THE INFLUENCE OF CUSTOMER COMPLAINT BEHAVIOUR, FIRM RESPONSES AND SERVICE QUALITY ON CUSTOMER LOYALTY OF MOBILE TELEPHONE SUBSCRIBERS IN UGANDA

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DECLARATION

This thesis is my original work and has not been submitted to any other college, institution or university for academic credit.

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This Thesis is dedicated to my dear family, Dad Thomas, Mum Tiffany, Husband Canon Fred, Children Miriam Hope, Peter, Lovy, Timothy, Faith, Patience, James Mark, Lauben, Lydia and Goddie with Love and great thanks.

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ABSTRACT

This study evaluated the influence of customer complaint behaviour, firm responses and service quality on customer loyalty of Mobile Telephone subscribers in Uganda. The study objectives were to determine the statistically significant relationship between customer complaint behaviour and customer loyalty; and examine the influence of firm responses on customer loyalty; assess the statistically significant influence of customer complaint behaviour on service quality and to examine the influence of service quality on customer loyalty. The study sought to establish the moderating effect of firm responses on the relationship between customer complaint behaviour and customer loyalty and to establish the mediating effect of service quality on the relationship between customer complaint behaviour and customer loyalty. Finally, the study sought to establish the joint effect of customer complaint behaviour, firm responses and service quality on customer loyalty. Three variables (customer complaint behaviour, firm responses and service quality) were used to form an integrated model to broaden the scope of customer loyalty. The study used descriptive cross sectional survey method. Stratified random sampling was used and a sample of 384 was used in the study with a response of 336 (88%). The population comprised students and staff of Makerere University. Primary data were collected from a sample of 336 administrators, support and academic staff of Makerere University. In a pilot study, reliability, validity and tests for parametric assumptions were done. Data were analysed using descriptive statistics and inferential statistics (factor analysis, correlations and regression tests). Results showed that the influence of customer complaint behaviour on customer loyalty within mobile telephone companies was both directly and partially moderated by firm responses and mediated by service quality. Both influences were positive and statistically significant ($\beta = 0.301$, $p<0.05$ and $\beta = 0.670$, $p< 0.05$, respectively). Service quality had direct positive significant correlations with customer Loyalty ($\beta = 0.239$, $p< 0.05$). Customer complaint behaviour had a statistically positive significant effect on customer loyalty ($\beta=0.263$, $p< 0.05$). The joint effect of customer complaint behaviour, firm responses and service quality on customer loyalty was statistically significant. It was recommended for policy makers and management of mobile telephone companies in Uganda to improve on handling customer complaints by considering firm responses and service quality dimensions. The study has made contribution to theory, policy and practice in relation to marketing in general and customer complaint behaviour in particular. It has offered more explicit clarification into the relationship between customer complaint behaviour, firm responses, service quality and customer loyalty. However, since the study was done in an academic environment, there is a need to conduct the study in a different context. The study used cross sectional research design which may limit generalisability of the results. Since consumer behaviour practices are dynamic, future research effort should emphasize use of a longitudinal study design.

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ABBREVIATIONS AND ACRONYMS

BMI	:	Business Monitor International
CB	:	Consumer Behaviour
CCB	:	Customer Complaint Behaviour
CEDAT	:	College of Engineering, Design, Art and Technology
CEES	:	College of Education and External Studies
CHS	:	College of Health Science
CHSS	:	College of Humanities and Social Sciences
CL	:	Customer Loyalty
CNS	:	College of Natural Sciences
CO	:	Company
COCIS	:	College of Computing and Information Science
COBMS	:	College of Business and Management Science
ECT	:	Expectancy Confirmation Theory
EDT	:	Expectancy Disconfirmation Theory
KMO	:	Kaiser, Meyer and Ohlin
Mak	:	Makerere University
MRA	:	Multiple Regression Analysis
MTC	:	Mobile Telephone Company
MTCs	:	Mobile Telephone Companies
MTN	:	Mobile Telecom Network
MTS	:	Mobile Telephone Subscribers
MUBS	:	Makerere University Business School
RATER	:	Reliability, Assurance, Tangibility, Empathy and Responsiveness
SERVQUAL	:	Service Quality (Measurement Instrument)
SMS	:	Short Message Service
SQ	:	Service Quality
UCC	:	Uganda Communications Commission
Ush	:	Uganda Shilling
UTL	:	Uganda Telecom
WOM	:	Word of Mouth
CV	:	Coefficient of Variation

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

There is a growing interest in understanding how customers evaluate their service experience given the competitiveness and complexity of the service sector (Gruber, 2011). As the service sector is making an increasingly significant contribution to the modern economy, customers reap the benefits of greater choice and easy availability (Seth et al., 2008). Growth in the service sector has become much more competitive because of liberalisation of the economy, and transformation of the marketing activities within the sector (Khan, 2010; Byarugaba, 2010; Seth et al., 2008). There is therefore a need for companies to work towards retaining the customers to ensure their survival in the face of intense competition. Further, customers determine service quality if companies are going to meet customer expectations. However, service failure is inevitable due to the nature of services of intangibility, inseparability, perishability and heterogeneity (Michel et al., 2009; Johnston & Michel, 2008).

Service quality and level of satisfaction is thought to determine the likelihood of repurchase decisions (Parasuraman et al., 1988). Ramzi and Mohamed (2010) assert that dimensions of service quality such as empathy, responsiveness and reliability significantly predict customer loyalty. In addition, service quality may lead to positive word of mouth (WOM) and favourable behavioural intentions (Gee et al., 2008). Further, the benefits of customer loyalty are widely recognised within business. They are improvements in customer retention and increase in market share; and in saving the use of resources, they mention the brand to their friends and would rather complain than defect (Duffy, 2003). Other benefits of customer loyalty include lower costs associated with retaining existing customers, rather than constantly recruiting new ones especially within mature, competitive markets (Ehrenberg et al., 1999).

Loyal customers are more likely to expand their relationship within the product range and so the rewards from this group are long term and cumulative (Grayson & Ambler, 1999).

Another widely perceived benefit of loyal customers is feedback which is thought to act as information channels, informally linking networks of friends, relatives and other potential customers to the organisation (Reichheld, 2003; Michel et al., 2009). In addition loyalty is a result of activities in search of an interaction and customers repeat purchase. Expectations of positive reinforcements induce relational behaviours.

Service quality has been found to affect both behavioural intentions and behavioural outcomes. Buyers purchase a lot of services from suppliers with whom they have high quality relationships (Camarero, 2007). Further, companies use loyalty programmes (like giving free air time, free SMS and free internet services) that provide economic rewards to enhance customer relationships. However, the argument is that a dissatisfied but complacent or contented customer is unhappy and may be disloyal (Tronvoll, 2012). "Customers are promiscuous when it comes to relationships with companies" (Uncles et al., 2003. pg., 5). They have found that few consumers are "monogamous" (100 percent loyal) or "promiscuous" (no loyalty to any brand). Rather, most people are "polygamous" (loyal to a portfolio of brands in a product category). From this perspective, loyalty is defined as "an ongoing propensity to buy the brand, usually as one of several" (Ehrenberg & Scriven, 1999).

During the past decade, mobile telephone companies have changed not only at the corporate and business levels but also in terms of consumer engagement. Companies have introduced the use of electronic commerce activities like making telephone calls, using internet services and short message services (SMS), and sending/receiving money using mobile telephones. While such changes have facilitated innovative business strategies, they have also created many challenges to the user experience.

Mobile telephone companies in Uganda are faced with the problem of increasing competition leading to fear of losing customers to competitors. These companies are concentrating on strategies to win customers which may have an influence on customer loyalty. Gee et al. (2008) assert that the mobile telephone industry has not been analyzed in the context of customer loyalty with respect to the integration of variables namely

customer complaint behaviour, firm responses and service quality. Knowledge about these variables may help to identify common service challenges like improving service quality to achieve customer loyalty (Tronvoll, 2012).

Most customers do not complain after service failure dissatisfaction, but exit (Tax et al.1998). In addition, researchers have shown that 60-80 percent of customers who defect to competitors said that they were satisfied or very satisfied prior to their defection. Empirical studies have indicated that handling customer complaints remains a key driver to customer loyalty. However, majority of consumer complaint literature is on why and how consumers respond to dissatisfaction with goods and services. Little attention has not been devoted to the integration of the variables of customer complaint behaviour, firm responses, service quality and customer loyalty.

1.1.1 Customer Complaint Behaviour

Customer complaint behaviour refers to the responses triggered by perceived dissatisfaction that is neither psychologically accepted nor quickly forgotten in consumption of a product or service (Homburg & Fürst, 2005). Research by Casado, Nicolau and Mas (2011) suggest that customer complaint behaviour (CCB) is a complex phenomenon which is reflected in the number of alternative definitions proposed to explain this kind of behaviour. Traditionally, the common determinant of complaining behaviour was described as dissatisfaction due to inadequacies of integrity, reliability, responsiveness, availability and functionality (Tronvoll, 2012). Hence, consumer dissatisfaction is a result of the discrepancy between expected and realized performance (Gruber, 2011). Dissatisfaction is based on disconfirmation of expectation (Oliver, 1997). It is a customer experience that is less than the perceived expectation.

Tronvoll (2007) described customer complaint behaviour as a function of dissatisfaction. Homburg and Fürst (2005) and Orisingher et al. (2010) assert that dissatisfaction is a significant factor that contributes to complaints. Kau and Loh (2006) articulated that dissatisfaction was caused by negative disconfirmation of purchase expectations that led to legitimate complaint behaviour. Many studies concerning consumer satisfaction and

dissatisfaction have employed the disconfirmation paradigm (Oliver, 1999). According to this paradigm, consumer satisfaction or dissatisfaction is a function of perceived discrepancies between prior expectations of the product or service and its actual performance (Oliver, 1997). Consumer complaint behaviour is linked to negative disconfirmation – whereby the perceived performance falls short of expectation, causing the consumer to become dissatisfied (Atalik, 2007).

Kivela (1999) examined the disconfirmation effect on satisfaction and its impact on return patronage, and found that they were related to the post-purchase behaviour such as bad-mouthing or taking no action. In addition to this, an evaluation of costs and benefits about a complaint is another factor that turns a dissatisfaction into an action. If the costs and time spent on a complaint are perceived as exceeding the benefits as a result of a complaint, customers will tend to remain silent and take no action (Day & Landon, 1977). Non-complainers considered that complaining was done by people with little else to do and believed that it would be futile (Kau & Loh, 2006).

Complaining can also be defined as a formal expression of dissatisfaction with many aspects of service experience (Lovelock & Wright, 1999). By complaining, customers can search for different possible outcomes which can be combined. A dissatisfied customer may voice a complaint, exit or remain committed to the company (Hirschman, 1970). Voice response essentially refers to complaining directly to the offending service provider. A customer who contacts a service provider in person, in writing or by telephone would be using voice response (Tronvoll, 2007). On the other hand, exit takes place when the customer begins a personal boycott against the service provider to avoid repeating the original transaction that led to dissatisfaction. Singh (1988) adds the "no complaint action" which in this study is known as commitment to the purchase of goods and services.

Commitment is also subsumed under loyalty because satisfaction reinforces customer's decision to participate in the service process, leading over time to commitment (Tax et al., 1998). Dissatisfied customers choose to seek redress, engage in negative WOM behaviour or exit, based on the perceived likelihood of successful redress, their attitude

towards complaining, the level of product importance, and whether they perceive the problem to be stable or to have been controllable (Andreassen, 2001 & Boshoff, 2005). Some of the demographic variables were found to be related to complaint behaviours. Female customers are more inclined to complain and tell others if they are dissatisfied with the complaint handling (Kau & Loh, 2006). These results contradicted the findings by Manikas and Shea (1997) that the male customers complained more than the female. It appears that subscribers with higher education are more likely to complain when they are dissatisfied because better educated MTC subscribers may be more knowledgeable about their rights as consumers and the method of redressing their complaint if they are not satisfied with the purchase (Heung & Lam, 2003).

Despite the strategic importance of listening to and managing CCB, the current understanding of customer complaints like poor network quality, poor customer care and lack of explanation about service failure is limited (Kim et al., 2010; Tronvoll, 2012). Marketing literature has focused on identifying various determinants of CCB including perceived costs, attitude towards complaining, environmental and demographic variables and the likelihood of a successful complaint (Singh & Wilkes, 1996). The existing models of CCB focused on the separation of private action from public action (Day & Landon, 1977). This categorisation has become increasingly irrelevant because of recent advances in Information, Communication and Technological (ICT) systems. In the past, when a customer experienced an unfavourable service experience, he or she talked to relatively few people; in contrast, the advent of the internet has dramatically increased the number of people available for negative communication (Tax & Brown, 1998). In these circumstances, it becomes difficult to maintain a separation of the concepts of private action and public action.

