find out the choice of mobile network service they use. The study revealed that half of the respondents 200 representing 50% were using both networks. This is followed closely by users of MTN only which accounts for 181 respondents representing 45% while the remaining 20 respondents representing 5% used Vodafone only. This also dictates their switching intensions. Figure 4.7 illustrates further.

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Figure 4.7: Choice of Mobile Network
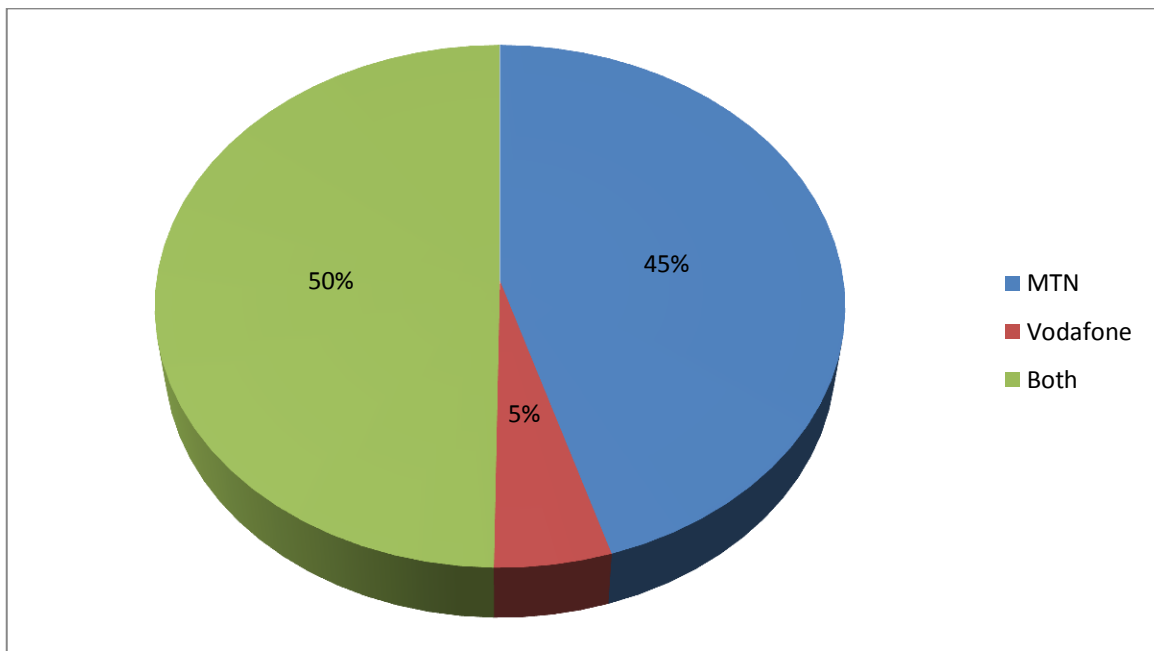
Source: Field Work, 2018

4.2.8 Location of Mobile Telecom Network Customers

Respondents in this study were drawn from various communities of residence. About half of the respondents, that is 200 representing 50.3% were from Kukuo. Another 98 respondents representing 24.6% were from Kalpohini. Respondents from Zogbeli were 40 representing 10.1%. Sakasaka, Malishegu and other communities all shared a respondent representation of 20 each representing 5% each respectively. If there are enough cell sites at a location to contain all existing subscribers, there is quality service and vice versa. Hence, the customers' ability to enjoy quality service delivery depends on whether his/her chosen network service provider has adequate cell sites. Figure 4.8 below illustrates the communities of residence of respondents.

Figure 4.8 Locations of Mobile Telecom Network Customers

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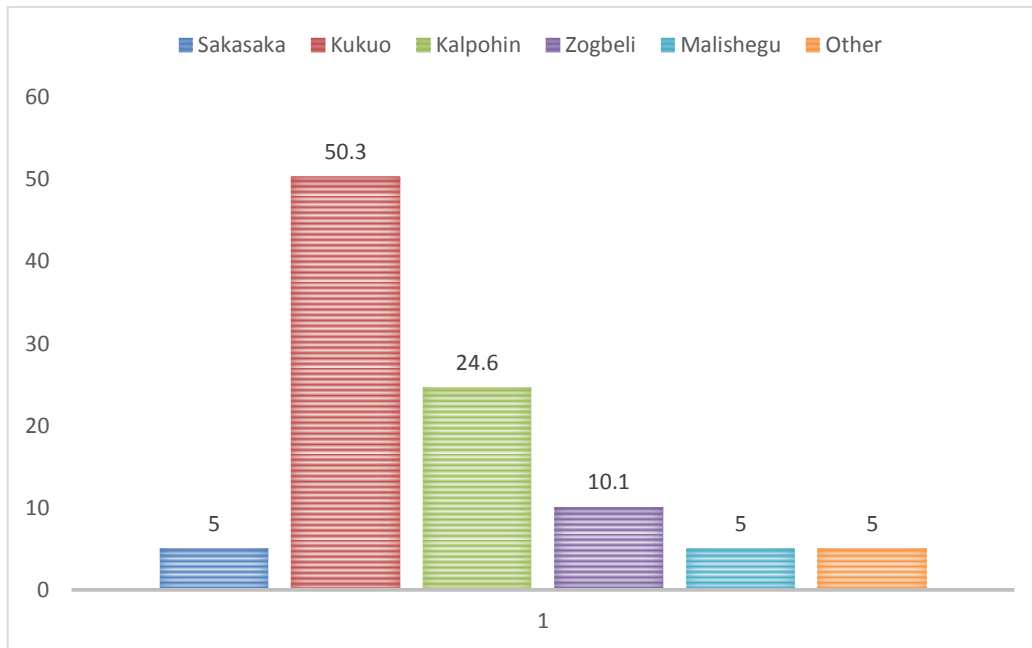
Source: Field Work, 2018

4.3 Determinants of Service Quality or Service Quality Gaps

Service quality enjoyed by customers is the interplay of perception and the service provider's ability to meet these perceptions in terms of gaps. The gap service quality model presents about six gaps to service quality. But in this study, it was revealed that most customers, 199 that is representing about 50 % know of these gaps, but 159 respondents representing 40% do not know anything about service quality gaps and 40 respondents representing about 10% chose a neutral position of not telling whether or not they know of any gaps.

Table 4.1 Customers' Perception and Awareness about Service Quality Gaps

Percentage (%)	Awareness of Service Quality Gaps	Number of Customers
50	Aware of Service Quality Gaps	199
40	Not Aware of Service Quality Gaps	159
10	Don't Know/Neutral	40
100	-	**398**

Source: Field Survey, 2018

Responses from the key informant interviews for this objective were respondent specific. For instance, the Regional Coordinator of Vodafone Ghana equated service quality gaps to the availability of cell sites at specific locations. He said, *as for the gaps we all have them. Sometimes the availability of cell sites in certain areas could be seen as a measure to sustain quality service and prevent gaps. Because you know multinationals are in to make money so they invest in areas they can recoup.* The staff of the National Communications Authority (NCA) when asked about service quality gaps defined it as, "customers' inability to take advantage of competitive offers from the networks, things that put the network operators on their toes." This means, as far as there are gaps in the operations of a telecom network company, customers will feel like trying other service companies where these gaps are minimal. In effect, service quality gaps are shortfalls in quality service delivery which some customers do not know about. During a focus group discussion with vendors of the Mobile Telecom networks, a participant had this to say about the gaps in service quality;

Most customers don't know about any gaps in service quality, those who buy network call credit cards from me have never asked me about it and so I have not really also thought about it, let alone find out what it is. But I have heard it's about shortfalls in service delivery.

The Frontline officer at MTN Ghana in the key informant interview said, service quality gaps are part of the service delivery process and cannot be entirely absent. He intimated that however, the gaps exist from two perspectives, which is the customers perspective and the telecoms perspective. According to him; "We may say there is no gap from us because of the ongoing technological injection we are doing, but it depends on the customer who will be able to measure us based on what we deliver to them."

4.4 Factors that Determine Service quality

The following are some of the factors and the attendant responses generated from the respondents. Respondents were asked to state their stand on each of the parameters for the factors that determine service quality. These were then developed into graphical figures for each service quality factor to generate an idea as to what position customers have in terms of their preferences for service quality.

However, the service providers too were asked to list some factors that account for their delivery of services to their customers. Here are some of them. The Regional Coordinator at Vodafone Ghana enumerated a number of the factors that determine service quality when he said;

When it comes to service quality, a number of factors come into play. You see, the resources is one, because the business might not have the resources to deploy a cell site in every area. And at places we want to site one, we have to acquire a permit from the

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EPA which is sometimes denied. At other times too, we have cable theft or fibre cuts at places due to road construction or farming activities. So all that are big challenges we face which leads to poor service quality. And also technology is also one, for instance, it fuels competition, I mean the market leaders, they are on 4G, and the rest of the other competitors are all on 3G for now. So 4G and 3G, comparatively, you see that 4G is much better and sometimes too, the human resource. I am not saying it is a key but sometimes too may be engineers. If you have full strength, anytime there is an issue, the engineers could quickly go and solve it.

For the Frontline Agent at MTN Ghana, factors that account for service quality refer to the service quality itself and the network's ability to meet customers' demands on service. According to him; "Factors that lead to quality service delivery refer to our ability at MTN Ghana and Tamale branch specifically to provide voice clarity when it comes to voice and for data in browsing, the speed that the customer gets in accessing the network."

From the industry regulator's perspective, factors that account for quality of service are looked at based on what they do by way of monitoring steps and procedures to keep telecom network companies on their toes. This was disclosed by the Assistant Manager in charge of Consumer and Corporate Affairs at the National Communications Authority (NCA) during the key informant interview. He mentioned that;

Factors that account for quality of service from our side we have what we call quality of service monitoring. As an organization, all the network operators are aware that we conduct quarterly quality of service monitoring. We have a van and we do a drive test and we collect data and the locations sometimes are not communicated to them so that they will easily go and improve quality there. What we do is that we do it every quarter

and we don't tell them that we are going to Sagnarigu or we are going to Kukuo, we just go and we don't even inform them that this is the time we are doing quality of service monitoring. And when we do, all the standards or the bench marks that we have given them, we check it, that is call set up time, congestion rate, bundle and everything.