In response to these developments, this study suggested new categories of complaining behaviour in terms of seeking redress and committment responses in addition to the existing ones of voice and exit. Complaining behaviour in these four categories can be manifested separately or together and at various stages in the complaint process.

1.1.2 Firm Responses

Davidow (2003) asserts that firm responses are company actions made in order to exert significant positive efforts on complaint satisfaction and loyalty. However, Davidow (2003) and Estelami (2000) have focused on six complaint handling factors which influence the perceived justice of the procedure. These firm responses represent values for customers like redress, apology, attentiveness, explanation, effort, facilitation and timeliness and they affect post customer complaint behaviour. The firm responses were summarized into three constructs as employee behaviour, compensation and company procedures (Estelami, 2000; Grawel et al., 2008). There is still a debate on the firm responses to complaint handling which is still an avenue for a potential contribution to firm responses literature.

Employee behaviour is described as emphatic, responsible and informative behaviour of the service person and a need for employee's competence and active listening skills which are important for complainants (Gelbrich & Roschk, 2010). In Davidow's (2003) framework, employee behaviour covers the interpersonal aspect of complaint handling by embracing attentiveness and credibility (such as explaining the problem). Compensation involves refunds, replacements, or a response outcome the company provides to address a customer complaint like an apology in case of social loss to help restore social equity. Davidow (2003) describes compensation as a benefit or response outcome that the organisation provides to address a customer complaint. It represents a tangible benefit in the form of monetary and intangible response outcomes that can be considered to be psychological compensation such as apology. In case of a service failure, consumers would expect the service provider to compensate them for any tangible loss they suffered as a result of that service failure. Customers may expect different levels of compensation depending on how severely the service failure affects them. An annoyed customer would expect a "fair fix" for the problem, while a consumer who feels "victimized" as a result of the service failure may expect some value-added atonement.

Company procedures include facilitation and timeliness where complaint handling processes are managed in an efficient and straight forward manner. Promptness refers to

the immediate and easy way of handling a complaint (Davidow, 2003). This description encompasses facilitation and timeliness, both of which refer to the ability of organisations to control complaint-handling processes in an efficient and straightforward manner. This organisational response, however, is renamed ''organisational procedures'', which better fits the content of both categories, whereas the term ''promptness'' is rather an alias of timeliness (Gelbrich & Roschk, 2010). Further, competent contact employees should have sufficient service knowledge and experience for good interactions (Gruber, 2011); and to become knowledgeable on managing complaints when solving problems.

1.1.3 Service Quality

Gronroos (1984) defines service quality (SQ) as a perceived judgement resulting from an evaluation process where customers compare their expectations with the service they perceive to have received. SQ is a critical dimension of competitiveness (Saunders et al., 2007). It is a concept that has generated considerable interest and debate in the research literature due to the difficulty of both defining and measuring it, with no overall consensus emerging regarding either aspect. The debate on service quality may be because of its dimensions of reliability, assurance, tangibility, responsiveness and empathy (Parasuraman et al., 2005); from which SERVQUAL research instrument was developed. Quality of a particular service is whatever the customer perceives it to be.

Service quality as perceived by the customer may differ from the quality of the service actually delivered. Services are subjectively experienced processes where production and consumption activities take place simultaneously. Interactions, including a series of moments of truth between the customer and the service provider occur. Such buyer-seller interactions or service encounters have a critical impact on the perceived service. Service quality has been defined in a number of ways but one of the most popular definitions is: "a comparison between the expected service and the perceived service" (Grönroos, 1984, p. 9). This definition is user-based and high quality of a service is achieved by consistently meeting or exceeding customer's expectations. In addition to this, the issue of provision of promised service in a timely, accurate and dependable manner needs highest priority (Byarugaba, 2010). Earlier researches indicate that reliability positively

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and significantly affects customers' perception of service quality of mobile telephone users because the reliability of a service has been established as the driver of mobile telephone service quality (Lee et al., 2008; Negi et al., 2009).

The measurement of service quality took a major step forward when Parasuraman et al. (1988) introduced SERVQUAL, an instrument that was developed as a means of measuring service quality in terms of customer expectations and organisational performance and was based on five generic service quality dimensions of reliability, assurance, tangibles, empathy and responsiveness (promptness). While SERVQUAL has remained popular with many researchers (Carrillat et al., 2007; Lee, 2005) it has also been subject to criticism (Ladhari, 2009) largely because replications have not achieved the same results and has led others to develop alternative models and approaches from SERVQUAL to evaluate service quality, like SERVPERF (Seth et al., 2008).

Parasuraman et al. (1988; 2005) have asserted that SERVQUAL: provides a basic skeleton through its expectations/perceptions format encompassing statements for each of the five service quality dimensions. The skeleton, when necessary, can be adapted or supplemented to fit the characteristics or specific research needs of a particular organisation. In their 1988 paper, Parasuraman et al. also claimed that the final 22-item scale and its five dimensions have sound and stable psychometric properties. However, the dimensions of network quality and service convenience have been proposed with respect to technology (Seth et al., 2008; Hutchinson et al., 2007). Further, there is general agreement that service quality is a multi-dimensional construct (Samen et al., 2012), but there remains a debate on how best to conceptualize and operationalize the construct (Seth et al., 2008).

Researchers have criticized the SERVQUAL scale for its use of gap scores (Samen et al., 2012), measurement of expectations, positively and negatively worded items, the generalisability of its dimensions, and the defining of a baseline standard for good quality (Hutchinson et al., 2007). Service quality has become a major area of attention for researchers because of its strong influence on lower costs, customer satisfaction and customer loyalty (Seth et al., 2008). When companies offer similar services at the same

price, the factor determining which company is the best option will be the quality of service provided. Service quality and its requirements are not easily articulated by consumers and companies because of the nature of services (Lovelock & Wirtz, 2007).

1.1.4   Customer Loyalty

Oliver et al. (1997) define customer loyalty as a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing despite situational influences and marketing efforts having the potential to cause switching behaviour (p. 392). On the other hand, loyalty is defined as the customer's intention to continue to do business with an organisation such as repurchase intention (de Ruyter & Wetzels, 2000). Customer loyalty is a multifaceted concept that has evolved over the years (Oliver, 1999). Initial research mostly emphasised the behavioural dimension of loyalty (such as repeat purchase of a given brand), but later also attitudinal and cognitive dimensions have been recognised. For instance, Caruana (1999) defines service loyalty as the degree to which a customer exhibits repeat purchasing behaviour from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service exists. However, measurement problems often lead to the omission of actual behaviour in empirical research and focus is in most cases on intentions, assuming that intentions strongly affect behaviour (Cahill, 2007).

A common approach in defining customer loyalty is to distinguish between a consumer's behavioural loyalty and attitudinal loyalty (Parasuraman et al., 2005). Behavioural loyalty is expressed as repeated transactions (or percentage of total expenditures in the category) and can sometimes be measured quite simply with observational techniques. Attitudinal loyalty is often defined as positive affect toward both continuance of the relationship and the desire to remain in the relationship, and is sometimes defined as equivalent to relationship commitment (Rod & Ashill, 2010; Holloway et al., 2009). Behavioural and attitudinal loyalty are both highly prized, because they are highly intertwined: repeated purchases lead to positive affect, which leads to conative loyalty (Oliver et al., 1997).

Turner and Wilson (2006) explain that attitudinally loyal customers are much less susceptible to negative information about the brand than non-loyal customers. When loyalty to a brand increases, the revenue stream from loyal customers become more predictable and can become considerable over time (de Matos et al., 2009). Realistically, firms cannot completely eliminate the possibility of service failures (Hess et at., 2003). Despite the failures, customers may still remain loyal to the purchase and use of the company services. Loyalty therefore refers to the situation in which the customer decides not to complain, but stays committed to a service or to a product accepting silently and passively its decline. It is important to underline that the word loyalty has, in this case, no moral or positive value. This means that a customer is loyal, despite the problem experienced and the consequent dissatisfaction, especially when there is no available alternative. Loyalty is one of those cognitive, non-behavioural reactions which can affect consumers' perception of the problem up to denying that dissatisfaction exists (Rowley, 2005). Loyalty is therefore determined by the strength of the relationship between relative attitude and repeat patronage.

Customer loyalty is critical to conducting business in today's competitive marketplace, and the mobile telephone company setting is no exception. Researchers argue that there must be a strong attitudinal commitment to a brand for true loyalty to exist (Reichheld, 2003). This is seen as taking the form of a consistently favourable set of stated beliefs towards the brand purchased. Such attitudes may be measured by asking people how much they like the brand, feel committed to it, will recommend it to others and have positive beliefs and feelings about it – relative to competing brands (Uncles et al., 2003). It is believed that the strength of these attitudes is the key predictor of a brand's purchase and repeat patronage. In other words, loyalty depicts the extent to which a customer regards him/herself as loyal, the customer's willingness to recommend the service company to others, and his/her intention to continue to use the mobile telephone company services in the future.

However, customer loyalty is not easy to maintain, rather it is vulnerable, where even satisfied customers may defect to get better value, convenience or quality elsewhere. Loyalty is important for the future of the company (Ehigie, 2006). While sustainers

attract and retain the customers, vulnerabilities pull the customers towards a substitute (Rowley, 2005). Customer loyalty is vulnerable because even if customers are satisfied with the service, they continue to defect if they believe they can get better value elsewhere. Many debates are centred on what customer loyalty actually is. As Gee et al. (2008, p. 360) state: "Loyalty is a complex multidimensional concept"; it is behavioural, attitudinal and a combination of both. The contextual area of the study on customer loyalty was mobile telephone subscribers (MTS).

Customer loyalty is measured by word of mouth (WOM) and customer retention. WOM communication refers to the likelihood of spreading information on an organisation and the valence of this information. This can be in form of positive and negative WOM communication. Negative WOM communication refers to spread of unfavourable information about an organisation, which includes advising against the organisation and its products or services (Boldgett & Anderson, 2000; Ehigie, 2006). Applied to post-complaint behaviour, it is shown that customers who are satisfied with complaint handling engage in positive word of mouth and are more loyal than customers who are dissatisfied with complaint handling.

1.1.5 Mobile Telephone Services Sector in Uganda

In the last decade, the technological development and liberalised economy led to a change from fixed line technologies to mobile telephone communication in many parts of the world, including Uganda (Uganda Telecommunications Sector Report, 2005). Traditionally, mobile and fixed phone providers competed fiercely for new customers. Over time, and with the increased saturation of the market, companies have come to realize that their performance can improve by focusing more on retaining customers than constantly acting in a conquest mode.

There are five mobile telephone competitive operators namely the Uganda Telecom, Mobile Telephone Network, Orange Uganda, Warid telecom, Airtel Uganda (Market Review, 2009). Warid telecom was taken over by Airtel Uganda in 2012. The quality level of service providers and the services they provide influence the consumer's choice

of dealers. According to Uganda Communications Commission (UCC) - Uganda Telecommunications Sector Policy Review (2005), the parameters on which a mobile telephone company can provide quality services include network and service accessibility, access delay, voice quality and short message service (SMS). One of the important aspects of a mobile telephone service is having good network quality. This refers to a network with clear voice where subscribers can receive/make mobile telephone calls with clarity and with no dropped calls.

Mobile telephone service providers need to continually assess whether the quality of the designed service they offer matches clients' expectations (Byarugaba, 2010). While Mobile Telephone Network (MTN) was ranked as the mobile service provider with the largest market share of 47%, Orange Uganda has the least market share of only 4% (BMI, 2011/2012). However, Orange Uganda was ranked number one in quality of services for three years by UCC. Surveys have indicated that there is a relationship between SQ and customer loyalty (Lee et al., 2008); yet this has not worked for Orange Uganda.

Mobile telephone services include making telephone calls, internet services, short message services (SMS), storing data and sending and receiving money. Four mobile money operators have been registered as a means for bringing about greater financial inclusion to the unbanked (Uganda Budget report, 2011/2012). The increasing competitiveness of new wireless broadband solutions compared to fixed line alternatives has brought heightened interest in internet subscriptions which have gone up by 29% in 2011. Network operators have introduced dynamic discounts, flat rate plans, chat zones and mobile broadband solutions in order to bring more value added services to the subscribers. With the increased saturation of the market in mobile telephone (Market Review, 2009), companies in Uganda need to realize that their performance can improve by focusing more on retaining customers than constantly acting in a conquest mode.