For the customers, some factors that determine service quality were presented to them in the questionnaire for them to tell their views. The following figures and tables illustrate some of them.

Figure 4.9 Vodafone/MTN's Dependable Service
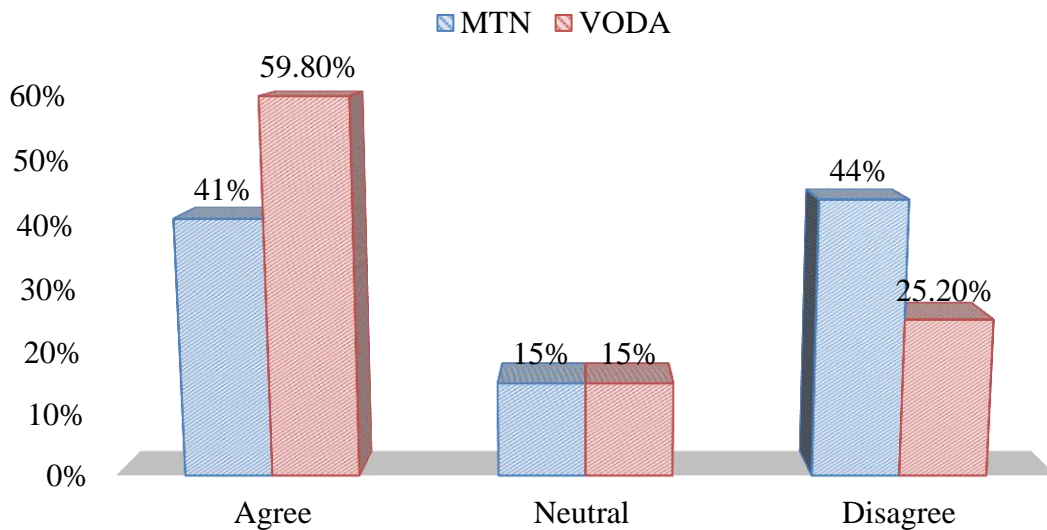
Source: Field Work, 2018

The responses in figure 4.9 show the extent of customer belief in how dependable MTN and/or Vodafone services are in relation to their needs. About 59.80% of Vodafone respondents agreed that their network is dependable, hence reliable. Also, about 41% of the respondents of MTN agreed that their network is a dependable network in service delivery. Both Vodafone and MTN had 15.1% each of their respondents who took a neutral stand on this issue. Again, 25.20% of MTN customers disagreed that their network is dependable whilst 44% of Vodafone respondents disagreed that their network is dependable. This means, on this dependable network service delivery factor of service quality, Vodafone is marginally ahead of MTN.

Figure 4.10 Providing Prompt Response to Services
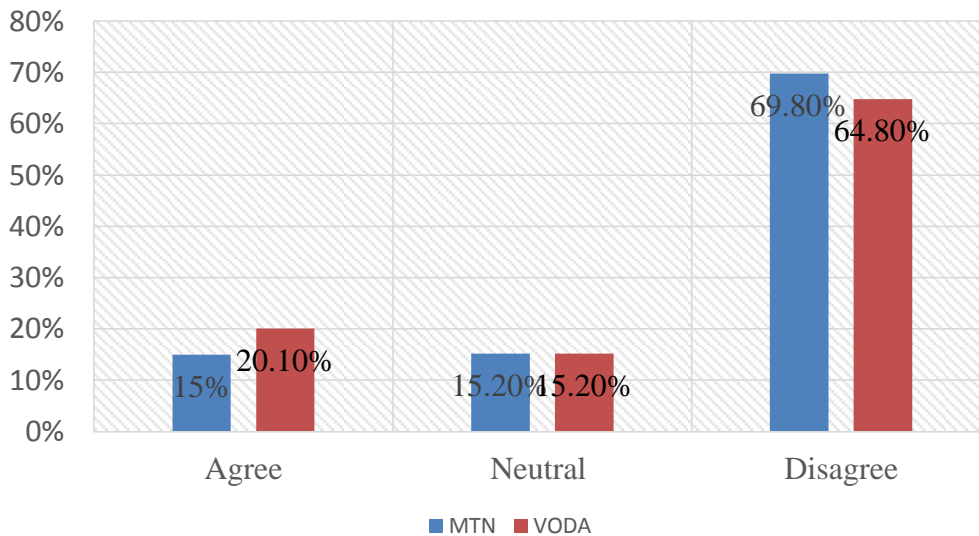
Source: Field Work, 2018

Providing prompt response to services is also a factor that determines quality of service in the Mobile Telecom industry as illustrated in Figure 4.10. On this, about 20.1% of the respondents of Vodafone agreed that their network provides prompt services whilst 15% of the respondents of MTN agreed that their network provides them with prompt services, hence are responsiveness. On the disagree scale, about 69.80% of the respondents of MTN disagreed that their network provides prompt services. And about

64.80% of the respondents of Vodafone disagreed that their network provides prompt services. The two networks had the same response rate on the neutral scale with 15.20% each.

Figure 4.11 Employees of Vodafone/MTN are Polite

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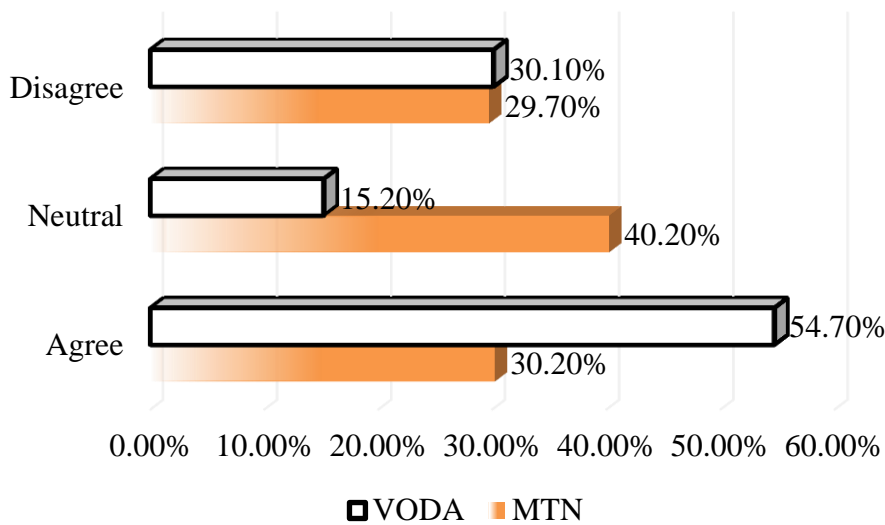
Source: Field Work, 2018

In the service industry, customer service calls for frontline staff to be polite when serving customers and would-be customers. This was also put before customers to understand what they make of this factor and the results are captured in Figure 4.11 above. The study revealed that about 30.20% of MTN respondents agreed that MTN employees are polite in their interactions with customers on services they render, hence they show empathy towards customers. Customers of Vodafone had 54.70% of them who agreed that employees of Vodafone are polite. The disagreed scale had 30.1% of MTN customers and 29.70% of Vodafone customers choosing it as their responses. The rest of the respondents 15.20% for Vodafone and 40.2% for MTN did not respond to the question on this factor, hence neutral.

Figure 4.12 Employees are Well Equipped
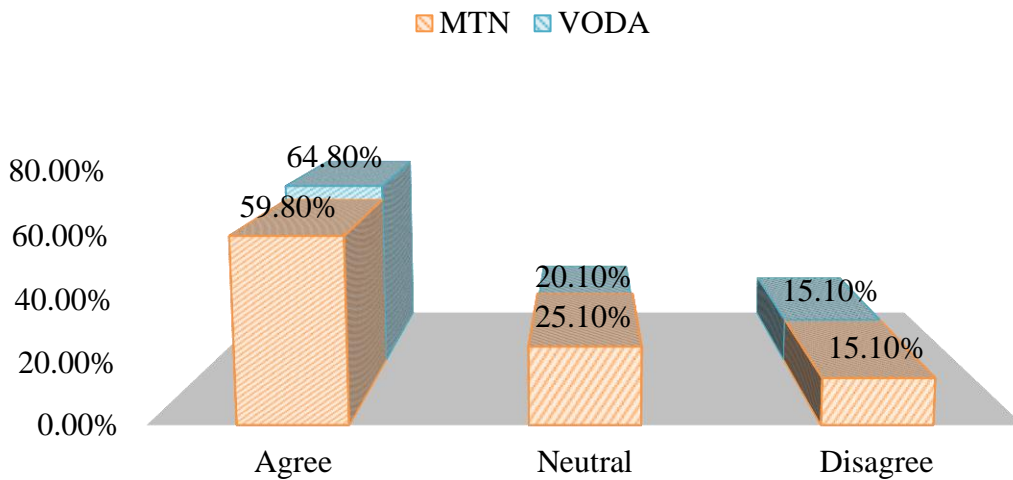
Source: Field Work, 2018

Before telecom network service industry employees can serve their customers very well, they must be well equipped to carry out their services. Customers were therefore asked to state their opinions on this factor. The results are stated in Figure 4.12 above. About 59.80% of MTN respondents agreed that employees of their network are well equipped to deliver services. For Vodafone, 64.80% agreed that the employees of their network are well equipped, . The two networks were also equally different in the disagree scale, with 15.10% for Vodafone and 15.10% for MTN too. A further 20.1% of Vodafone respondents and 25.1% of MTN respondents remained neutral.