It has been realised that companies cannot completely eliminate the possibility of service failures (Hess et al., 2003; Komunda & Oserankhoe, 2012). However, what is important is how companies recover from service failure. Recovering effectively from service failures contribute to positive customer evaluations of organisations. Responding

effectively to consumer complaints can have a dramatic impact on repatronage intentions and the spread of negative WOM (Halstead, 2002). Consequently, complaint handling has been recognized as a critical task for service managers in mobile telephone services. Further, there is a need to enhance the trustworthiness of mobile phone operators by keeping customers' best interest at heart, providing customized services and exemplary behaviour of contact personnel to make the interaction a memorable experience. In addition to the original five dimensions of service quality (reliability, tangibility, empathy, assurance and responsiveness), the mobile telephone operators should also focus on other two dimensions of service convenience and network quality proposed by Seth et al. (2009) and Hutchinson et al. (2007). This is because these aspects significantly affect customers' perception of service quality of mobile telephone service providers.

1.1.6 Makerere University Mobile Telephone Subscribers

Makerere University has been in existence since 1920. It runs on a collegiate system with nine (9) colleges and one school which include College of Agricultural and Environmental Sciences, College of business and management sciences, College of Computing and Information Science, College of Engineering, Design, Art and Technology. Makerere University was chosen as a study population because of its multi-culturalism. It has both the highly educated and least educated and has gender diversity.

Further, Makerere University is a combination of people from different cultures (like Ugandans, Indians, Kenyans), and with different levels of education; while some have no degree; others have degrees; yet others have the highest level of education like professors. They are all gender; are from different nationalities and are an informed mature population. The population of Makerere University includes University post graduate and under graduate students, academic staff, administrators and support staff. The population of Makerere University is regarded as the micro sum of Uganda. Given the rich background, the population of Makerere subscribes to different mobile telephone operators of MTN, UTL, ORANGE and Airtel Uganda.

Basing on UCC, Makerere University mobile telephone subscribers keep swapping telephone lines because of inadequate service quality. They share their disappointment on poor network quality, inadequate billing and service inaccessibility by using SMS, face book and mobile telephone calls. They swap lines from one service provider to another in the lookout for better quality services. After an initial unfavourable service experience, mobile telephone subscribers expect recovery activities such as apologies, explanations, substitutions, or compensation to save the relationship and arrest negative word of mouth, but they often end up with double deviation.

1.2   The Research Problem

Cognitive Dissonance refers to a psychological position where an individual holds two or more elements of knowledge that are relevant to each other, but inconsistent with one another (O'Neil & Palmer, 2004). It is the psychological uncomfortable state following the act of choosing between a set of alternatives each of which has some desirable attributes. The discomfort motivates somebody to do something to reduce it to seek balance. While dissonance begins as a simple apprehension, it escalates over the decision making cycle to the later purchase stages. Dissonance is likely to occur when satisfaction is low or when consumers are satisfied but it is unlikely to occur when satisfaction is very high. Significant resources are being spent by organisations on trying to fix problems and tell others about their positive experience, and even recommend the organisation to their friends and acquaintances (Reichheld, 2003).

The literature on consumer behaviour suggests that initial dissatisfaction leads to cognitive appraisal, which in turn determines the customer complaint behaviour responses of doing nothing, complaining to a third party or spreading a negative WOM; such responses are not likely to lead to service recovery. Service recovery (putting right what has gone wrong) is needed for service companies to offset a customer's negative reaction to the service failure. It includes all the actions that should be taken by companies in order to move a customer from a state of disappointment to a state of satisfaction. It is important for companies to handle customer complaints because it costs

several times as much to create a new customer as it does to keep and satisfy an existing one (Kotler & Armstrong, 2010).

The relevant literature has revealed the major gaps. Firstly, the bulk of literature focuses on identifying determinants of CCB. Secondly, the role of attitudinal and perceptual variables has not been the focal point in explaining CCB; and several studies focus on CCB as an outcome, which may not be predicted by attitude and perception (Seawright et al., 2008). The inconsistent relationship between attitude and behaviour explains why CCB is not accounted for fully by attitudinal and perceptual variables in consumer behaviour theories (Parasuraman et al., 2005). This calls for the integration of other variables like firm responses, service quality and CCB where customer loyalty is a dependent variable.

Customer satisfaction and loyalty are much higher after a problem has occurred and been put right than it was before the problem occurred (Bailey, 1994; de Matos et al., 2008). It should be noted that customers are aware of the fact that up to a certain level, mistakes can happen. However, they demand a timely, fair, courteous, clear, efficient and interactive solutions (Ekiz & Arasli, 2007). Consumers evaluate the recovery effort in terms of fairness and form their recovery satisfaction judgements according to behavioural outcomes like switching, word of mouth or loyalty. Despite the many research studies already done on customer complaint behaviour, there is still lack of agreement over the reasons for complaining behaviour (Velazquez et al., 2010; Gruber, 2009). The existing complaint models are challenged because of their static and single post purchase focus.

The mobile telephone industry in Uganda started as a private sector in 1996. This means that existing mobile telephone companies (MTN, Airtel, UTL and Orange) have been operating in Uganda for a few years. The operations of mobile telephones have largely been private sector led. In their strive for market share, the mobile telephone network operators introduced dynamic discount rates, flat rate plans, lower international call tarrifs, menu driven services, chat zones and mobile broadband solutions like Orange's internet everywhere. Such services were introduced to bring more value added services to

the consumer. The mobile telephone market grew by 19% in 2011 mainly due to price wars. The Ugandan consumer benefited from the price cuts due to price wars which began in 2010 where call rates went down from a cost of 300 shillilngs per minute on average to 180 Uganda shillings per minute. The price cuts were very deep and there were concerns from the UCC that this could have a detrimental effect on service delivery and future growth.

Basing on Uganda Communications Commission (UCC), mobile telephone companies are going through a number of challenges of poor service quality in terms of service inaccessibility, poor integrity, slow responsiveness and inability to handle customer complaints to the expectations of the customers. Some mobile telephone subscribers have a number of lines which they keep using to their advantage as they monitor and aim at the cheaper and easily accessible network with more value addition advantages like using free SMS, free internet services as well as sending data and voice mails.

In 2004, Karatepe and Ekiz conducted a study on firm responses to complaints on post-complaint customer behaviours in the hospitality industry in Northern Cyprus. The study investigated the effects of apology, atonement, promptness, facilitation, explanation, attentiveness and effort on complainant satisfaction and loyalty, and the association between satisfaction and loyalty. The research findings indicated that apology, explanation, and effort are three organisational response options that exert significant positive effects on complainant satisfaction and loyalty. The scope of the study was limited to university students and therefore results could not be generalised beyond the group. The study did not address firm procedures and employee behaviour aspects.

Kim et al. (2010) conducted a study on consumer complaining behaviour of Mobile Telephone Operators in Pakistan. They broadened the thinking on consumer's complaint handling processes and proposed integrating the service recovery and CCB literature. They concluded that the integration of variables of CCB and service recovery was a starting point for broadening the thinking on consumer's complaint handling processes to get a deeper understanding of consumer's cognitive processes. As a limitation,

convenience sampling method was used to measure mobile phone users' perception of customer complaint behaviour.

In 2010, Khan carried out a study on service quality of cellular mobile telephone operators in Pakistan and found that SERVQUAL (service quality measurement instrument) was found to be a valid instrument to measure service quality in mobile phone services. However, the instrument is still debatable because of using gap scores and its dimensions varying from one industry to another. For example, convenience and network quality were found to be important extra service quality dimensions in the study on mobile telephone companies because of the influence of technology (Seth et al., 2008; Hutchinson et al., 2007).

On their part, Komunda and Osarenkhoe (2012) conducted a study on remedy for service failure: effects of service recovery on customer satisfaction and loyalty in the banking industry, Uganda. The research findings showed that the interaction of employee responsiveness and courtesy have a positive impact on consumer evaluations. As a limitation, a descriptive cross sectional survey was used where by data was collected at a specific point in time. It was recommended that a more comprehensive longitudinal study that considers complaint resolution could be included in further studies to reaffirm the causal relationship.

Duffy (2003) and Gruber (2009) conducted studies which did not use an integrated approach that allows for the study of a number of variables simultaneously. The research on service quality and customer loyalty (Lee et al., 2008; Ramzi & Mohamed (2010) has also been done separately. There was nedd for conducting a comprehensive study that integrated several variables to address the knowledge gaps of single and two variable studies. The main objective of the present study was therefore to examine the relationships between several variables by adopting an integrated approach. The study sought to examine the interaction effects of customer complaint behaviour, firm responses, service quality and customer loyalty of mobile telephone subscribers. The study question was "what is the relationship between customer complaint behaviour, firm responses, service quality and customer loyalty of mobile telephone subscribers"?

1.3 Objectives of the Study

The overall objective of the study was to determine the effects of customer complaint behaviour, firm responses and service quality on customer loyalty of mobile telephone subscribers. The specific objectives were to:

i). Determine the relationship between customer complaint behaviour and customer loyalty of mobile telephone subscribers in Makerere University.

ii). Assess the relationship between firm responses and Customer Loyalty.

iii) Examine the relationship between customer complaint behaviour and service quality.

iv) Establish the relationship between service quality and customer loyalty.

v). Determine the influence of firm responses on the relationship between service quality and customer loyalty.

vi). Assess the effect of service quality on the relationship between customer complaint behaviour and customer loyalty.

vii). Determine the joint effect of customer complaint behaviour, firm responses and service quality on customer loyalty.

1.4 Value of the Study

The results of the study contribute to theory building, policy issues and managerial practice. To the theory of customer complaint behaviour, the study adds two variables: firm responses as a moderator variable and service quality as a mediator variable and these influence the dependent variable (customer loyalty). The study considers the integration of customer complaint behaviour, firm responses, service quality and how they influence customer loyalty. Most existing models of customer complaint behaviour focus on individual variables without integrating them.

The study contributes to managerial practice as senior managers and executives are expected to better understand the role that their policies, actions and activities play in shaping customer complaint behaviour (CCB) and consequently customer loyalty. Management of mobile telephone companies ought to get better understanding of the role

played by firm responses in terms of adequately compensating staff that have complaints, improving staff/mobile telephone subscriber relations through giving an apology, listening to the customer disappointments with courtesy and understanding and handling subscriber disappointments.

Further, facilitation and proper firm procedures should be communicated to the subscribers to enable ease of interaction, initiate prompt action and to make timely decisions as they address subscriber's concerns. Emergence of a significant relationship between firm responses bring out the dimensions of compensation, employee behaviour and firm procedures which send a strong signal to managers of mobile telephone companies. This implies that firm responses is vital for successful behavioural expression of unfavourable attitude towards a person or situation (CCB) to be attained and consequently to lead to customer loyalty. There was greater understanding of the overall effect that firm responses and service quality on customer's loyalty can assist management in strengthening their weak CCB attributes and in predicting the best strategies that could project improved performance.

Further, service quality was a mediating variable of the study. While this study confirms the dimensions of service quality in terms of reliability, assurance, tangibility, empathy and responsiveness, it has led to a debate in the application of the SERVQUAL instrument for measuring service quality, adding some two dimensions of service convenience and network quality. The derivation of the additional service quality dimensions are technology based. The resulting instrument is therefore customized for mobile telephone operators and may be adopted by other service sectors which are technology based. It was established that service quality dimensions vary with different sectors like education and hospitality. This means that dimensions of service quality in the technology sector may be different from those in other sectors, hence the need for the right policies, procedures and business strategy in each context. This observation led the study to posit that in reference to contextual matters the service quality dimensions may vary from one service context to another.

The direct beneficiaries of this study are regulatory bodies like Uganda Communications Commission (UCC). The findings of the study will provide invaluable insights and a more reliable guide to monitoring the impact of the operations of the Uganda's mobile telephone operators. It could also serve as a yardstick for measuring partly the Uganda Communication Commission's respective policy goals and objectives.

1.5   Organisation of the Thesis

This study has five chapters. This chapter has presented a conceptual background on customer complaint behaviour, firm responses, service quality and customer loyalty. Further, the chapter provided a contextual background on MTS. The statement of the problem, the research objectives and significance of the study are all detailed in this chapter. The second chapter presents a review of literature on the key study variables of CCB, firm responses, service quality and customer loyalty and their relationships and points out the knowledge gap which this study sought to fill. The study further presents the conceptual framework basing on the dependent variable and the research hypotheses. A total of seven hypotheses were formulated on the basis of research objectives.

Chapter three explains the research methodology adopted in the study and provides an explanation of the research philosophy that guides the study, the underlying research design, the target population and the sampling procedure employed. Further, the chapter covers data collection and this includes the questionnaire design, validation and the reliability test of the instrument and finally, the operationalisation of the study variables and data analysis. Basing on chapter four, the data analysis results were presented. Data analysis was based on internal consistency, descriptive and inferential statistics. This allowed for carrying out correlations and regression testing by use of regression models for prediction of the independent variables on dependent variables. Finally, chapter five gave a summary of findings under each objective of the study, followed by conclusions and recommendations of the study.

1.6   Chapter Summary

The chapter has reviewed the background to the study; described the key study variables; and summarized the status of mobile telephone company services sector in Uganda. The chapter has also described the research problem, study objectives, value of the study and outlined the organisation of the thesis. The next chapter is on literature review where the theoretical foundations of the study and empirical literature are described, then the conceptual framework and hypotheses of the study are reviewed.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explains the aspects of customer complaint behaviour (CCB), firm responses, service quality (SQ) and customer loyalty in the mobile telephone industry context. The study draws from underlying theoretical perspectives on cognitive dissonance theory, the equity/perceived justice theory, the satisfaction/dissatisfaction theory basing on expectancy-disconfirmation paradigm (Oliver, 1997), the attribution theory and the conceptual framework, hypotheses and specific knowledge gaps that the study seeks to fill. Theories have been applied to the study of customer loyalty (Tronvoll, 2012).

2.2 Theoretical Foundation of the Study

This study is primarily anchored on the cognitive dissonance theory. Cognitive dissonance is a psychological phenomenon that occurs when there exists a discrepancy between what a person believes and information that calls this into question (Festinger, 1985). The reason underlying cognitive dissonance is that it is psychologically uncomfortable to hold contradictory cognitions. This psychological discomfort triggers a mental recovery process in the affected individual that can lead to: search for information supportive of the held belief coupled with constant attempts to downplay the cognition that resulted in the phenomenon of dissonance, or to a change in belief reflective of the new condition in order to eliminate or reduce the dissonance. Scientists have been debating for years over the precise nature of dissonance theory where studies in marketing have had both negative and positive results; empirical evidence to support the existence of the construct has been sparse with some studies concluding that the existence of the construct has not been proven (Sweeney et al., 1996). Research explores the relationship between cognitive dissonance and service quality as taking a static approach in which quality is measured at one point in time (Assael, 1992).

A key assumption is that people want their expectations to meet reality, creating a sense of equilibrium, yet this is not always the case. Cognitive dissonance theory was developed to address how people react both cognitively and emotionally to a negative event and hence cope with stressful situations (Lazarus & Folkman, 1984). This theory has been adopted by marketing researchers to portray CCB as coping responses to dissatisfying consumption and service experience. Cognitive dissonance theory has been related to CCB and attribution theory (Stevens & Gwinner, 1998).

The study is also based on the Expectancy Disconfirmation Theory (EDT). Expectancy disconfirmation refers to the degree to which an event conforms to or deviates from an individual observer's expectations (Pyszczynski & Greenberg, 1981). EDT argues that satisfaction is related to the size of the disconfirmation experienced, where disconfirmation is related to the customer's initial expectations (Parasuraman et al., 1988). The EDT suggests that if the experience is worse than expected then the service quality is perceived to be poor and the customer becomes dissatisfied and may engage in complaint responses (Gruber et al., 2009; Andreassen (2001). The expectancy disconfirmation model explains service satisfaction and dissatisfaction. Parasuraman et al. (2005) refer to customer expectations as internal benchmarks against which customers measure the quality of service they receive.

Expectations serve as the comparison standard in expectation confirmation theory (ECT) – what consumers use to evaluate performance and form a disconfirmation judgment (Tronvoll, 2007; Shiffman & Kanuk, 2007). Disconfirmation is hypothesized to affect satisfaction, with positive disconfirmation leading to satisfaction and negative disconfirmation leading to dissatisfaction. A major debate within the marketing literature concerns the nature of the effect of disconfirmation on satisfaction (Santos and Boote, 2003; Kotler & Kelley, 2006). The root of the problem lies in the definition of predictive expectations as the comparison standard for perceived performance. In such a case, the confirmation of negative expectations is not likely to lead to satisfaction. Basing on disconfirmation paradigm, satisfaction/dissatisfaction is a direct consequence of the disconfirmation process (Tronvoll, 2007; Shiffman & Kanuk, 2007). However, evidence

suggests that the disconfirmation process of expectations does not lead directly to consumer dissatisfaction, and that the effects of disconfirmation are mediated with attribution processing.

Attribution theory falls under the disconfirmation paradigm. Disconfirmation of an expectation acts as an important causal agent where events that do not conform to expectations may trigger the search for an explanation or reason for the event. Attribution theory is the systematic study of the perception of causality. In a complaint behaviour context, product failure is the kind of negative and unexpected event that has been shown to bring about causal search (Weiner, 2000). Weiner's attribution theory is mainly about causal dimensions of locus of control, stability and controllability. Consumers perceived causality, stability and controllability to influence their intentions to complain, emotional reaction, recovery expectations and behavioural intentions to the company (Hess et al., 2003).

Equity theory is based on a three-dimensional view of the concept of fairness and includes distributive justice, procedural justice and interactional justice (Bies &Shapiro, 1987). Justice theory is a concept that helps understand how dissatisfied customers evaluate complaint responses. Distributive justice involves dealing with decision outcomes (Klaus & Ennew, 2005). Interactional justice refers to the quality of interpersonal treatment received from representatives of a business while a failed recovery is being corrected. Procedural justice refers to the fairness of procedures used to correct a failed service situation. The types of perceived justice reflect consumer's fairness judgements towards different aspects of the exchange relationships. Equity theory proposes that customers' behaviours are affected by the assessment of their contributions and the rewards they receive (Adams, 1965). When customers believe that an inequality exists in an exchange, they become disappointed. The customer may choose different complaint responses depending on the action that is most likely to restore equity with the minimum cost. The research introduces the concept of fairness into the model of satisfaction with failure/recovery encounters to help understand how recoveries lead to customer loyalty and to deepen understanding of consumers reaction of service recovery.

When customers perceive that they have not been sufficiently compensated for the damage, they may feel even more annoyed than they were subsequent to the failure (Gruber, 2011). Therefore compensation is positively associated with consumer's perceived distributive justice and can influence behavioural intentions. There is a debate on the effect of recoveries on customer satisfaction. The main study is based on cognitive dissonance theory because this is where the other theories of justice and expectancy disconfirmation are rooted.

2.3 Customer Complaint Behaviour and Customer Loyalty

A commonly used definition of customer complaint/complaining behaviour was suggested by Singh (1988), who conceptualised it as a set of multiple (behavioural and non-behavioural) responses, some or all of which are triggered by perceived dissatisfaction with a purchase episode (p. 94). A complaint provides an opportunity for service recovery followed by a chance to educate the customer, strengthen loyalty and evoke positive word-of-mouth comments (Blodgett & Anderson, 2000; Shields, 2006). Although attracting new customers is vital, successful companies recognize that retaining current customers and building loyalty are even more important for profitability; as such, successful companies encourage dissatisfied customers to complain (Tax et al., 1998; Tronvoll, 2010). Indeed, successful complaint handling can be a significant positive investment for a service company generating a return of 30 to150 per cent on investment (Gruber, 2007).

The existing models of customer complaint behaviour (redress, voice, loyalty or exit) have been challenged because of their static and single post purchase focus (Singh, 1988). This means that when customers have had disappointment, they may complain or stay and not even complain. When disappointed customers do not complain, it means that the company will not get an opportunity to conduct service recovery, solve the problem and ease the customer's dissatisfaction. A complaint is a consumer's negative emotional response towards lack of quality, reliability and credible services. If a lot of attention is given to a complaint, they can form a part of valuable information that would assist in forming strategic service encounters (Gruber, 2011).

Between 5 and 10 percent of dissatisfied customers lodge a complaint following a bad experience but majority tends to switch silently and make negative WOM communication (Ehigie, 2006). Some dissatisfied customers may not voice their complaint to the product/service provider, but may use other avenues such as negative word of mouth, aggression and taking the business to a competitor elsewhere (Lerman, 2006). When complaints are not handled well, this may lead to bad WOM; can endanger company reputation and brand damage and consequently diminishing customer loyalty (Tronvoll, 2012; Gee et al., 2008). Unfortunately, not all dissatisfied customers complain. Majority of complaining customers are dissatisfied with the company's complaint handling effort. Hence, adequate service recovery is critical to minimise customers suffering from double deviation effect which may lead to disloyalty (Karatepe & Ekiz, 2004).

Managing complaints is essential if dissatisfied customers are to be converted into satisfied and loyal customers. Although effective service recovery results in complainant satisfaction and loyalty (Tronvoll, 2012), many complainants are dissatisfied with the company's complaint handling effort and use negative word of mouth, voice, or exit services (Gruber, 2012), and the way complaints of mobile telephone subscribers are managed leaves a lot to be desired. Voice refers to a situation when customers decide to express their dissatisfaction to the responsible party. According to Oh (2004) it is possible to make an important distinction between direct complaint and indirect complaint. The first is expressed at the moment of the service or product failure, the second afterwards. This (voicing) may lead to customers exiting the services of the mobile telephone service provider. Exit refers to the situation in which customers decide not to repurchase or not to use a service again. In the future, they will choose another service or another product. In order to choose exit, one or more alternatives should be available and known by the dissatisfied customer. Day and Landon (1977) link "exit" to "boycott" as a more radical and active reaction to dissatisfaction.

2.4   Firm Responses and Customer Loyalty

Organisational/firm responses are the reactions by a company in response to a complaint which represent action taken by the company. Employees should have competence and

act with promptness, empathy and remain pleasant and helpful during service recovery (Tronvoll, 2012). Ekiz and Arasli (2007) add that even when there are other indicators of service recovery like facilitation and work effort, organisational responses to complaints are based on apology, redress, explanation, attentiveness and promptness (Boshoff, 2005; Davidow, 2003 and Babakus et al., 2003). Furtherstill, the afformationed dimensions are related to complaint satisfaction, repurchase intentions and word of mouth communication (Karatape & Ekiz, 2004; Davidow, 2000).

In order for companies to retain their customers into a long term relationship, they need to have competent staff with empathy, courtesy, fast responsiveness and to be easily accessible (Rod & Ashill 2010; Gruber, 2010). Such skills will lead to favourable word of mouth and loyalty of customers. According to Ehigie (2006) and Wong and Sohal (2003), customer loyalty is a significant concept in today's competitive market place; and loyal customers are concerned with the likelihood of a customer returning, making business referrals, providing a positive word of mouth, references and publicity. Further, little is known about the effects of organisational responses to customer complaints on repurchase intentions (Davidow, 2000; Babakus et al., 2003 and Ekiz, 2003); and it should be noted that there is a paucity/scantiness of empirical research in this area.

2.5 Customer Complaint Behaviour and Service Quality

Customer complaints are a natural consequence of any service activity (Michel et al., 2009) because mistakes are an unavoidable feature of all human endeavours and also of service delivery (del Rio-Lanza et al., 2009). This means that for the consumer, complaining is a means of making one's feelings known when unfair seller practices are encountered, when disappointment with a product arises, and when disapproval of business conduct more generally occurs (Fornell & Westbrook, 1979). Conceptualized this way, dissatisfaction is the attitude resulting from disconfirmation of expectancies, and complaining is a behavioral expression of the dissatisfaction. In complaint management, it is important that the company understands why consumers choose specific complaint behaviors, particularly those that do not involve the direct voicing of a complaint to the organisation. Gruber (2011) asserts that managing complaints well and

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recovering customers after a service failure and a complaint, should be the cornerstone of an organisation's customer satisfaction strategy.

In the light of the ongoing discussion on service quality, the debate on such controversial concept like its multidimensionality and service quality gaps are still far from complete and there is still an avenue for a potential contribution to service quality literature (Byarugaba, 2010, Owino, 2013). The majority of studies have been conducted to measure or validate service quality from customers' perspectives only without much attention given to examining this concept from managers' and employees perspectives. Companies should go beyond customer satisfaction through providing quality services and also handling customer complaints which will consequently lead to loyal customers (Gee et al., 2008); in any case customer loyalty is the goal of MTCs in Uganda.

2.6 Service Quality and Customer Loyalty

Service quality is measured by an instrument called SERVQUAL (Parasuraman, 1988) and has now been employed in a broad range of sectors ranging from financial services and telecommunications but critiqued as confusing (Hutchinson et al., 2007). This research is important to establish the validity of the instrument on generic reliability, tangibility, empathy, assurance and responsiveness dimensions as it relates to its use in African contexts (Khan, 2010). SQ is a key area for researchers because of its strong impact on image creation, lower costs and customer loyalty (Seth et al., 2008). Aydin and Ozer (2005) add that SQ enhances customers inclination to buy again, buy more, buy other services, become less price sensitive and tell others about their favourable experiences; and conclude that there is a positive relationship between service quality and customer loyalty.

To achieve customer loyalty, Oliver (1997) and Gee et al. (2008) maintain that all service encounters offer an opportunity to provide superior service quality and distinguish the firm from its competitors. In spite of the critical importance of customer loyalty being vital for business survival; it is strange that the relationships between service quality and customer loyalty is not equally well-developed (Ramzi & Mohamed 2010).