Figure 4.13 Convenient Operating Hours
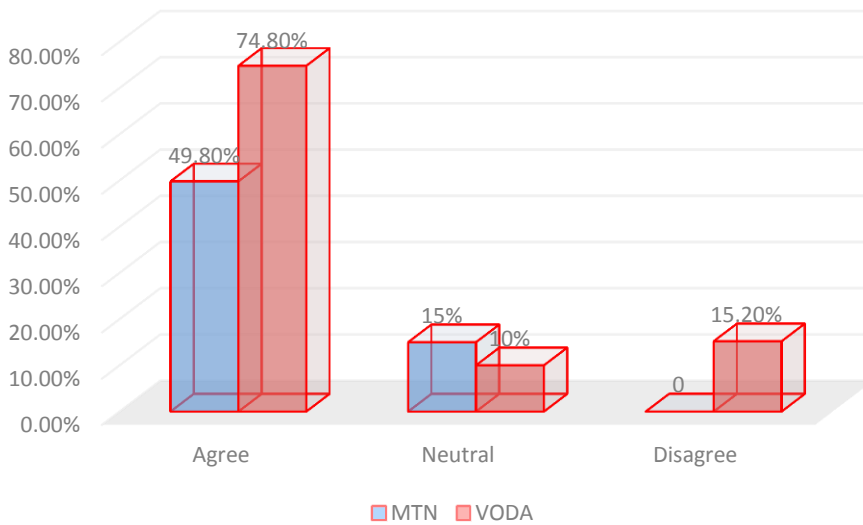
Source: Field Work, 2018

The convenience or otherwise of the operating hours of the two networks were also taken into consideration. This is because customers will very much prefer a Telecom network company that is always available to cater for their needs regardless of the time. The results of this are captured in Figure 4.13 above. About 74.80% of Vodafone respondents agreed that their network has operating hours that is convenient for them. MTN had about 49.80% agreeing to this factor. Also, about 10.1% for Vodafone and 15.1% for MTN are neutral. MTN had none disagreeing to this factor and Vodafone had 15.20% of responses for the disagree scale that their telecom network company's operating hours are convenient.

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Figure 4.14 Vodafone/MTN required service
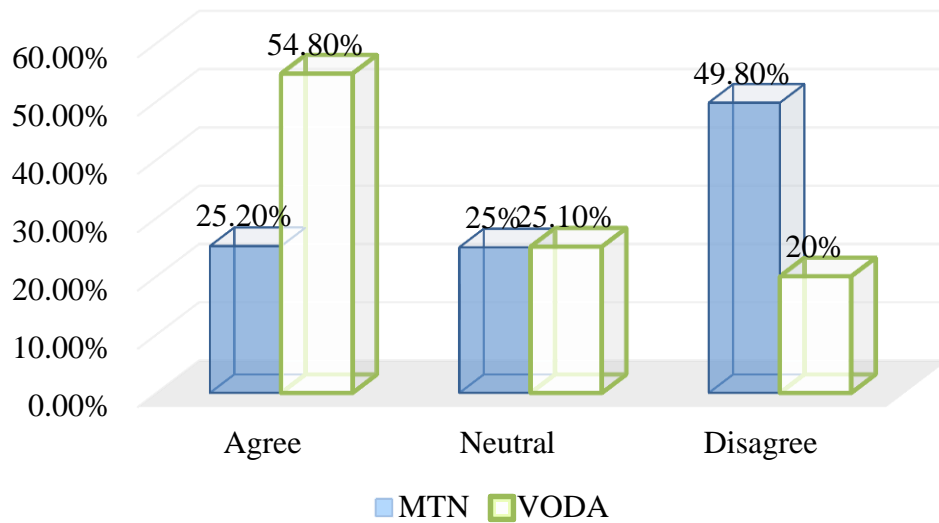
Source: Field Work, 2018

When customers are able to perform their day-to-day tasks on the range of services provided by the Mobile Telecom networks, they feel the service providers have given them the required service. From Figure 4.14, 25.20% of MTN customers agreed that their network provides them with the required service while Vodafone had 54.80% of respondent agreeing to this. The neutral scale had an identical 25.1% for both networks. The responses on disagree scale; saw MTN with 49.80% whilst Vodafone had 20%.

Figure 4.15: Customers readiness to Use Vodafone/MTN
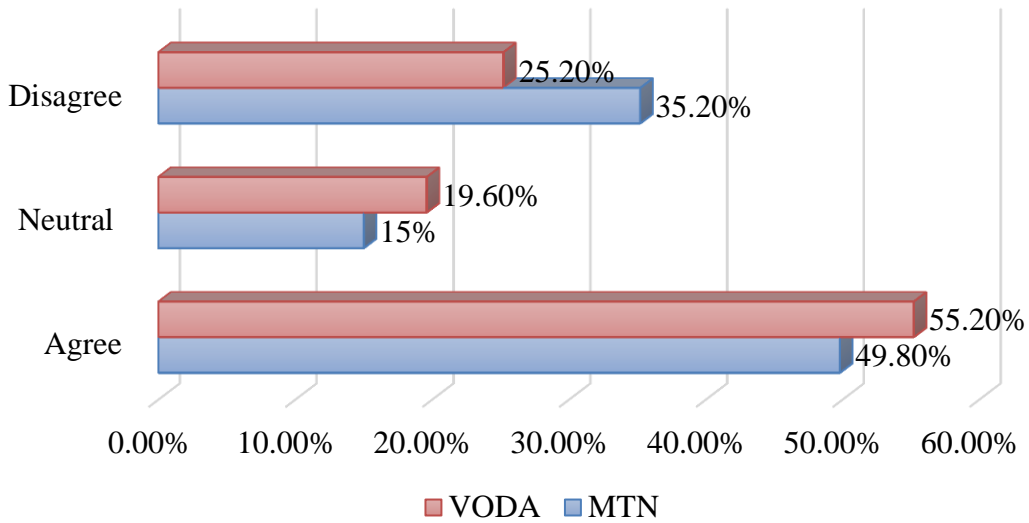
Source: Field Work, 2018

In the service industry, customer satisfaction determines customer retention as well as loyalty. The study attempted to ask of the views of customers/respondents on their switching intentions as far as their chosen mobile network's services are concerned. The results are found in Figure 4.15. The study revealed that a total of 55.20% of Vodafone respondents agreed that they are ready to continue using the services of Vodafone. These are the people who feel it is not necessary to switch mobile networks. On the other hand, 49.80% of MTN respondents have the view that they will continue to use their chosen network as they agreed to the statement on, 'Customers readiness to continue using their chosen network'. About 19.6% of Vodafone respondents remained neutral compared with 15% for MTN who are also neutral. For those not willing to continue using the services of their chosen network, about 25.20% of Vodafone respondents of the total responses said they will not continue using their chosen network as they disagreed to the statement about whether they will continue using their chosen network. About 35.20% of

MTN respondents indicated their unwillingness to continue using their chosen network as they disagreed.

4.5 Customer Satisfaction

Table 4.2 Gender of Respondents and Telecom Network Service Used (Cross-Tabulation)

Gender/Telecom Network Used		Telecom Network Service Used			Total
		MTN	Vodafone	Both	
Gender of Respondents	Male	60	0	123	**183**
	Female	120	20	78	**218**
Total		**180**	**20**	**201**	**401**

Source: Field Work, 2018

The above cross-tabulation was done to find out what the preferences are on the choice of mobile network company by the different gender. Available literature shows that satisfaction levels in the telecom industry varies with the different gender. The responses showed that about 60 male respondents representing 15% use only MTN. No male used Vodafone only. However, about 120 male respondents representing 30.2% use both networks (MTN and Vodafone). For the female respondents' preferences, the study showed that 120 female respondents representing 30.2% use MTN only. Female respondents who use Vodafone only were 20; representing 5% and the remaining 78 female respondents representing 19.6% use both networks. The mobile phone is a gender-neutral tool; therefore, ownership and usage don't depend on the different gender. However, when it comes to usage, some research points to differing usage patterns among the various genders. With females preferring sophisticated brands in terms of the ownership while males prefer simple efficient ones to own and use.

Table 4.3 Customer Satisfaction of MTN and Vodafone Services

Responses	Vodafone		MTN	
	Frequency	Percentage	Frequency	Percentage
Strongly Agree	123	30.6	40	10.1
Agree	198	49.3	141	35.1
Neutral	40	10.1	60	15.1
Disagree	20	5.0	100	25.1
Strongly Disagree	20	5.0	60	15.1
Total	**401**	**100.0**	**401**	**100.0**

Source: Field Work, 2018

A cross-tabulation was done for MTN and Vodafone customers to ascertain how satisfied their respective customers are about the services they receive. Table 4.7 is the results gathered from the responses. Table 4.7 shows that 30.2% of Vodafone end users strongly agreed with the level of satisfaction they get from their Mobile Telecom network. For MTN, 10.1% strongly agreed that their Telecom network service is satisfactory. But a further 49.7% of Vodafone respondents agreed but not strongly that they are satisfied with their network. For MTN, 34.7% of the respondents agreed but not strongly that they are satisfied with their network. About 10.1% of the Vodafone respondents and 15.1% of MTN respondents remain neutral in their responses on this level of satisfaction. On the disagree scale, 5% of Vodafone and 25.1% of MTN respondents respectively disagree but not strongly that they are satisfied with their network. About 5% of Vodafone respondents and 15.1% of MTN respondents respectively strongly disagree with the level of satisfaction of their network.

The network service providers were also given a chance during the key informant interviews to illicit the satisfaction that they think they render to their end users based on the service delivery. The Regional Coordinator at Vodafone Ghana said he was sure customers of his network are satisfied with their service. In his own words, he said; "Oh yes, for Tamale, I am quite satisfied. I have issues but Tamale, yes it might not be 100%, it might not be excellent but at least we have a good mark. We receive fewer complaints."

The Frontline Officer at MTN in the key informant interview also shared his view on their opinion about customer satisfaction. According to him, satisfaction of customers hinges on coverage for which he thinks MTN is ahead of the rest in the region. The Frontline Officer at MTN Ghana Tamale branch said;

Satisfaction of customers in the telecom industry has to do with getting your customers the network coverage at each location they are found. For Tamale, our coverage is 100%. For voice, regardless of location, our customers are satisfied but for data, there may be complaints when the person uses a device that is not 4G configured, if not, all those on the 4G get super speed when it comes to data. So they are satisfied with our service. I am sure about it.