Customer loyalty and service quality has been studied but not in the telecom industry (Holloway et al., 2009; Lee et al., 2008). Further, service quality has an effect on customer loyalty; however, there remains considerable debate on the nature of the relationship (Ramzi & Mohamed 2010). The assumption is that there is a strong relationship between service quality attributes and customer behaviour like repurchase intention (Oliver et al., 1997). Further, Turkish mobile telephone consumers suggest that service quality is necessary, but insufficient to create loyalty (Aydin & Ozer, 2005).

2.7   Customer Complaint Behaviour, Firm Responses and Customer Loyalty

Dissatisfied customers may not voice their complaints but exit the company services because of the mistakes made by the company, billing errors and service catastrophes. Others may exit because of the unfavourable service encounter like uncaring, impolite, unresponsive and unknowledgeable employees. If customer complaints are not handled properly, the negative consequences may be far-reaching (Maxham & Netemeyer, 2003). Dissatisfied customers will not only discontinue their patronage, but are also likely to spread a negative message, jeopardizing the company image (Gruber et al., 2007). Khan (2010) explained that switching mobile phones was because of voice quality and network coverage. Service failure is inevitable, therefore it is crucial for management of mobile telephone companies to understand CCB in order to effectively manage it to retain customers. The most common complaint motives include seeking corrective actions, followed by asking for an explanation, seeking an apology, expressing emotional anger and with low rating for compensation and seeking redress (Heung & Lam, 2003).

Tronvoll (2010) states that complaining is a way to vent negative emotions. In addition to that, complaints are a very useful form of consumer-initiated market information that can be used to make strategic and tactful decisions. Complaining gives the customer the opportunity to be compensated; and to be a source of information and may improve the relationship between the customer and the company. In case of service failure, the company's response can exacerbate the customer and drive him or her to a competitor. A disappointed mobile telephone customer can communicate to many people spreading negative WOM messages. Unfortunately, negative messages may lead to a devastating

experience to companies (Kim et al., 2010). Basing on post complaint behaviour, customers who are satisfied with complaint handling engage in positive word of mouth and are more loyal than customers who are dissatisfied with complaint handling of service quality of mobile telephone service providers.

Customers want knowledgeable employees about policies and procedures that relate to customer service. However, Michel et al. (2009) and Gruber (2011) assert that there is incompetence of staff in handling complaints. Andreassen (2001) adds that it is not worth it to try to recover from every service failure. Grewal et al. (2008) add that compensation is necessary only when the company is responsible for the failure and the failure occurs frequently. However, less frequent failure is still a dissatisfaction to the customer and should be handled both for image creation and to restore the customer to the original good feeling about the company. Solving the problem is the right thing to do, no matter how frequent it occurs, and a resolved problem may lead to customer retention.

Customer loyalty is thought to reflect how much customers wish to maintain their relation with a specific supplier and it usually comes as a result of the extent to which customers believe that what they get from this supplier is worth more than what they get from others. Therefore, customer loyalty becomes the ultimate goal of any service company. Examining customer loyalty is essential if a company is to retain its current customers because loyal customers are cost effective and make referrals to friends (Komunda & Osarenkhoe, 2012; Duffy, 2003). Further, loyal customers provide repeat business and are less likely to shop around for the best deals than non loyal customers.

2.8 Customer Complaint Behaviour, Service Quality and Customer Loyalty

Most dissatisfied customers decide not to complain rather they exit the service instead (Tronvoll, 2007; Osarenkhoe & Komunda, 2013). Companies who do not rise to the challenge of complaining customers are turning down the important opportunity of reclaiming and improving a relationship. Customer complaints are a valuable source of important market intelligence for feedback; to correct the root cause of the problem, attain service quality and customer loyalty. In addition, Wong and Sohal (2003) contend

that SQ has become a significant differentiator and the most powerful competitive weapon which many leading organisations possess. Such organisations strive to maintain a superior quality of service in an effort to gain customer loyalty. Despite the fact that customer loyalty is essential for business sustainability, the relationship between service quality and customer loyalty remains relatively under developed.

The central theme that runs through customer loyalty relates to the proportion of expenditure devoted to a specific brand or store; and it is a situation where repeat purchase behaviour is accompanied by a psychological bond and repeat purchase intentions and behaviours. A loyal customer feels an obligation to persevere with a personal relationship through good and bad times. Further, loyal customers are inclined to recommend a service provider to other customers (Ehigie, 2006; Gruber, 2007); pledge a steady attachment to a service; and have dependence on and affinity of purchasing a service (Uncles et al., 2003; Seth et al., 2008).

Customer loyalty is often included as an outcome variable in service quality models, however, there are a number of factors that limit a comprehensive understanding of service quality and its impact on customer loyalty in services and prevent the generalisability of research findings. First, the operationalisation of the construct of customer loyalty remains limited as it ignores the full range of conceivable layout reaction that may follow the evaluation of a service. Secondly, the link between the individual dimensions of SQ and the various levels of customer loyalty received relatively little research attention and linking the construct of SQ with all its dimensional levels increases the diagnostics of explaining customer loyalty (Bloemer et al., 1999). The identification of the determinants of service quality and its impact on customer loyalty should be a central concern for service management academicians and practitioners, as it is necessary to specify, measure, control and improve service quality from the customer's perspective (Johnston, 1995).

If service companies do not manage service recovery properly, it could harm their long-term success prospects. However, when companies carry out effective complaint handling, this can have a great impact on customer retention rates, deflect the spread of

damaging WOM and improve bottom-line performance. A dissatisfied customer can remain loyal, voice complaints (Gruber et al., 2007) or exit (Tronvoll, 2012). Without loyalty, dissatisfaction that results from an unsatisfactory experience will incite consumers to undertake some form of complaint (Rowlay, 2005; Grewal et al., 2008) which would help mobile telephone companies to get information from the mobile telephone subscribers in Makerere University.

2.9. Customer Complaint Behaviour, Firm Responses, Service Quality and Customer Loyalty

There are different consequences of service failures including dissatisfaction, a decline in customer confidence, negative WOM behaviour and customer defection (Tronvoll, 2012). This includes situations in which a service failure occurs but no complaint is lodged by the consumer which leads to loss of revenue and increased costs, or a decrease in employee morale and performance. Companies are concerned with whether the quality of the designed service they offer is of good quality or matches clients' expectations (Khan, 2010). According to Reichheld (2003), Gee et al. (2008); Morrisson and Huppertz (2010), when complaints are handled effectively, it may lead to customer satisfaction and loyalty.

Poor service recovery threatens the long-term survival of the organisation (Michel et al., 2009; Thwaites & Williams, 2006). On the contrary, when organisations carry out effective complaint handling, this can have a great impact on customer retention rates, deflect the spread of damaging WOM, and improve bottom line performance. WOM communication is believed to hold particular importance in its ability to influence other consumers because it is perceived as being more neutral and less biased than marketing-based communication (de Matos & Rossi, 2008). Research shows that the impact of WOM is particularly important in services, where consumers are more likely to be dependent on the communication of others (Hennig-Thurau et al., 2004). WOM communication refers to the likelihood of spreading information on an organisation and the valence of this information. This can be in form of negative and positive WOM communication. Some researchers consider positive and negative WOM to be opposite ends of the same continuum (Kau & Loh, 2006). It is argued that this may hold true for

the valence of the consumer's reference, the likelihood of both types of WOM is not necessarily negatively interdependent. One may tell both the negative and positive things about an organisation (Gelbrich & Roschk, 2010). Negative WOM communication refers to spread of unfavourable information about an organisation, which includes advising against the organisation and its products or services (Boldgett, Hill & Tax, 1997). The negative effects of service failures are amplified when customers spread their dissatisfying experiences about SQ across their social networks. A single WOM message can reach and potentially influence many receivers through multiple exchanges; especially, if it has a negative valence (Mazzarol et al., 2007). Negative WOM communication provides an outlet for emotion-based coping, as consumers can vent their negative emotions. Some customers tend to exhibit a positive attitude toward complaining due to perceived social benefits of WOM.

Positive WOM is common because it usually follows a complaint and subsequent recovery effort (Gelbrich & Roschk, 2010). Positive WOM communication does not occur when customers fail to complain and subsequently, do not initiate failure amends. It is because of failure persistence and lack of service recovery efforts which prevent customers from recommending the organisation; but lead to switching and to lost customer lifetime value (Bonifield & Cole, 2007). On the contrary, post failure negative WOM may arise prior to a complaint as well as subsequent to ineffective recovery efforts after a complaint (Blodgett & Anderson, 2000). A retailer's resistance to listening and responding to consumer complaints increases the likelihood that consumers will complain in private – in the form of negative WOM to friends (Michel et al., 2009).

Word of the mouth (WOM) is informal advice and information about products and services that exchanges between individuals and among them (Lam et al., 2004). As an information source, positive WOM is a powerful input into decision making (Hennig-Thurau et al., 2004). Very satisfied customers always act by publishing favourable word of the mouth and it actually converts to an advert or in the contrary (Lavlak et al., 2006). WOM is one of the strategies used by customers to reduce their post-decision dissonance

(Hennig-Thurau et al. (2006). Also, on average, one satisfied customer tells his/her good service experience to three (3) persons (Kotler, 2003).

With negative WOM and exit responses, the organisation often loses the opportunity to remedy and learn from the situation, suffers from reputation problems, and forfeits its investment and any potential future gains from that customer's patronage (McAlister et al., 2003). However, a growing number of researchers have identified service recovery as a rather neglected aspect of service marketing and one that warrants attention (Tronvoll, 2012; Komunda & Osarenkhoe, 2012). Having a positive attitude toward complaining is a key issue in customer complaint behaviour (Bell & Luddington, 2006) which can lead to retention of customers into a long term relationship.

Customer retention refers to actions that a selling organisation undertakes in order to reduce customer defections. Successful customer retention starts with the first contact an organisation has with a customer and continues throughout the entire lifetime of a relationship. Customer retention is concerned with maintaining the business relationship established between a supplier and a customer (Duffy, 2003). A growing body of literature suggests that customer loyalty has positive impact on client retention (Rowlay, 2005). Customer loyalty is critical to conducting business in today's competitive marketplace, and the MTS setting is no exception. Researchers argue that there must be a strong attitudinal commitment to a brand for true loyalty to exist (Reichheld, 2003). Ahluwalia et al. (1999) have shown that attitudinally-loyal customers are much less susceptible to negative information about the brand than non-loyal customers.

In addition, the firm responses in the study include apology, explanation, redress attentiveness and promptness. An apology is a psychological exchange that is offered in for the inconvenience or problem which the customers face. According to Boshoff and Allen (2000), apologizing for the inconvenience is usually the first step towards re-establishing the equilibrium. This plays an important role in establishing customer satisfaction with a company's service recovery effort. Explanation basically refers to some information given by the service provider about why the problem occurred. Ekiz and Arasli (2007) add that when the explanation is provided appropriately, it reduces the

recipient's perceptions of injustice, and this may in turn affect the recipients loyalty (Davidow, 2003). Redress refers to the 'fair settlement or fix' of the problem which arises between the company and the customer.

Davidow (2000) asserts that customers who receive a fair settlement are satisfied and more likely to show repartronage. Attentiveness refers to the interaction and communication between the company staff and the complainant. It should be noted that such an interaction is the key construct and can either enhance or detract from complaint satisfaction, repurchase intentions and negative word of mouth. Finally, promptness presents the fairness of the organisation in responding to the customer complaints in a timely manner. Ekiz and Arasli (2007) explain that the speed of response is important in affecting customer satisfaction and repurchase behaviours.

Studies conducted in financial services showed that increasing customer loyalty by 5% could lead to 25-75% profit growth (Khan, 2010). However, not all satisfied customers may remain loyal. Many customers are not interested in a long term relationship approach and act out of self interest (Camarero, 2007). Most of the customers do not complain after service failure dissatisfaction, but exit (Tronvoll, 2007). Researchers have shown that 60-80 percent of customers who defect to competitors said they were satisfied or very satisfied just prior to their defection. In addition, Ndibusi and Tam, (2004) indicate that majority of complaining customers are dissatisfied with the organisation's complaint handling efforts in terms of timeliness, staff competence and employee behaviour. Unfortunately, disgruntled customers with unresolved complaints are likely to spread a negative message, jeopardizing the organisation image (Gruber, 2011).

Disconfirmation is hypothesized to affect satisfaction, with positive disconfirmation leading to satisfaction and negative disconfirmation leading to dissatisfaction. A major debate within the marketing literature concerns the nature of the effect of disconfirmation on satisfaction. The root of the problem lies in the definition of predictive expectations as the comparison standard for perceived performance. In such a case, the confirmation of negative expectations is not likely to lead to satisfaction (Santos & Boote, 2003). The main objective of the present research is to examine the relationship between customer

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complaint behaviour, service quality and customer loyalty by adopting the integrated approach among customers of the mobile telephone companies in Uganda.