The views of the industry regulator on satisfaction of customers during the key informant interview dueled on capacity of the Mobile Telecom network operators to satisfy their end users. The Assistant Manager in charge of Consumer and Corporate Affairs at NCA said;

From my perspective, personally I think that if you look at the voice quality of Vodafone, they have a very good voice quality when it comes to voice and MTN also has very good data quality because of the 4G that NCA auctioned to them. So they are the only network

using 4G except the other 4G services such as Surfline and then Busy Internet and the other people. But when it comes to those who do voice and data, MTN has a very good quality data because of the 4G and the rest but when it comes to voice, I think Vodafone is ahead of them in terms of voice. So they all have what we call competitive advantage. The voice is an advantage, we think that data is now ruling the world but I can still tell you that especially our part of the world, because majority are illiterate and can't read and write so data doesn't have meaning for them so the voice too they also cherish the quality of the voice.

Figure 4.16: Customer endorsements of mobile networks to relatives/friends
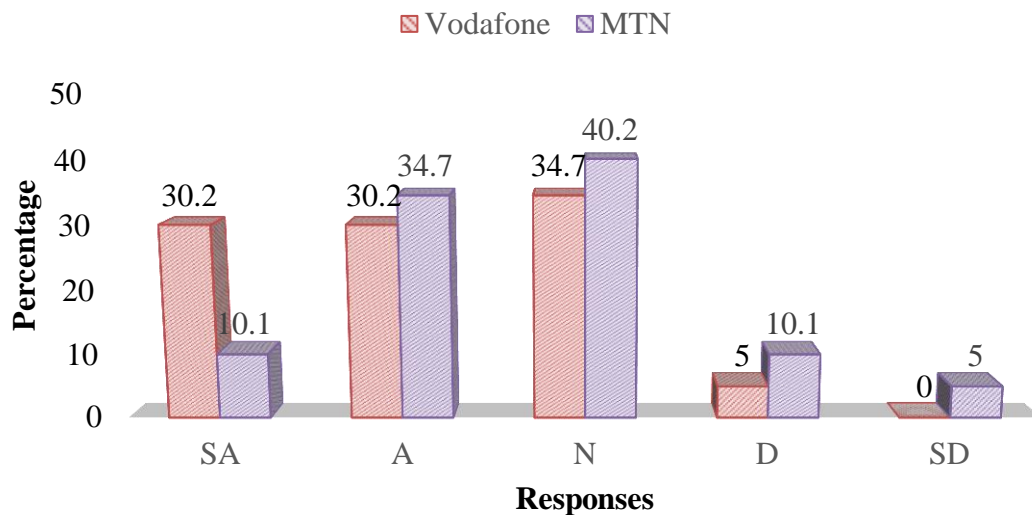
Source: Field Work, 2018

When a service is good, it gets endorsements from friends and family. The study delved into whether respondents will recommend their chosen network to a friend or family member to use. The responses that emanated from it are found in Figure 4.16. About, 30.2% of Vodafone respondents of the total responses said they would recommend MTN to their friends and family as they strongly agreed to this statement. For MTN, a total of

10.1% of the respondents said they would endorse Vodafone to their close associates. Also, a further 30.2% of Vodafone respondents agreed with the statement but not strongly. For MTN, about 34.7% agreed but not strongly. A total of 34.7% of Vodafone respondents and 40.2% of MTN respondents did not choose any parameter in the scale, hence they remained neutral. For disagree part of the scale, 5% of Vodafone respondents and 10.1% of MTN respondents disagreed but not strongly that they would recommend the networks to friends and family. No Vodafone respondent strongly disagreed but 5% of MTN respondents strongly disagreed on making any recommendations.

Table 4.4: Modern Equipment

Network	Frequency	Percentage
Vodafone	199	50.0
MTN	98	24.6
Both	101	25.4
Total	**398**	**100.0**

Source: Field Work, 2018

Figure 4.17: Modern Equipment
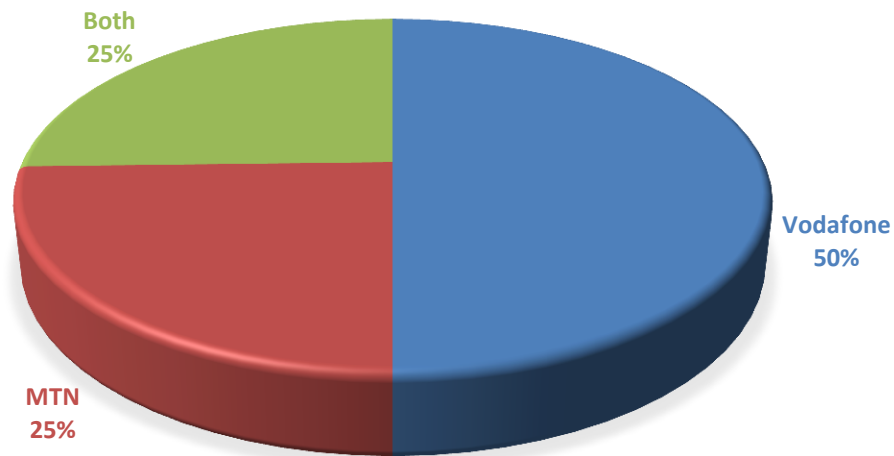
Source: Field Work, 2018

The use of modern equipment can propel quality of service in the Mobile Telecom industry due to the ongoing trends in technological advancement. In table 4.5 above, majority of the respondents, that is 50% chose Vodafone ahead of MTN when asked about whether their mobile network company (Vodafone or MTN) had modern equipment or used modern equipment in their operations to ensure quality service delivery. About 25% of the respondents said MTN had modern equipment ahead of Vodafone. The other 25% said both networks had modern equipment. This means that there is a strong perception among customers of MTN and Vodafone that their Mobile Telecom network uses modern equipment in their operations. Figure 4.17 illustrates further. This perception fuels expectations from the services that customers receive from their mobile network company.

4.6 Corporate Branding Images

Table 4.5: Corporate Branding Images

Network	Frequency	Percentage
MTN	160	40.2
Vodafone	138	34.7
Both	100	25.1
Total	**398**	**100.0**

Source: Field Work, 2018

The existence of beautiful offices and corporate branding images is a strong driver of customer perception in the Mobile Telecom industry. Customers feel more impressed when the appearance of their Mobile Telecom network company is decent in terms of offices and overall visibility. From the table above, about 160 respondents representing 40.2% of the total respondents who use MTN said their network operator had beautiful offices and corporate branding images whilst 138 respondents representing 34.7% of the respondents who use Vodafone said their network had beautiful offices. Respondents who chose both networks were 100 in total representing 25.1% and said both networks have beautiful offices and corporate branding images. This means MTN respondents marginally felt more strongly that their mobile network company has beautiful offices and corporate branding images.

Another customer satisfaction parameter this study took note of was appearance of employees. The appearances of employees serve as a motivation to customers when they visit the Mobile Telecom network's office for services. From the responses gathered on this study, 140 MTN respondents representing 35.2% said the appearance of employees were decent. For Vodafone, 178 respondents representing 44.7% said the appearance of

employees of their network was decent. About 60 respondents representing 15.1% said both networks (MTN and Vodafone) have employees who appear decent in serving them. A further 20 respondents representing 5% did not pick any of the two networks, hence were neutral in their response. This could be attributed to these respondents not having visited the network operator's office for service. In this parameter, responses for decent appearing employees were marginally in favour of Vodafone

Figure 4.18: Effects of Quality Service on Business
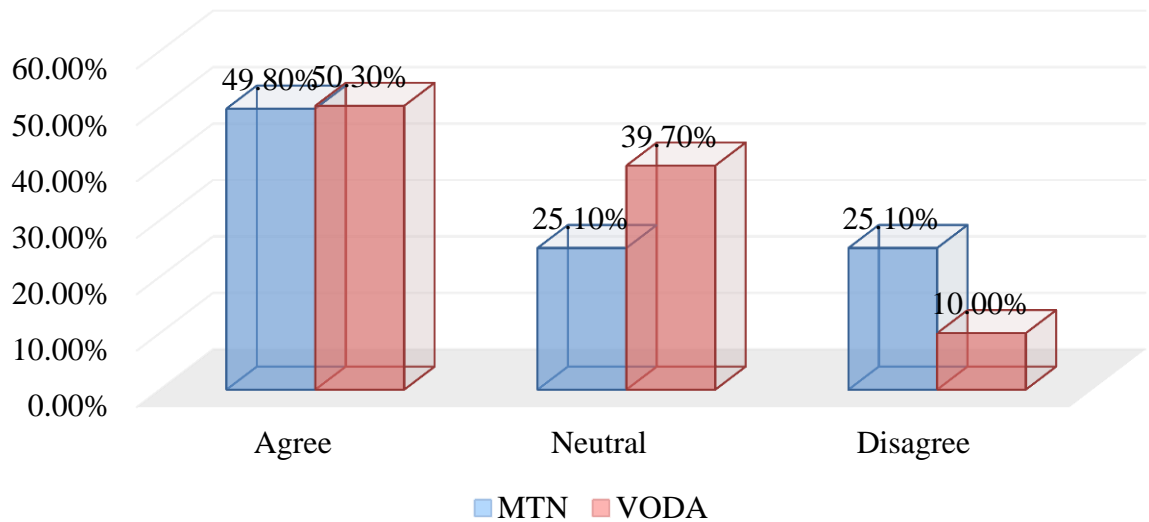
Source: Field Work, 2018

The use of mobile phones and the benefits derived from it cuts across all segments of society such as personal, occupational, business and social networking. Respondents were asked to state the effects of quality service on their business. The study revealed that a total of 50.30% of Vodafone respondents agreed that quality service affects their business. For MTN, 49.80% agreed that their network's poor quality service affects their business. Also, as much as 39.7% of Vodafone respondents in the study did not respond to the question on this matter whilst 25.10% of MTN respondents failed to respond on this matter, hence were neutral. The MTN network had 25.10% for the disagree scale on

this issue meaning they don't agree to experiencing any effects in using their network for business while Vodafone had 10% of their customers disagreeing to this point.