2.10   Summary of Knowledge Gaps

Some companies fail to get important information for solving service failure problems before the failure gets to another level (Komunda & Osarenkhoe, 2012; Michel et al., 2009). Seth et al. (2008) assert that businesses all over the world have realized that it is all about the customers, but many companies have lost sight of them. Leverin and Liljander (2006) add that the ultimate goal of any service provider is to build relationships and to have loyal customers. Undertaking this research is filling an open slot in our scientific knowledge (Table 2.1).

Table 2.1: Summary of Knowledge Gaps

Study	Focus of the Study	Findings	Knowledge Gaps	Focus of the Current Study
Andreassen (2000)	The study investigated the relationship between customer satisfaction and customer loyalty	Perceived fairness of outcome of service recovery have an impact on satisfaction with service recovery	Customer satisfaction as the primary route to customer loyalty.	The study established moderators of CCB and Customer loyalty.
Heung and Lam (2003)	The study investigated customer complaint behaviour towards hotel restaurant services in Hong Kong.	Customers are likely to engage in private complaint behaviours like word of mouth communication.	Customers are passive on giving feedback to management.	The study Improved on existing customer feedback systems and complaint handling strategies.
Karatepe and Ekiz (2004)	Effects of organisational/firm responses and customer loyalty in Hospitality Industry	Organisational responses (effort, apology and explanation) exert significant positive effects on satisfaction and loyalty.	There was a need for exceptional service quality	The study established other firm responses affecting customer loyalty

Hutchinson et al. (2007)	The study examined service quality in mobile communication industry	SERVQUAL (service quality) instrument is a valid and reliable tool in measuring Service Quality	To include convenience and network dimensions among the Service Quality dimensions	The existence of convenience and network quality as dimensions of Service Quality was established.
Gee et al.(2008)	The study investigated the understanding and profitably managing of customer loyalty	Managing customer loyalty in a profitable manner.	Effect of technology on exit, voice, loyalty theory.	The study established mediating factors in attaining customer loyalty.
Rod et al. (2010)	The study investigated a model of management commitment to service quality (MCSQ) and service recovery performance in the context of public and private hospitals in New Zealand.	The study was mediated by organisational commitment and there are no differences between frontline employees in the private and public sectors.	There is a high degree of inter-correlation between the five RATER dimensions of service quality.	The study established the existence of service convenience and network quality as a dimension of SQ in the MTC.
Ramzi and Mohammed, (2010)	The study examined the impact of tourism service quality (SQ) dimensions in the Jordanian Five Star Hotels.	The dimensions of SQ such as assurance, tangibility, empathy, reliability and responsiveness significantly predicted customer loyalty.	SERVQUAL dimensions are not universal basing on the industry	The study focused on service quality dimensions in the mobile telephone company sector.
Gruber (2011)	The study examined how complaining customers want to be treated by frontline employees in personal complaint handling encounters in a University setting.	The study established attributes of customer complaint behaviour as competence and active listening skills.	The study focused on only university students, results not generalised.	Scope of the study was on all the stakeholders of the University.

Komunda and Osarenkhoe (2012)	The study examined the effects of service recovery on satisfaction and loyalty in the banking industry.	Communication had a significant relationship with service recovery	There is a debate on the nature of customer complaints.	The study explored further the nature of customer complaints behaviour.
Tronvoll (2012)	The study investigated customer complaint behaviour as a dynamic process in accordance with the service dominant logic	The study proposed a model posits 3 categories of complaining behavior of action, communication and no complaining responses.	There was lack of empirical validation of the proposed model of consumer behavior (CB).	The study used quantitative research design in the study of customer complaint behavior.
Kabare (2013)	The study examined the relationship between managerial focus and customer satisfaction within large flour mills in Nairobi.	The joint effect of quality drivers of customer perception and managerial focus on customer satisfaction was statistically significant.	The study focused on limited number of variables and constructs when CB is influenced by many more.	The study used moderators and mediating effect on the study variables of CCB and customer loyalty.
Amin and Nasharuddin (2013)	The study investigated hospital service quality and its effects on patient satisfaction and loyalty.	Establishment of higher levels of hospital service quality will lead customers to have a high level of satisfaction and loyalty.	The concept of service providers was not explored in the study.	The concept of service providers was explored under customer complaint behaviour.

2.11. Conceptual Framework

The study was guided by conceptualisation got from literature review and theories. The study proposes a conceptual framework on the interaction between customer complaint behaviour, firm responses, service quality and customer loyalty. The dependent variable is customer loyalty with measurements of word of mouth and customer retention. The independent variable is customer complaint behaviour. The moderating variable is firm's

responses and the intervening variable is service quality. The conceptual framework shows the inter relationships among customer complaint behaviour, firm responses, service quality and customer loyalty. The study is on the integration of the independent variable (customer complaint behaviour) with the moderating variable (firm responses), intervening variable (service quality) and the dependent variable (Figure 2.1).

Figure 2.1: Conceptual Model

Moderating Variable

H₅

Firm's Responses

-Employee behaviour
-Compensation
-Firm procedures

H₂

Independent

Variable

H₇

Customer complaint Behaviour

Customer Loyalty

- Redress
- Voice
- Exit
- Commitment

H₃

Service Quality

- Customer retention

H₄

-Assurance
-Empathy
-Reliability
-Responsiveness
-Tangibility
-Convenience
-Network quality

-Word of Mouth

H₁

↓H6

Intervening Variable   **Dependent Variable**

Source: Current Researcher

Conceptual model (Figure 2.1) shows the inter relationships among variables of customer complaint behaviour, firm responses, service quality and customer loyalty. According to the model, customer loyalty is influenced independently by customer complaint behaviour, firm responses and service quality. Firm responses have a moderating effect

on customer complaint behaviour and customer loyalty. Service quality is a mediating variable between customer complaint behaviour and customer loyalty. Customer complaint behaviour (independent variable) has measurements of redress, voice, exit and commitment. Service quality comprises of dimensions of reliability, assurance, tangibility, empathy, responsiveness, service convenience and net work quality. The moderating variable firm responses has measurements of firm procedures, compensation and employee behaviour. The dependant variable (customer loyalty) has dimensions of customer retention and positive word of mouth.

2.12   Hypotheses of the study

The conceptual hypotheses for the study were:

H1:   There is a significant relationship between customer complaint behaviour and customer loyalty of mobile telephone subscribers.

H2:   There is a significant relationship between firm responses and customer loyalty of mobile telephone subscribers.

H3.   There is a significant relationship between customer complaint behaviour and service quality of mobile telephone subscribers.

H4:   There is a significant relationship between service quality and customer loyalty of mobile telephone subscribers.

H5:   The relationship between customer complaint behaviour and customer loyalty is significantly moderated by firm responses.

H6:   The relationship between customer complaint behaviour and customer loyalty is significantly mediated by service quality.

H7:   The joint effect of customer complaint behaviour, firm responses, service quality on customer loyalty is statistically significant.

2.13 Chapter Summary

Chapter two has presented the review of literature on customer complaint behaviour, firm responses, service quality and customer loyalty. It was evident from the cited theoretical and empirical literature that customer loyalty was influenced by customer complaint behaviour and there was a relationship between customer complaint behaviour and service quality. The current study empirically investigated the relationships shown in the conceptual framework and presented in the seven study hypotheses with a view to establishing the relationship between the study variables; as well as the moderation, mediation and joint effect of the independent variables on the dependent variable.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1   Introduction

The chapter presents a description of the methods and approaches that were used to conduct the study. It discusses the research philosophy, research design, study population, data collection methods, reliability and validity tests and the operationalisation of study variables. The chapter ends with an explanation of data analysis procedures that were used in the study.

3.2   Research Philosophy

The philosophical approaches to scientific investigation include realism, phenomenology and positivism. The realism philosophy argues that a reality exists that is independent of human thoughts and beliefs (Saunders et al., 2007). The phenomenological paradigm focuses on the immediate experience and description of things as they are, not what the researcher thinks they are. Phenomenological approaches are based on personal knowledge, subjectivity and interpretation. It also focuses on immediate experience (Saunders et al., 2007). There is a need to explore the subjective meanings motivating people's actions in order to understand these actions (Cooper & Schindler, 2006).

Positivism adopts a clear quantitative approach to investigating phenomena (Cooper & Schindler, 2006). The paradigm assumes that an object reality exists which is independent of human behaviour, but is not a creation of the human mind. In positivism, knowledge is presupposed to naturally exist based on real facts, objectivity, measurement and validity of results. The philosophy believes that universal scientific propositions are true only if they have been verified by empirical tests. When using positivism, numerical data will be collected and used through statistical analysis (quantitative research) and prediction is based on existing theory. This is a deductive approach which involves development of a theory which is subject to a rigorous test.

The current study was guided by use of positivism paradigm because it is based on existing body of knowledge and it involves objective testing of hypotheses that will thereafter be used in coming up with objective predictions.

3.3   Research Design

The current study used the descriptive cross sectional design. A descriptive study involves a description of phenomena associated with a subject population regarding: who, what, when, where and how of a topic of study. Descriptive studies attempt to obtain complete and accurate description of situations, persons or events. It allows description of phenomena as well as collection of a large amount of data from a sizeable population in a highly economic way. Descriptive statistics is the discipline of quantitatively describing the main features of a collection of data and aim to summarize a sample, rather than use the data to learn about the population that the sample of data is thought to represent.

A cross sectional survey refers to a study which involves data collection from a population or a representative subset at one specific point in time (Saunders et al., 2006; Babbie, 2010). Cross sectional studies are appropriate where the overall objective is to establish a significant relationship among variables at some point in time (Mugenda & Mugenda, 2003). A descriptive cross-sectional research design facilitates checking for significant associations between variables to make generalisations concerning the target population (Kotler & Keller, 2006). The research design therefore offered an opportunity to establish the relationships between CCB and customer loyalty and to determine the influence of firm responses and service quality on this relationship. This type of design was successfully used by Munyoki (2007), Bagire (2012), Tronvoll (2012) and Njeru (2013).

3.4   Target Population

The population of the study embraced subscribers to mobile telephone operators who were students, academic staff, administrative staff and support staff of Makerere University. The choice of Makerere University community was because it is one of the

oldest universities in East Africa; most people in the University are well educated and informed of their rights as consumers; they are multicultural; are knowledgeable about how to go about complaining; and can complain through various channels to mobile telephone companies. The University has a cosmopolitan people from all parts of Uganda. The mobile telephone subscribers use mobile telephones for making telephone calls, use of social media (like use of SMS, internet services) and mobile money banking. The total population of Makerere University was 50,949 (academic year 2011/2012) mobile telephone subscribers.

3.5 Sample Design

The following formula was used to determine the appropriate sample size for the study:

$$n = \frac{Z^2 (P) (1-P)}{E^2} \qquad n = \frac{1.96^2 (0.25)}{(.05)^2} = 384$$

Where:

n = the desired sample size if target population is greater than 10,000.

Z = the degree of confidence (95% confidence level).

P= the proportion in a target population estimated to have characteristics being measured

E= allowed error term

The sampling technique used to select both the students and staff was stratified random sampling. Uganda currently has four major telephone companies all of them offering both data, text and voice services. The unit of analysis was the subscribers to mobile telephone companies, specifically Makerere University students (undergraduate and post graduate students), academic staff, administrative staff and support staff (Table 3.1). A list of all students and staff in Makerere University was obtained from the Human Resource Office and Registrar's Office of the University and was used to determine the respondents for the study.

Table 3.1: Population of Makerere University (2012-2013)

Category	Population	Sample	Percentage
Students	46274	192	50
Academic Staff	1,823	80	20
Support Staff	1,597	72	17
Administrative Staff	1,255	40	13
Total Population	50,949	384	100

Source: Human Resource office, Makerere University
Registrars Office, Makerere University

Systematic sampling technique was used to select the specific respondent. In the current study, every fifth person was included in the sample.

3.6. Data Collection

The study used both secondary and primary data. The secondary data were in form of reports, brochures, flyers, periodicals, manuals, monographs and journals. The bulk of these materials were obtained from the Uganda International Trade Fair which was organised by Uganda Manufacturers Association in which the mobile telephone companies (UTL, MTN, Orange and Airtel) participated.

Primary data was collected from Makerere University mobile telephone subscribers (students and staff) using a semi-structured self administered questionnaire. The questionnaire was divided into five sections. Section A elicited data on the demographic variables (age, gender, marital status, education level, income). Section B collected data on customer complaint behaviour in terms of seeking redress, voice, exit and commitment; section C gathered data on reliability, responsiveness, assurance, tangibility, service convenience, empathy and network quality). Section D elicited data on customer loyalty (customer retention and word of mouth) while section E collected data on Mobile Telephone Company (firm) responses with respect to compensation, employee behaviour and organisational procedures. Questions were designed in line with the objectives of the study.