During the key informant interview on this issue, the Regional Coordinator of Vodafone Ghana in Tamale had this to say when asked about this issue:

We all know that this time everything is ran on technology. So we are there as a solver of problems. Whatever the client is using the service for is the person's business so if its communication from one end to another without even generating revenue for the person doing it, it's the person's business. So we are very cautious of that, such that we ensure that we give the best of service to our clients. In order that they also continue doing their business because some people actually rely on the services for their businesses to thrive. If we go down now, a lot of institutions will also go down. So we are mindful of that, definitely it has an impact on businesses.

For the staff of the NCA, he said;

Well, positively for instance if I pay for a Vodafone broadband for my business, may be I want to operate an internet café; I will need the highest possible speed to be able to operate an effective internet café so if the internet is slow definitely it will affect my business negatively. I will not make my returns very well. In the same way if the speed is high, my returns will be appreciating positively.

4.7 Ensuring Value for Money

Table 4.6: Ensuring Value for money

Response	Vodafone		MTN	
	Frequency	Percentage	Frequency	Percentage
SA	63	15.7	20	5
A	80	20	141	35
N	158	39.3	80	20
D	60	15	60	15
SD	40	10	100	25
Total	**401**	**100**	**401**	**100**

Source: Field Work, 2018

The two comparative networks in this study (MTN and Vodafone) were also considered based on which of them provides value for money for its customers. The cross tabulation in Table 4.5 illustrates the responses generated from respondents. Table 4.5 shows 15.1% of Vodafone end users who strongly agreed that they get value for money from their network whilst only 5% of MTN respondents strongly agreed that their network provides them with value for money services. For Vodafone, 20.1% of the end users agreed but not strongly that they get value for money. And 34.7% of MTN respondents agreed but not strongly that their network provides them value for money services. Also, 39.7% of Vodafone respondents and 20.1% of MTN respondents remained neutral on this issue. For disagree scale, a total of 15.1% each of MTN and Vodafone respondents said their network does not provide them with value for money services. The rest of the respondents, a total of 10.1% for Vodafone and 25.1% of MTN respondents said their network does not provide them with value for money services as they strongly disagreed.

On the part of the service providers, value for money issues is dependent on the charges they do for services customers receive from them. For the Regional Coordinator of

Vodafone Ghana, the rate at which they charge their customers for services and the promotions they give out are enough to say customers get value for money for using Vodafone. According to him, this places every customer at a position to get and enjoy what he/she can afford. When asked about this value for money issues, he said; *If you ask me, YES! You see it is not just the case, but we have a standard price. And I think the standard price is Ghp0.08 per minute. There is no much difference in terms of pricing. But you know we all have promotions that we run. So for instance, I will offer Ghc 10, Ghc 11 for let's say 1000minutes of calls on-net that is say Vodafone to Vodafone and I may offer you again 120minutes off-net that is from Vodafone to competition. Then I might give you some 250megabites of data, so those are the things. They are a whole lot of them, so you look at what fits you and go in for it. It's not just how much we sell a recharge card but the value comes from those propositions that we offer.*

The MTN Ghana Frontline Agent was equally optimistic about the value-for-money customers get from their network. According to him they charge the lowest rates in the market. When asked on whether customers of MTN get value-for-money in using MTN, he said;

"Yes, we charge lower than other networks like Ghp10 per minute. For data, it depends on the capacity in downloading such as videos which are smaller in size as against those that are bigger in which case you will be charged higher and these are choices a customer can make."

The industry regulator also has an eye on value for money issues and this came to light when a question on this was posed to the Assistant Manager in charge of Consumer and Corporate Affairs at the NCA. He alluded to the fact that the authority has put in place enough measures to ensure customers get value-for-money in relation to what they

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spend using their chosen telecom network service. He mentioned some of them as certain operational parameters such as billing feedback, to enable customers instantly receive messages from service providers about how much they have spent on a call. Then there is also a regulation that makes service providers notify customers before migrating them from their data bundle to their main balance if the bundle elapses. On the whole, the NCA officer said;

Value for money issue, if you look at the parameters we have put in place as an authority for the networks to operate, everyone is supposed to get value for money. Though it depends on individual preferences but we have instituted the billing feedback and improved it to help customers get value for money.

Figure 4.19 Standards in Customer Care
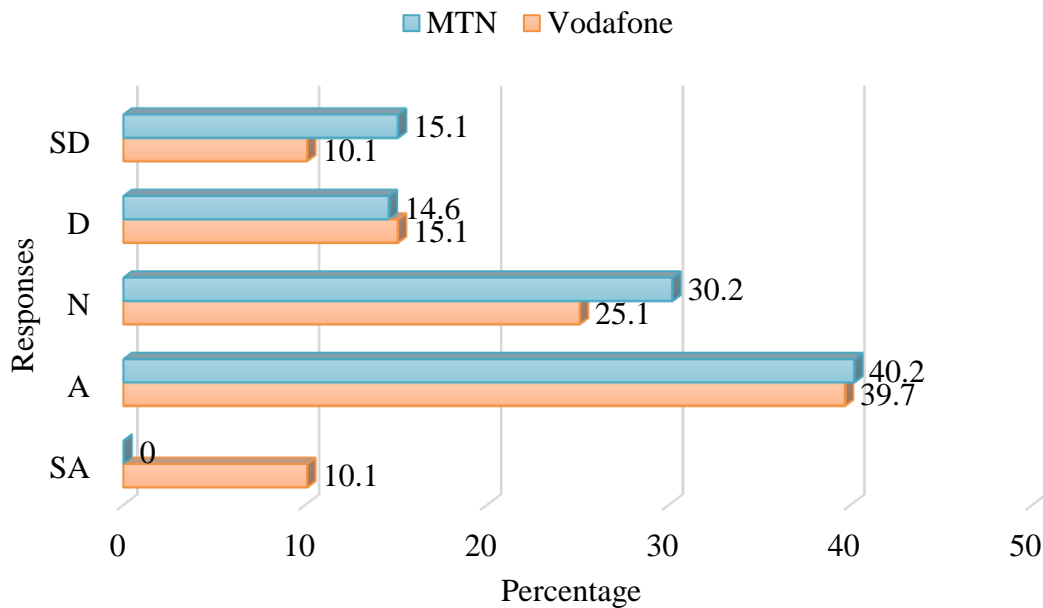
Source: Field Work, 2018

4.8 Comparing Standards in Customer Care Against Expectations

Standards in customer care and expectations form another objective of this study with the aim of comparing the two and coming up with a verdict based on the responses generated from the field. On this score, Figure 4.19 has a catalogue of respondents' views on customer care as against expectations based on MTN and Vodafone. The study revealed that, while no MTN customer strongly agreed to standards in customer care from their network's perspective Vodafone had about 10.1% of their respondents strongly agreeing that their network has a better standard and customer expectations than MTN. A further 39.7% of Vodafone respondents agreed but not strongly that their network has a better customer service standard and MTN had 40.2% of them agreeing that their network has a better standard and customer care than Vodafone. The neutral scale saw 30.2% of respondents for MTN and 25.1% respondents for Vodafone. On the disagree scale, about 14.6% of MTN respondents and 15.1% of Vodafone respondents said their network does not match to the current standards in customer care and expectations. Then 10.1% of respondents of Vodafone said their network does not match up to current standards in customer care and expectations. The remainder of the respondents that is about 15.1% strongly disagreed with this statement on standards.

This issue of standards in customer care and expectations was also put before the network service providers and the industry regulator for their views. At the National Communications Authority (NCA), during a key informant interview, an Assistant Manager in charge of Consumer and Corporate Affairs in response to this issue said;

For us at NCA, yes we have standards in customer care. For instance, we do regular check-ups on their customer care centers to find out how long customers wait to be served. We also do check to see how many customer care agents or if you like tellers that they have. And aside the provision how many are there at a particular time. Aside that

we have what we call the complaint mechanism, when we send them complaints how we expect it to be received, the standard even not from us but when an ordinary customer calls, the standard of addressing that issue, I think we set all those standards for them and it's the same across board, they all have to abide by it.

On the other hand, the regional coordinator at Vodafone Ghana in a key informant interview disclosed that in order for them to align the standards in customer care to meet customer expectations, they engage in constant training of staff. He further added that;

For two to three years now, the eye of the business is customer experience. We have done a lot of training especially for the front liners. We even train everybody in the business because you go out as an ambassador of the business. You carry the brand of the business, so even if you are not a front liner and you are lacking some qualities in customer experience, it affects the business.

For his part, the Front Line Officer at MTN Ghana gave a similar response as his competitor at Vodafone. He said, standards in operations are very important to the MTN brand especially as they are the market leaders. According to him, in order not to exhibit any lax in service delivery, employees of MTN are constantly trained on current technological advancements in the telecom industry to meet a certain standard. He added that:

Since I started working at the front desk of MTN, I cannot count the number of trainings we have received in customer service. The aim is just to keep that standard we have set that has taken us to the top of the market. We wish to remain the market leader for as long as we can so there is no chance to spare. My regional coordinator always says as long as the sun rises, MTN should continue to be shining but it is not easy to do that. We have to carve out a niche for the business. That's why we are the only telco with 4G. In

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data, we are one of the best if not the best in Ghana. So based on that we believe we meet our customers' expectations to the best of our ability.

A respondent during the focus group discussion with vendors of the networks however said, most customers who buy merchandise from him care little about data and are rather concerned about calls and text messages. So if data usage is seen as a standard as contained in the response above, then it is for some category of customers and not all. He said, "I have not encountered customers who know about standards in customer care. All those who visit my shop to purchase scratch cards and other services are not really the type that ask of these things."

4.9 Discussion of Findings

4.9.1 Customers Perception of Gaps in Service Quality and satisfaction

It was revealed that half of the customers of Mobile Telecom services (50% of the respondents) know about the service quality gaps as presented by Parasuraman, Zeithaml and Berry, (1985). A substantial number too (40% of the respondents) have no idea about the service quality gaps. Only a few (10% of the respondents) remained neutral or said they did not know or would not comment on it. Even though all respondents had some form of formal education, it is not enough to fully understand quality issues in the Mobile Telecom industry. It is based on knowledge about the service quality gaps that customers can understand the difference between what their network service provider offers and what their perceptions and expectations are. This is in line with what Emel, (2014), Sanjay and Garima, (2004) identified in their respective studies on the gaps model that after the gaps modeling; the determinants of service quality that consumers used when interpreting the quality were described. This means service quality is interpreted very well if one has an idea about the gaps.

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4.9.2 Factors that Determine Service Quality

Based on this, varying views were gathered from respondents as far as each of the factors is concerned. The first factor was about which of the two networks provided dependable services to their customers based on a scale. The results showed that some customers of Vodafone with a total respondent percentage of about 25% strongly agreed that indeed Vodafone is a dependable network in terms of services. MTN had a total of 10% of their customers who strongly agreed that their network offers dependable services. This means, on this factor of service quality, Vodafone is marginally ahead of MTN. This is in line with the findings of Nigel, Jonathan and Britt, (2004) that the rapid expansion of the Mobile Telecom markets is clearly linked to liberal regulatory environments, where operators have been given freedom to respond to customer requirements, hence making these operators dependable according to customer needs. This is the case in the study area of this project because; at least some customers (a combined 35%) agree that their Mobile Telecom network service providers offer them dependable services. On the disagreed scale for this, customers with issues about whether Telecom network service companies provide dependable services sum up to 44.5%, slightly higher than the 35% for those who believe services are dependable. This is in line with the findings of Samuel and Arnold, (2014) that "the goals set by government have only partly been met especially with respect to the development in mobile service quality in rural areas – and the quality of service is still low and has even deteriorated on some indicators. There is, therefore, a widespread dissatisfaction with the general Telecom development in Ghana among users as well as policy decision makers and administrators." This conforms to the findings of Florian and Soeren, (2014), in analyzing dependable network service when they talked about reliability in which they said, "having the most reliable network in terms of fewest dropped calls and outages, and constant access to data is overwhelmingly

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the most important attribute in terms of network choice". Meaning customers switching intentions are dictated by how dependable their Mobile Telecom network service provider is able to provide their needs.

Also, keeping promises to customers was seen as a factor that determines service quality. The study revealed that as much as 30% of Vodafone customers and 10% of MTN customers have agreed that the two networks keep promises; some other respondents such as 19.5% for MTN and 5% for Vodafone disagreed as to the networks keeping their promises to customers. These statistics espouses the points articulated by Adjetey, (2012) when he expressed doubts as to whether Ghanaian Mobile Telecom companies have policies to guarantee total satisfaction of their customers through promises.

The next factor that determines service quality considered in this study was fair charges in terms of the amounts customers pay for services. About 5% of the MTN respondents in this study agreed that their network has fair charges whilst 10% of the Vodafone respondents agreed that their network has fair charges for them. And a total of 25% of the MTN respondents in this study disagreed strongly that their network charges them fairly whilst 20% of the Vodafone respondents disagreed strongly that the charges of their network are fair. The rest of the respondents representing 25% remained neutral in their responses on this factor. Meanwhile, according to NCA's publication for February, 2016, both MTN and Vodafone charges the same amount of Ghp 0.11 on net and Ghp 0.13 off net for calls. The two networks however have slightly different charges for Short Message Services (SMS). While MTN charges Ghp 0.045 for SMS on-net, Vodafone charges Ghp 0.055 for SMS on-net. Also, MTN charges Ghp 0.055 for SMS off-net whilst Vodafone charges Ghp 0.065 for SMS off-net. These statistics therefore relates to the responses that emanated from the study. This conforms to the assertions of Scott,

Jonathan and Britt, (2004) that the findings on charges of the Mobile Telecom industry players recognizes that its next 1billion customers will be won by companies that develop business models that work for poorer people in Africa. This presents big opportunities for the delivery of pro-poor services in terms of call and SMS charges.

4.9.3 Customers of Mobile Telecom Networks AND Value for Money

The results showed that 5% of MTN respondents   agreed that their network provides them with value for money services. For Vodafone, 34.5% strongly agreed that their network provides them value for money services. For the strongly disagree scales, a total of 20% of MTN respondents said their network does not provide them with value for money services. Also, 20% of Vodafone respondents said their network does not provide them with value for money services. The rest of the respondents of about 20% from both networks remained neutral in their responses on this issue. This issue of value for money is part of the number of Mobile Telecom industry's developmental issues that was captured in the study titled Telecom Consumer of the Future by Florian and Soeren, (2014) as they identified it as a very important customer centered measure that will lead to growth in Telecom companies in competition. According to them, retail access provisions and value-for-money offerings are both classified under data utilities which if Mobile Telecom companies pay attention to, they can achieve 'higher potential profitability'.

4.9.4 Effects of Quality Service on the Businesses of Mobile Network Customers

The effects of Mobile Telecom network service on business are viewed based on either positive or negative. When service is poor, it leads to a negative effect and vice versa as customers spend more than they should on services. On this issue of service quality effects on businesses of customers, the study took two issues into consideration. These are value-for-money and how beneficial the service is to the customer in terms of their

business. The former has already been discussed in a previous section. The study revealed that 10% of MTN customers strongly agreed that usage of their network is more beneficial than others. For Vodafone, 39.5% strongly agreed that using their network is more beneficial than others. Five percent of MTN respondents strongly disagreed with the assertion that using services of their network company is beneficial. On the other hand, 20% of respondents of Vodafone said using the services of their Mobile Telecom network is not beneficial as they disagreed strongly with the statement on benefits. About 25.1% of the other MTN respondents and 39.7% of Vodafone respondents did not respond to this question or chose a neutral position on the issue of benefits.

This issue of likely effects of poor quality service on customers of Mobile Telecom networks hinges on the uses of mobile phones as captured by Scott, Jonathan and Britt, (2004) that it saves time, makes business more dynamic, improves financial management, all of which tend to improve household income and reduce risk in African settings. In each of these, when service delivery is poor, it will affect customer's businesses negatively and vice versa.

4.9.5 Standards in Customer Care Against Expectations ON the Nature of Services

Standards in customer care and expectations form another objective of this study with the aim of comparing the two and coming up with a verdict based on the responses generated from the field. About 30% of Vodafone end users strongly agreed that their network has a better standard and customer expectations than MTN while 10% of the respondents of MTN agreed that their network has a better standard and customer care than Vodafone. On the strongly disagree scale, about 14.5% of MTN respondents said their network does not match to the current standards in customer care and expectations. Then about 15% of Vodafone respondents said their network does not match up to the current standards in customer care and expectations. The remainder of the respondents, about 30.5%

remained neutral on this issue. Currently, Mobile Telecom networks see the use of modern equipment, current technology and prompt service delivery as some of the standards in customer care and expectations marching. Added to these are standards such as delays in call set up time, call drops, out of coverage area notices among others. The above results in this study suggest that respondents had varying degrees of understanding in their responses on this issue.

Standards in customer care are dictated by the regulator, the NCA for the case of Ghana. The standards have some universal points of agreement in the service industry which is mandatory. For the NCA in Ghana, the points of note are; the length of time customers spend in getting complaints resolved by the service providers, the manner in which complaints are resolved and based on these, a complaint mechanism is put in place for compliance. The NCA has measures in place to check all of these and ensure they are being followed. From time-to-time, these standards in customer care are modified to conform to the current wave of globalization. This is to ensure that the telecom industry in Ghana has standards that conform to global standards in the Mobile Telecom network service industry. For instance, these requirements and results from the study conform to the works of Jennifer, (2015) in her study on Responding to problems faced by Telecommunications Consumers in Australia, as the Australian Communications and Media Authority (ACMA) have similar standards on international calls including; give consumers information on arrival at an overseas destination about the charges applicable for the providers' international roaming services at that destination, enable consumers to decline continued provision of international mobile roaming services while overseas and any other matters considered appropriate including measures enabling consumers to monitor and manage their roaming usage and costs. In Ghana, the NCA also has billing notification which is a requirement for service providers to comply with, such that when

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a customer has exhausted data bundle on their account, they have to be notified. So that based on the notification, they must decide whether they should be migrated to their main account. This shows that customers have some reservations about their network service providers compliance to these standards based on the responses above.

4.10 Summary of Findings

4.11 Introduction

This study was meant to assess Service Quality and Customer Satisfaction in the Mobile Telecom Services in Tamale, Ghana.

4.12 Summary of Major Findings

4.12.1 Customers Perception of Gaps in Service Quality and Satisfaction

i.   The study revealed that majority of respondents (50%) had knowledge about service quality gaps in the Mobile Telecom industry. Others such as 40% of respondents did not have any knowledge about service quality gaps. A further 10% remained neutral or had no information to share on this objective.

ii.   Most customers had a fair assessment of service quality of the Mobile Telecom networks. This means as most customers are not satisfied with service quality, most of them wish to try elsewhere with an aim of possibly finding a different Mobile Telecom network service provider.

iii.   One other factor that shapes customer perception is the use of modern equipment in the operations of the Mobile Telecom network operators. Majority of the respondents (75%) declared that their network uses modern equipment in its operations. The responses placed Vodafone ahead of MTN as a network that does better at using modern equipment in their operations. This means that there is a strong perception among customers of MTN and

Vodafone that their mobile telecom network uses modern equipment in their operations. And this perception fuels expectations from the services that customers receive from their mobile network company.

iv. Employees of Mobile Telecom networks also have to be well equipped to offer quality service to customers. From the study it was revealed that both sets of customers of Vodafone and MTN feel the employees of their network are not well equipped to offer them decent services. This also has a lot to do in shaping customer perception, expectation and satisfaction. If customers feel the employees of their Mobile Telecom network company are not well equipped then there is a high sense of customer dissatisfaction and low expectation.

v. The existing gaps in service quality compel customers to use both networks as they become of age. This is because the study shows that as people are ageing they prefer using both networks instead of one just to be able to balance the two to avoid any shortfall.