The questionnaire included both open and closed ended questions. A five point rating scale was developed (1= not at all, 2= to a small extent, 3= to a moderate extent, 4= to a large extent and 5= to a very large extent) because the scale has a fairly robust characteristic. The items were developed from the literature with appropriate modifications to reflect the context of the current study (Appendix 2).

The demographic variable had 9 items; customer complaint behaviour variable had 20 items; service quality variable had 44 items; customer loyalty variable had 17 items and firm responses variable had 19 items. The questionnaire was administered through a drop and pick up later method. The researcher assured the respondents of total confidentiality regarding the responses.

A total of six hundred questionnaires were distributed to the respondents. For the staff of the University, the drop and pick up later method was used to collect the data. As for the students, the questionnaires were administered by the researcher at the beginning of the semester in a classroom set up.

3.7   Reliability and Validity of the Instrument

3.7.1   Reliability

Reliability is described as the absence of differences in the results if the research was repeated (Collis & Hussey, 2009). It indicates the accuracy or precision of the measuring instrument. The most commonly used indicators of internal consistency is Cronbach's Alpha Coefficient. Cronbach alpha was used to test the measurement scales to ascertain the reliability of the five point rating scale which was used in the survey (Kothari, 2005; Nunnally, 1978). The closer the Cronbach's Coefficient Alpha is to 1, the greater the internal consistency of the items in the scale.

According to Nunnally and Bernstein (1994); Grayson (2004), a cut off alpha coefficient point of 0.70 is sufficient. Cronbach's Alpha Coefficient has extensively been used in the local context to measure reliability (Kinoti, 2012; Nyeru, 2013; Owino, 2013).

A pilot study was undertaken to establish the reliability of the instrument using internal consistency approach using SPSS version 19. Reliability tests were conducted on a pilot study of 81 conveniently selected individuals from within the sample. The parts of customer complaint behaviour, service quality, customer loyalty and firm responses all showed acceptable alpha coefficient at 0.70. The overall alpha coefficient was .751 and pertinent results of the reliability of the instrument are summarised in Table 3.2.

Table 3.2: Reliability of the Instrument

Part of Instrument	Variable	Number of items	Alpha Coefficient
Whole Instrument		64	.751
Section 1	Customer Complaint Behaviour	9	.740
Section 2	Firm Responses	9	.860
Section 3	Service Quality	29	.936
Section 4	Customer Loyalty	17	.784

Source: Primary Data

From Table 3.2, the alpha coefficient of the instrument was high with the overall measure at .751. Basing on the variables, service quality had the highest measure with .936 and the least was customer complaint behaviour with .740. The cronbach alpha values exceeded the acceptable level of 0.70 as recommended by Nunnaly (1978), which means that the scale was reliable.

3.7.2 Validity of the Instrument

Validity refers to the extent to which the data collection methods accurately measure what they are intended to measure (Saunders et al., 2007). Validity is important because it can help determine what types of tests to use, and help to make sure researchers are using methods that are not only ethical and cost-effective, but also a method that truly measures the idea or construct in question. Further, validity is also dependent on the instrument measuring what it was designed to measure, and not something else instead. A test has content validity built into it by careful selection of study items. For the current study, items were chosen with the intention of complying with the test specification which was drawn up through a thorough examination of the subject domain. Content validity was also applied basing on using expert judgement and expertise of the doctoral

supervisors as well as the senior lecturers of marketing from the University of Nairobi to confirm whether the theoretical dimensions came out as conceptualised. Expert opinion on content validity was also used by Bagire (2012) and Awino (2007). The study applied content, construct and discriminant validity tests. Further, to check and improve on content and face validity, the questionnaire was pilot tested. The questionnaire was administered to 81 respondents selected from the population of interest.

The factor analysis was done basing on the criteria of the Keiser, Meyer and Ohlin (KMO) above 0.7; while Bartlett's test is significant at eigen values greater than 1. To ascertain validity the questionnaires were tested on 81 respondents. The constructs of the variables (CCB, firm responses, service quality and customer loyalty) were subjected to Kaiser-Meyer Olkin (KMO) and Bartlett's test extraction using Principal Component analysis by varimax rotation and Kaiser normalisation. KMO measure of sampling adequacy should be greater than 0.05 for satisfactory factor analysis to proceed. Further, Bartlett's test of sphericity suggests that the population correlation matrix is not an identity if the chi-square statistic for a variable is significant at 0.05.

In the current study, the KMO scores exceeded .660 while the Bartlett's test of sphericity scores for all the variables were statistically significant at .000 confirming construct validity.

3.8 Operationalization of Variables

The operationalisation of study variables was based on a detailed review of literature and previous studies. The variables under the study included an independent variable as customer complaint behaviour; the dependent variable as customer loyalty; the moderator variable as firm responses and the intervening variable as service quality. The indicators of customer loyalty were word of mouth and customer retention; the indicators for service quality were tangibility, assurance, reliability, responsiveness, empathy, network quality and service convenience; the indicators for firm responses were employee behaviour, compensation and firm procedures; the indicators for customer complaint behaviour were voice, redress, exit and commitment.

The measurements of study variables were generated from the literature. The moderating variable firm responses was measured basing on measures proposed by Davidows (2003) of compensation, employee behaviour and firm procedures. Basing on the mediating variable, service quality was measured using Parasuraman's 1988 SERVQUAL model which was improved basing on literature review. The dimension of the variable included reliability, assurance, tangibility, empathy, responsiveness to which service convenience and network quality were added. In addition, the dependent variable was measured basing on the dimensions of WOM and customer retention. This is contained in Table 3.3.

Table 3.3: Summary of Operationalisation of Variables

Variable	**Nature**	**Indicator**	**Specific measure**	**Scale**	**Question**
Independent Variable	Customer Complaint Behaviour	-Voice -Redress -Exit -Commitment	Five point rating scale 1-Not at all 2-To a small extent 3-To a moderate extent 4-To a large extent 5-To a very large extent	Interval	Section B
Moderating Variable	Firm Responses	-Compensation -Firm procedures -Employee Behaviour	1-Not at all 2-To a small extent 3-To a moderate extent 4-To a large extent 5-To a very large extent	Interval	Section E
Intervening/ mediating Variable	Service quality	Assurance -Tangibility -Reliability -Empathy -Response -Network Quality -Convenience	1-Not at all 2-To a small extent 3-To a moderate extent 4-To a large extent 5-To a very large extent	Interval	Section C
Dependent Variable	Customer Loyalty	-WOM -Customer Retention	1-Not at all 2-To a small extent 3-To a moderate extent 4-To a large extent 5-To a very large extent	Interval	Section D

Source: Current Researcher

In line with studies conducted by Kinoti (2012) and Njeru (2013) on measurements, a five point rating scale was used ranging from "not at all" (1) to a "very large extent" (5).

This was adopted for all the study scales of the questionnaire. The scale was found to be appropriate since it gave the respondent alternatives in making a choice. Section A elicited data on demographic characteristics. Even when some scales like service quality had been tested before and used in other studies and found to be valid and reliable, they were further tested for reliability and validity to prove their suitability and applicability in the Ugandan situation. Data was cleaned and analysed using SPSS version 19.

3.9 Data Analysis

Data analysis was preceeded with cleaning, editing and coding, then followed by analysis and reporting. The Statistical Programme for Social Sciences (SPSS) version 19 was used to analyse the data using both descriptive and inferential statistics. Assumptions of data parametric tests included normality of distribution of data, linearity of data, homogeneity of variance and multicolinearity was done to assess whether the assumptions of parametric data were tenable. Parametric tests were conducted to establish if the sample satisfied the assumption of parametric data.

Assumption one was that the dependent variable was measured on a continuous scale. The dependent variable of the study was customer loyalty. With reference to the questionnaire (Appendix Two, part D), it indicates that the variable customer loyalty was measured using an interval scale where 1=not at all, 2=to a small extent, 3=to a moderate extent, 4=to a large extent and 5=to a very large extent. Therefore, the first assumption of linear regression was met.

In the second assumption, it states that the two or more independent variables are continuous or categorical. The independent variables in this study were customer complaint behaviour (CCB) with four dimensions of redress, voice, exit and commitment. The moderator variable was firm responses with three dimensions of compensation, employee behaviour and firm procedures. The mediator variable was service quality with seven dimensions of reliability, responsiveness, tangibility, assurance, empathy, network quality and service convenience. All these (independent, moderator and mediator variables) were measured on a five rated scale where 1=not at all, 2=to a small extent,

3=to a moderate extent, 4=to a large extent and 5=to a very large extent. Therefore, the second assumption of linear regression was met.

Assumption three was on linearity. This was tested using scatter plots (Appendix 3) by examining the relationships between the dependent variable (customer loyalty) and independent variable (customer complaint behaviour). The results established that the assumption of linearity was not violated. The scatter plots came out like a random array of dots evenly dispersed around the line, and that there was no clear trend in the distribution, and therefore the assumption of linearity was met.

Assumption four was on normality. Analysis for normality was done because it exhibits problems of multicollinearlity, heteroscedasticity and other forms of non-normality that would otherwise affect the accuracy of the results. Normal distribution was tested using histograms with a superimposed normal curve to test the data set for normality (Appendix 4). The standardized residuals showed a normal distribution curve. The data points were very close on the line of best fit, therefore signifying a fairly normal distribution for all constructs of CCB, firm responses, service quality and customer loyalty thus fulfilling the assumption of normality of parametric tests. Skewness and Kurtosis was another statistical test for normality in which all the measures were within the acceptable cut off points, with <3 for skewness, <10 for Kurtosis (Kline, 2005). By use of Skewness and Kurtosis, the data was fairly normally distributed because basing on the rule of thumb; a variable is reasonably close to normal if its skewness and kurtosis have value between -1.0 and +1.0. From this study, statistics for customer complaint behaviour, firm responses, service quality and customer loyalty, Kurtosis statistics lie between -1.08 and 0; and for Skewness lies between -.074 to .201 (Appendix 5).

The fifth assumption was on homogeneity of variance. Homogeneity refers to the quality of coming from the same origin (Hair et al., 2006). This was tested both statistically and graphically. Graphically, the scatter plot test was used to test for homogeneity by exploring the relationship between the variables and to establish whether the variables were related in a linear straight line or in a curvelinear fashion (Appendix 3). Field (2006) asserted that when dots in a scatter plot follow a funnel shaped curve or are in a

curve-linear pattern, then there is a likelihood of heteroscandasticity in the data and residual errors are not random. From the results in the study, data points were evenly dispersed, confirming that the assumptions of homogeneity and linearity had been met. Field (2006) adds that basing on parametric test of homogeneity of variance, the levene statistics is non-significant when p>0.05, then the data is homogeneous as suggested by Levene's test measures (whether or not the variance between the dependent and independent variables is the same). In the study, the significance levels are between 0.122 to 0.781 (Appendix 6). In addition, the test for linearity was done using normal P-P plots. The P-P plot was a straight line where the dots were scattered along the line, indicating linearity (Appendix 7).

The sixth assumption was on multicollinearity. Multicolinearlity occurs when the association between the independent variables is so high that their individual prediction of the variation in the dependent variable is affected. This means that any single independent variable is highly correlated with a set of other independent variables where r is greater or equal to .70. When there is high correlation, it becomes difficult to establish which independent variable contributes to the variance explained in the dependent variable. Tests were therefore run to establish multi-collinarity because such can affect the accuracy of the results. The tests for multicollinearity used in this study were the Torelance and Variance Inflation Factor (VIF) and Pearson Correlation Coefficient that were two collinearity diagonistic factors that could help identify multicollinearity. Tabachnick and Fidell (2007) suggests that if the tolerance value is very small (less than 0.10), this indicates that the multiple correlation with other variables was high, suggesting the possibility of multicollinearity. The tolerance values were not less than 0.1 (Appendix 9) and therefore, the data set did not violate the multicollinearity based on tolerance. The results for Pearson Correlation Coefficient are indicated in (Appendix 14) in are correlated positively but not highly correlated indicating no multicollinearity since they were are less than 0.700**.

Basing on VIF, the test provides a measure of how much the variance for a given regression coefficient is increased, compared to if all the predictors were uncorrelated (Denis, 2011). This means that the extent to which a given predictor is highly correlated

with the remaining predictors is the extent to which the VIF will be large. In this study, a regression of the independent variable (CCB) on customer loyalty indicate that the VIF values were less than three (3) and all the tolerance values were between .400 and .600 (Appendix 11). This means that the independent variables were not highly correlated to customer loyalty and therefore, the date set had no problem of multicollinearity.