4.12.2 Factors That Determine Service Quality

i. About one-third of the respondents (35%) believe that the Mobile Telecom networks in the study area provide them with dependable services, hence reliable. This means a greater percentage of customers in the study area (65%) are not confident that their Mobile Telecom networks services are dependable in terms of reliability.

ii. Some customers of the two Mobile Telecom networks (40%) said the companies do not keep promises with them in terms of responsiveness. This means 60% of the respondents sided with the Mobile Telecom networks when it comes to keeping promises with them, hence responsiveness. These

promises are mobile credit discounts, promotions and offers to customers. The service providers are able to give those offers to customers when they promise to do so.

iii. Almost half of the respondents (45%) said their network charges are fair as compared to what other customers pay for specific services. This means the other more than half (55%) said their networks charges are not fair comparatively. This means in terms of the cost of using services of Mobile Telecom networks more customers are unsatisfied as their expectations are not being met.

iv. The study results shows that expenditure on call credit reduces as age of mobile phone users increases creating an inverse relationship between spending on call credit and ageing users of Mobile Telecom network customers. This can be attributed to several factors; people spend less time on calls as they grow old, usage patterns in terms of other Mobile Telecom network services such as social media are less patronized by the aged, plus the type of mobile phones dictates expenditure on call credit such as sophisticated verses simple brands of phones. In this case aged people generally use simple brands of phones because the most important thing to them is calls and text messages as compared to younger ones who prefer more sophisticated uses such as camera, video recorder cum player, and audio recorder/player among others. All these features tend to have demands on call credit as frequent updates appear from time to time on such mobile devices. However, the study showed that service quality affects all of these people in one way or the other.

The study revealed that customers don't get value for money for using the services of Mobile Telecom networks in the study area because majority of the respondents (60.5%) felt so. Other respondents 39.5% however felt they get value for their money.

Most respondents (50.5%) said their network's poor service delivery affects their business since they pay more for services. The other 49.5% said the effects of poor quality service on their business were average.

The study revealed that end users of Mobile Telecom services in Tamale see their respective networks being below the standard since 60% of the respondents felt so in terms of tangibles. This means both MTN and Vodafone still have a lot to do when it comes to customer satisfaction standards and expectations.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

In conclusion, the findings show that, customers perceive satisfaction and quality service in different ways. While most Vodafone customers were satisfied with the service they receive from their network service provider, most customers of MTN were not satisfied with the service they receive from their Mobile Telecom network provider.

The study also brought to light, the challenges of both networks (MTN and Vodafone) in meeting customer satisfaction in Tamale. Customers are not satisfied with service providers in terms of dependable service, hence reliability prompt response to service and the attitudes of employees towards customers when complaints are logged.

Respective customers of both networks reported that poor service quality affects their businesses in terms of spending. Customers highlighted how poor services can derail their efforts at profit making in businesses. This is therefore a negative effect on businesses of customers.

The two comparative networks however had similar standards in terms of customer care and expectations on the nature of services they render. However, customers of Vodafone were slightly positive about their network's standards in care and meeting their expectations on average than MTN customers.

Mobile Telecom network operators blamed frequent poor service delivery on fibre cuts, cable theft and inability to locate network service mast (cell sites or cellular-base stations) at their designated locations due to regulations surrounding permits from the NCA and Environmental Protection Agency (EPA).

The study concludes that certain aspects of operations of both MTN and Vodafone networks have to be improved in order to meet customer satisfaction in Tamale. The respective networks have over the years concentrated much on information technology upgrading which does not necessarily translate into decent services for customers.

The two networks (MTN and Vodafone) each have one quality of service drawback or the other from time to time to contend with. The two networks each have challenges in their operations that restrict their ability to deliver quality service. This has been acknowledged by some customers who try to manage the situation by using more than one network. This according to them helps in keeping a balance in the service they receive so that when one Mobile network fails, the other would work for them. This has helped in managing the switching intentions customers hitherto would have had.

The study also concludes that the use of license revocation by the NCA remains a better way of ensuring Mobile Telecom networks are kept on their toes. However, the frequency of this action seems slow as only Expresso have been slapped with this in the over a decade of operations in the industry.

5.2 Recommendations

The study recommends the following:

In the face of the challenges in service delivery, it is recommended that customers take advantage of Mobile Number Portability (MNP) to switch service providers whilst still maintaining their existing mobile phone number. This is because most customers are unaware of the advantages that go with MNP. Hence, most customers express regret for using a particular service but are unaware that leaving a service provider does not lead to losing their mobile phone number.

It is recommended that, service providers should take steps to improve service quality through effective application of new technology in the current trends in globalization. This will enhance service quality as usage patterns expand to capture data with the emergence of smart phones.

The NCA need to ensure that more is done in terms of punitive measures such as long term sanctions; license revocations among others to enable Mobile Telecom networks initiate measures to improve service quality. License revocation for instance can be used frequently to deter industry operators from offering poor services to their customers.

Also, challenges facing the telecom sector are basically infrastructure that is specific to enhancing service quality delivery. Service quality can only be guaranteed if there is a solid infrastructure base to propel effective connectivity among mobile devices. Ideally, fibre cuts and cable thefts which are identified as some of the causes of breaks in service delivery by the Mobile Telecom networks should not be a problem for the sector when there is improvement in infrastructure specific to service delivery. This could lead to prompt response to concerns about poor quality services.

It is recommended that the Mobile Telecom network operators need to back up and put in place mechanisms to safeguard their infrastructure specific to improving services. However, as much as it is appearing that some people appear to be sabotaging the efforts of the Mobile Telecom networks in infrastructure expansion and the placement of masts and all that, if effective mechanisms are in place it will help minimize these drawbacks. The regulator, the NCA also needs to crack the whip and ensure that subscribers get value for their money as it has been indicated in the responses on this matter that most customers feel they don't get value for their money. This will enhance customer satisfaction.

Another recommendation is that there must be incentives in the form of tax reliefs from government for players in the telecommunication sector to urge them on to deliver quality services to their customers. The NCA can coordinate this by reporting to government Mobile Telecom network companies who are able to meet this need. It could be monthly, quarterly, half yearly or yearly. When this is put in place, it will motivate Mobile Telecom industry players to work towards good quality service.

5.3 Limitations of the Study and Areas of Further Research

Limitations are bound to occur as far as the social science research discipline is concerned and therefore this study was not an exception. In the first place, the access to secondary data especially with the service providers in the Mobile Telecom industry in Tamale was a big challenge. These Mobile Telecom network operators were uncomfortable about the targeting of customer satisfaction and service quality issues in the industry. The challenge was with discomfort from the service providers that the findings may not favour them. MTN in particular are pointed for their reluctance in providing information on the number of customers they have in Tamale for this study.

The next challenge was with the language of communication on the study topic. Some jargons in Mobile phone usage information were unfamiliar to the respondents and this was a herculean task in some situations where these words had to be explained to the respondents. This was solved through the effective translation of all the words into the local language to enhance understanding so that respondents gave responses with ease. This did not affect the results except the time spent in doing the translation.

The study was also challenged in some situations where respondents were unwilling to be contacted. This was mainly attributed to several researchers having used their knowledge and expertise without any direct benefit coming to them. Steps were taken to

reinforce the confidentiality of their responses and the fact that the study is for academic purposes. With this reassurance these respondents were interviewed and this helped to solve this challenge.

Time was also of essence as periodic delays with the acquisition of secondary data always presented a problem. After the initial challenges with this, the researcher wrote officially in advance to all the institutions secondary data was sought from before the actual period where this data was needed. This was how this problem was mitigated.

Another challenge encountered in this study was with the target population. This is because the Mobile Telecom networks do not have data relating to customers who patronize their services in the Northern Region, Tamale Metro and/or the communities where respondents lived. Data for Mobile voice subscribers are taken at the national level and this is what is relied upon by all operators and the regulator. Therefore, when it came to data collection and respondent identification in the study communities in the Tamale Metro, it became a herculean task. For instance, the populations of the various sampled communities were acquired from the Development Planning Unit of the Tamale Metropolitan Assembly but these were general statistics and not only mobile phone users. Therefore, a lot of patience had to be applied during the data collection period so that when a respondent was identified, he or she was politely asked if they were Mobile phone users before the questionnaire was administered to them. Those who were not Mobile phone users were replaced. This took longer than would have been needed to collect the data, had the operators been able to provide the list of customers in the study area.

This study was aimed at service quality and customer satisfaction. However, during the entire period of the study, it emerged that there were still several gaps yet to be filled. Therefore, I recommend the following areas of further study:

➢ A much higher sample size should be employed to carry out a similar study since the 401 respondents in this study were highly inadequate to serve as a representative outcome of the entire population of the study area.

➢ Mobile Number Portability since its introduction has been ineffective. A study as to how its effective utilization can lessen the trends in poor quality service should be looked at.

➢ The other two Mobile Telecom companies (AirtelTigo and Glo) need to also be studied to ascertain how they are coping with issues of customer satisfaction and service quality.

➢ The influx of Mobile Money services and how this affects the conventional banking system.

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APPENDICES

UNIVERSITY FOR DEVELOPMENT STUDIES

FACULTY OF PLANNING AND LAND MANAGEMENT

DEPARTMENT OF GOVERNANCE AND DEVELOPMENT MANAGEMENT

COURSE: MPHIL DEVELOPMENT MANAGEMENT

QUESIONNAIRE FOR CUSTOMERS OF MOBILE TELECOM NETWORKS
TOPIC: SERVICE QUALITY AND CUSTOMER SATISFACTION IN THE MOBILE TELECOM NETWORKS SERVICE IN TAMALE, GHANA

BY: ABDULAI MAJEED: UDS/MDM/0365/15

This questionnaire is designed to know your opinion in relation to the satisfaction that you derive from the use of the services of MTN and Vodafone Ghana Limited. This survey is apart of my master's (Mphil category) degree dissertation and your kind support is crucial for the successful completion of this research. Your responses will be anonymous; data will be combined and analyzed as a whole. Please attempt to answer all the questions and tick one appropriate box that best suits your perspective for each statement. You are assured that any information you provide is solely meant for the research and nothing else. Your responses to the questions will be kept confidential**.** Thank you very much for your time and assistance in advance.

RESPONDENTS: Customers of MTN and Vodafone Ghana Limited in Tamale, Ghana
SECTION A: BIODATA OF RESPONDENTS (Tick the appropriate response)
1**.** Gender   [ ] Male [ ] Female
2**.** Age a. [ ] 12-24 b. [ ] 25-37 c. [ ] 38-49 d. [ ] 50-61 e. [ ] 62 and above
3**.** Level of Education. a. [ ] Primary/JHS b. [ ] SHS c. [ ] HND/Degree
d. [   ] Postgraduate e. [   ] No education f. [   ] Others (please specify)……………………………………………
4**.** Employment status. a. [   ] Unemployed b. [   ] Employed c. [ ] Student d. [ ] Retired
e. [   ] Others (Specify)…………………………
5. What is your monthly income? a. Below GH₵ 100 [   ] b.GH₵ 100-200 [   ] c.GH₵ 200-300 [ ]

   d. Above GH₵ 300 [ ]   e. Other (Please specify)…………………………………?

6. Which mobile telecom network service do you patronize……………………….?

a. MTN [ ]   b. Vodafone [ ]   c. Both [ ]

7. Area/Community of residence in Tamale...………………………………………?

SECTION B: PHYSICAL EVIDENCE ON BRAND OF MTN AND VODAFONE

Kindly tick whether you Strongly agree, Agree, Neutral, Disagree or Strongly

Disagree on the following statements:

8. MTN and Vodafone Ghana have respective modern equipment and facilities.

MTN: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Vodafone: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

9. Between MTN and Vodafone Ghana which company has beautiful offices and corporate branding images?

MTN: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Vodafone: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

10. Among MTN and Vodafone whose employees appear well dressed and neat.

MTN: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Vodafone: (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

SECTION C: FACTORS THAT DETERMINE SERVICE QUALITY OF VODAFONE

11. Vodafone Ghana Limited services are dependable.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

12. Vodafone keeps its promises with its customers on services provided.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

13. Vodafone Ghana Ltd provides prompt services to its customers.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

14. Vodafone is sympathetic and reassuring to its customers.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

15. Customers of Vodafone can trust employees of Vodafone for excellent

Performance when concerns are reported to them.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

16. Employees of Vodafone are polite and courteous.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

17. Employees are well equipped to carry out their duties.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

18. Employees of Vodafone understand my needs.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

19. The operating hours of Vodafone is convenient to me.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

20. I receive fair charges for the services I use with Vodafone Ghana.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

21. I get value for my money in using Vodafone Ghana services.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

22. My usage of Vodafone Ghana services are beneficial to me in my business

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

23. I get the required service I need from Vodafone Ghana.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

24. Standards in customer care of Vodafone align with my expectations on the nature of services they provide. (1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

SECTION D: FACTORS THAT DETERMINE SERVICE QUALITY OF MTN

11. MTN Ghana Limited services are dependable.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

12. MTN keeps its promises with customers on services provided.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

13. MTN Ghana Limited provides prompt services to its customers.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

14. MTN is sympathetic and reassuring to its customers.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

15. Customers of MTN can trust employees of MTN for excellent

Performance when concerns are reported to them.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

16. Employees of MTN are polite and courteous.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

17. Employees of MTN are well equipped to carry out their duties.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

18. Employees of MTN understand my needs.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

19. The operating hours of MTN is convenient for me.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

20. I receive fair charges for the services I use with MTN Ghana.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

21. I get value for my money in using MTN Ghana services.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

22. My usage of MTN Ghana services is beneficial to me in my business

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

23. I get the required service I need from MTN Ghana.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

24. Standards in customer care of MTN align with my expectations on the nature of services they provide. (1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

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SECTION E: CUSTOMER SATISFACTION/PERCEPTION-VODAFONE

25. I am satisfied with the overall service quality offered by Vodafone Ghana Ltd in Tamale. (1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

26. I intend to continue using Vodafone Ghana services for a long time.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

27. I will encourage friends and relatives to use the services of Vodafone Ghana Limited. (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

28. I love Vodafone because their service charges are lower compared to other Networks. (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

SECTION F: CUSTOMER SATISFACTION/PERCEPTION-MTN

25. I am satisfied with the overall service quality offered by MTN Ghana Limited in Tamale. (1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

26. I intend to continue using MTN Ghana services for a long time.

(1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

27. I will encourage friends and relatives to use the services of MTN Ghana Limited. (1) Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

28. I love MTN because their service charges are lower compared to other Networks. (1)Strongly Agree (2) Agree (3) Neutral (4) Disagree (5) Strongly Disagree

Thank you for participating in this study.

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FOCUS GROUP DISCUSSION GUIDE FOR VENDORS/CUSTOMERS

TOPIC: SERVICE QUALITY AND CUSTOMER SATISFACTION IN THE MOBILE TELECOM NETWORKS SERVICE IN TAMALE, GHANA

Thank you very much for agreeing to speak on this topic. I am an Mphil Development Management student of the University for Development Studies, Wa Campus. I assure you that the information you are about to share will be treated with utmost confidentiality and would be used solely for academic purposes. For recall and further analysis, I would like to ask for your permission to record the session.

1. What is your satisfaction in terms of the level of patronage of your products/services?
2. What are the gaps in service quality in the mobile telecom industry?
3. What factors determine the quality of service customers of mobile telecom networks enjoy?
4. In what ways do you think your customers get value for their money in relation to the amounts they are charged for the services of mobile telecom networks?
5. How does the quality of service of mobile telecom networks affect the businesses of your customers in Tamale? (Probe further for either positive or negative effects)
6. Does standards in customer care of mobile telecom networks align with your customers' expectations on the nature of services you provide? (In what ways? Elaborate further)
7. How will you define service quality in the mobile telecom network environment based on your customer's expectations?
8. Do you feel your customers are satisfied with your service? (Probe for the specific elements that constitute "satisfaction").

KEY INFORMANT INTERVIEW GUIDE FOR NCA STAFF

TOPIC: SERVICE QUALITY AND CUSTOMER SATISFACTION IN THE MOBILE TELECOM NETWORKS SERVICE IN TAMALE, GHANA

Thank you very much for agreeing to speak on this topic. I am an Mphil Development Management student of the University for Development Studies, Wa Campus. I assure you that the information you are about to share will be treated with utmost confidentiality and would be used solely for academic purposes. For purposes of difficulty in recall, I would please like to record the interview for further analysis with your permission.

BIODATA OF RESPONDENT

Please tick the appropriate box for your answer

1. Gender: Male [ ]   Female [ ]

2. What is your nationality?   Ghanaian [ ]   Non-Ghanaian [ ]

3. Age a. [ ] 12-24 b. [ ] 25-37 c. [ ] 38-49 d. [ ] 50-61 e. [ ] 62 and above

4. What is your highest academic qualification?

WASSCE [ ]   Technical/Post-Secondary [ ]   Diploma/HND   [ ]   Bachelor's Degree [ ]

Post-Graduate Diploma/Master's Degree [   ]   PhD   [ ]

5. What position do you occupy?……………………………………

MOBILE TELECOM SERVICE INDUSTRY REGULATOR'S VIEW ON SERVICE QUALITY

6. What are the gaps in service quality in the mobile telecom industry?

7. What factors account for the quality of service in the Mobile Telecom industry in Tamale?

8. What do you think will make customers satisfied with the quality of service they get from their chosen network? (Either MTN or Vodafone).

9. What are customer's expectations on service quality in the mobile network environment?

10. Do you think based on current service delivery parameters; customers get value for their money in relation to the charges of mobile telecom networks in Tamale?

11. How does the quality of service affect the businesses of mobile telecom network customers in Tamale? (Probe for concrete evidence of effects – positive of negative).

12. What standards in customer care will you require mobile telecom network companies to render based on your regulations?

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13. (As a follow-up to 12) How does these standards in customer care align with customers' expectations on the nature of services these companies render?

14. Does competition between MTN and Vodafone influence the quality of service delivered to their customers?

15. Apart from warnings and fines, what other measures are there for you to use as a check on the services that mobile telecom networks render?

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KEY INFORMANT INTERVIEW GUIDE FOR SERVICE PROVIDERS

TOPIC: SERVICE QUALITY AND CUSTOMER SATISFACTION IN THE MOBILE TELECOM NETWORKS SERVICE IN TAMALE, GHANA

Thank you very much for agreeing to speak on this topic. I am an Mphil Development Management student of the University for Development Studies, Wa Campus. I assure you that the information you are about to share will be treated with utmost confidentiality and would be used solely for academic purposes. For purposes of difficulty in recall, I would please like to record the interview for further analysis with your permission.

BIODATA OF RESPONDENT

Please tick the appropriate box for your answer

1. Gender: Male [ ]   Female [ ]

2. What is your nationality? Ghanaian [ ]   Non-Ghanaian [ ]

3. Age a. [ ] 12-24 b. [ ] 25-37 c. [ ] 38-49 d. [ ] 50-61 e. [ ] 62 and above

4. What is your highest academic qualification?

WASSCE [ ]   Technical/Post-Secondary [ ]   Diploma/HND   [ ]   Bachelor's Degree [ ]

Post-Graduate Diploma/Master's Degree [   ]   PhD   [ ]

5. What position do you occupy?……………………………………

SERVICE PROVIDERS VIEW ON SERVICE QUALITY

6. What are the gaps in service quality in the mobile telecom industry?

7. What factors account for the quality of service of your network in Tamale?

8. Are you satisfied with the quality of service you provide your customers? (Either MTN or Vodafone).

9. What do you think your customer's expectations are on service quality in the mobile network environment?

10. Do you think your customers get value for their money in relation to the charges of your network and the services you render to them?

11. How does the quality of service you render affect the businesses of your customers in Tamale? (Probe further for either positive or negative)

12. Do you have standards in customer care in your operations?

13. (If Yes to 12 above) How does these standards in customer care align with customers' expectations on the nature of services you provide them?

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14. Do you think your customers get value for their money in relation to the charges of your network and the quality of service you provide?

15. Does competition between MTN and Vodafone influence the quality of service delivered to your customers?

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