The last assumption of independence errors or possibility of having serial correlations between errors was checked by carrying out Durbin and Watson tests in a regression model (Field, 2006; Durbin & Watson, 1951). Basing on the rule of thumb of Durbin et al. (1951), a test statistic below 1 and above 3 indicates that there are serial correlations of errors which bias the results. However, basing on Field (2006), the Durbin statistic from the regression model indicated 1.109 which is within the range between 1 and 3, which indicates that the assumption of the independence of errors was tenable (Appendix 10). The histograms, probability plots and Q-Q plots for all study variables showed most of the points on and very close to the line of best fit which signified a fairly normal distribution of data.

In addition, a principal component analysis was run to identify patterns in data and to establish the similarities and differences in the data. Further, Pearson product moment correlation coefficient was used to measure the strength of linear association between two variables, like the relationship between CCB and service quality. The data set items were consequently reduced to a manageable level by putting them into clusters, yet retaining as much of the original information as possible. The principal component analysis was appropriate because it was conceptually less complex and was able to establish linear components in a data set (Field, 2006). The researcher used varimax rotation method because of its ability to maximize the dispersion of loadings within factors. The factor analysis revealed moderate to high commonalities of 0.50 to 0.90 with cross loadings. The commonalities for a variable which were less than 50% were excluded from the analysis because the factor solution contained less than half of the variance in the original variable and the explanatory power of the variable was improved when items with low loadings were eliminated. In case of cross loading, the lower loading was eliminated in order to improve on discriminant validity index.

Principal Component Analysis was used to extract a set of factors. These factors were related to come up with a final solution using varimax which produces uncorrelated factors. The constructs explaining the particular variables were extracted. The minimum factor loading was +/-0.05 and eigen values greater than 1. The factors were interpreted and named by studying the list of questionnaire items and understanding what the loaded question items had in common, while bearing in mind the questions with the highest correlation coefficients under each factor. The decision to retain, eliminate or modify some of the items was based on theoretical fit and factor loading ground. On the basis of factor analysis (on the five item scale) four dimensions were identified for CCB as redress, voice, exit and commitment. For firm responses, three dimensions were identified which included compensation, employee behaviour and firm procedures. Service quality had seven dimensions namely: reliability, assurance, tangibility, empathy, responsiveness, network quality and service convenience. Finally, customer loyalty had two dimensions identified which were word of mouth and customer retention.

With regard to factor analysis, the researcher determined the factors to retain basing on Kaiser (1974). The sampling adequacies were got using Kaiser-Meyer-Olkin criteria where Barttelt's test had eigen values greater than 1 and therefore retained factors with eigen values greater than 1. The criterion on which the researcher determined the factors to retain was based on the idea that the eigen values represent the amount of variation explained by a factor and an eigen value of 1 represents a substantial amount of variation. Using Kaiser's criterion, the first 7 components for service quality had eigen values greater than 1, and accounted for 80.674% of the variations; firm responses with three components accounted for 77.965%, customer complaint behaviour with four components accounted for 73.553%, customer loyalty with two components accounted for 71.776% of the variations. The extract of the combined data of total variance explained is in Table. 3.4.

Table 3.4: Total Variance Explained by the Combined Data

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
SQ	1.055	15.070	80.674	1.055	15.070	80.674
FR	1.131	4.189	77.965	1.131	4.189	77.965
CCB	1.671	9.283	73.553	1.671	9.283	73.553
CL	1.621	23.163	71.776	1.621	23.163	71.776

Source: Primary Data

SQ = Service Quality; **FR** = Firm Responses; **CCB** = Customer Complaint Behaviour; **CL** = Customer Loyalty

Basing on the study sample size of 384, the factor loading of 0.60 and above was considered appropriate for the study. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.66 and the determinant of the R-matrix of greater than 0.0001 were taken as cut-off points in the study, and it was used to check for multicolinearity or singularity challenge (Field, 2006). KMO of greater than 0.65 ensured that the factor analysis yielded fairly diverse and reliable factors (Kaiser, 1974). Since the generated determinants of R-matrix figures in this study are all above 0.0001, it is an indicator that the multicollinearity challenge is non-existent among the predictor variables. After the factor analyses were conducted (Appendix i), the extracted factors were used in the tests of correlation, mediation, moderation and regression models.

3.10 Mathematical models

Data were analyzed using both descriptive statistics (mean and measures of dispersion) and inferential statistics (correlation, analysis of variance and regression analysis). Descriptive analysis was conducted to present the main characteristics of the sample. To test the hypotheses, correlation and regression analyses were computed to determine the expected relationships between CCB, firm responses, service quality and customer loyalty.

Using mathematical models, the regression analyses provided estimate equations to predict the magnitude of the dependent variable and provide values for the

predictor variables. Pearson Moment Correlation (r) was derived to show the nature and strength of the relationship among study variables. Coefficient of determination (R^2) was used to measure the amount of variation between the study variables.

The general formula for predicting customer loyalty was presented by the model:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots\ldots\ldots \beta_n X_n + \varepsilon_1;$

where Y is the dependent variable and is a linear function of $X_1, X_2, X_3, \ldots\ldots X_n$ plus ε_1;

α is the regression constant or intercept.

β_{1-n} are the regression coefficients or change induced in Y;

ε_1 is the error term that accounts for the variability in Y which cannot be explained by the linear effects of the independent variables.

The estimate model for the mobile telephone company, customer loyalty was expressed as: **$CL = \alpha + \beta_1 CCB + \beta_2 FR + \beta_3 SQ + \varepsilon_1;$**

β_{1-3} is the regression coefficients; CL is customer loyalty, the dependent variable.

Customer complaint behaviour represents the composite score of mobile telephone companies where customer complaint behaviour is the independent variable; the mediating variable is service quality while the moderating variable is firm responses, ε_1 is the random error term that accounts for variability of customer loyalty in MTCs which cannot be explained by the linear effects of the independent variables. Customer loyalty is the estimated composite index as a dependent variable and finally α is a regression constant.

To test the moderating effect of firm responses on the relationship between customer complaint behaviour and customer loyalty, a hierarchical multiple regression analysis was used. This regression was preferred because it allowed for assessment of what one or a combination of independent variables added to the prediction of the dependent variable while controlling for the previous ones. Once all the independent variables were entered, the overall model was evaluated basing on its ability to predict customer loyalty. The test was done in two steps.

In the first step, the independent variables (customer complaint behaviour and firm responses) was entered into the model as a predictor of the outcome variable (customer loyalty). The independent variables do not have to be statistically significant predictors of the dependent variable (customer loyalty) in order to test for an interaction term (Baron & Kenny, 1986). In the second step, an interaction term (the product of the two independent variables) was computed. An interaction term presents a joint relationship between customer complaint behaviour and firm responses and this accounts for additional variance in the dependent variable beyond that explained by either customer complaint behaviour or firm responses. The moderator effect is present if the interaction term explains a statistically significant amount of variance in the dependent variable. The single regression equation was presented:

$$Y = \alpha + \beta_1 X + \beta_2 Z + \beta_3 XZ + \varepsilon_1$$

Where α is the regression constant or intercept;
X = customer complaint behaviour; Z = firm responses
B_1 is the coefficient relating to the independent variable X (CCB) to the outcome; Y (customer loyalty), where Z (F) =0. XZ is the product of CCB and firm responses and ε_1 is the error term. The regression coefficient for the interaction term B_3, provides an effect of the moderation effect. If β_3 is statistically different from zero, there is a significant moderation on the X (CCB) and Y (customer loyalty) relationship.

To examine the mediating effect, Baron and Kenny's (1986) four step procedure was used. Several regression analyses were conducted and the significance of coefficients examined in each step. In the first step, a simple regression analysis with the independent variable (CCB) predicting the dependent variable (customer loyalty) was carried out. In the second equation, a simple regression analysis with the independent variable (CCB) predicting the intervening variable (service quality) was carried out. In the third equation, a simple regression analysis was carried out with the intervening variable (SQ) predicting the dependent variable (customer loyalty) and finally, a multiple regression analysis with the independent variable (CCB) and SQ predicting the dependent variable customer loyalty was carried out.

The purpose of steps one to three was to establish if zero-order relationships among the variables existed and if they were statistically significant, proceed to step four. If CCB was no longer significant when service quality is controlled, the findings would support full mediation. If CCB was still significant, that is, both customer complaint behaviour and service quality significantly predict customer loyalty; the findings would support partial mediation. Figure 3.1 presents the graphical representation of the mediating effect:

Figure 3.1: Mediating Effect of Service Quality on the Relationship between CCB and Customer Loyalty.

Part 1: Overall Direct Effect

CCB ———————————————————— CL
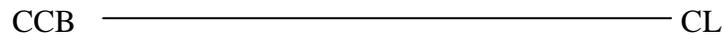
Part 2: Path Diagram of mediation effect of Service Quality

SQ

Path a   Path b

CCB   CL
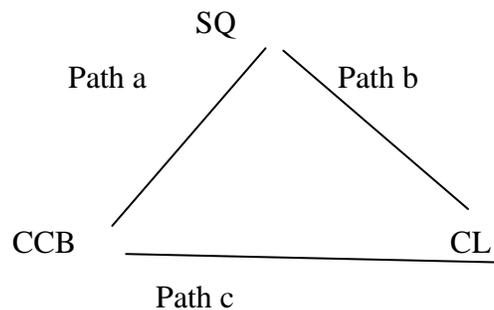
Path c

Source: Adopted from Baron and Kenny (1986)

As illustrated in Figure 3.1, testing for mediation involves establishing four conditions by determining path *c*, customer complaint behaviour (independent variable) is significantly related to the dependent variable (customer loyalty); path *a* shows that customer complaint behaviour is significantly related to service quality (mediating variable), and when service quality is not associated with customer complaint behaviour and they do not mediate customer complaint behaviour and customer loyalty relationship; path *b*, service quality is significantly related to customer loyalty and finally when controlling for the effects of the service quality on customer loyalty, the effect of customer

complaint behaviour on customer loyalty is no longer significant (path c') (Baron & Kenny, 1986). Only path "*a*" (the independent variable is correlated with the mediator) and path "*b*" (the mediator affects the dependent variable) are necessary conditions for establishing a mediation effect. A summary of the analytical models is depicted in Table 3.5.

Table 3.5: Regression Model

Objectives	Hypotheses	Analytical Model	Interpretation
Objective 1 Investigate the relationship between customer complaint behaviour and customer loyalty.	H_1: There is a relationship between CCB and Customer Loyalty of mobile telephone subscribers in Makerere University.	Multivariate Regression Analysis Customer Loyalty = f(customer complaint behaviour) $CL = α + β_1 X_1 + ε1$ Where CL = Customer Loyalty, $β_1$ = Coefficient of determination; α = a constant; X_1 = Customer Complaint Behaviour; ε1 = error term.	Coefficient of determination (R^2) value will determine the percentage of customer loyalty explained by CCB. R^2 to assess how much of the dependent variable's variation is due to its relationship with the independent Variable.
Objective 2 Assess the relationship between firm responses and customer loyalty	H_2: There is a relationship between firm responses and customer loyalty.	Pearson correlation coefficient Customer loyalty =f(firm responses); $CL = α + β2_1 X_2 + ε1;$ X_2 =Firm Responses B_2 =Coefficient of determination; CL= Customer Loyalty ε1 = error term	Coefficient of determination (R^2) value will determine the percentage of CL explained by firm responses. • An F test to assess overall robustness & significance of the simple regression model.
Objective 3 Examine the relationship between customer complaint behaviour and service quality.	H_3: There is a relationship between CCB and service quality.	Pearson correlation coefficient SQ = f(customer complaint behaviour); $SQ = α + β_3 X_1 + ε1;$ SQ= Service quality B_3 =Coefficient of determination; X_1 = Customer Complaint Behaviour.	-Coefficient of determination (R^2) value will determine the percentage of SQ explained CCB. • Conduct t test to determine individual Significance of the relationship.
Objective 4 Establish the relationship between Service Quality	H_4: There is a relationship between service quality and customer loyalty.	Pearson correlation coefficient Customer loyalty = f(service quality) $CL = α + β_3 X_x + ε1$	Coefficient of determination R^2 value will determine percentage of CL determined by SQ. • Conduct t test to

(SQ) and customer loyalty.		B_4 = Coefficient of determination X_3 = Service quality	determine individual significance of the relationship
Objective 5 Investigate the influence of firm responses on the relationship between CCB and CL	H_5: Firm responses influence the relationship between Customer Complaint Behaviour and Customer Loyalty.	Customer Loyalty = f(firm responses + CCB) **CL = α +$β_1X_1$ + $β_2X_2$ + $β_3 X_1X_2$ + $ε_1$** X_1=Customer complaint behaviour; X_2= Firm Responses B_2=Coefficient of determination X_1X_2= Interaction Term	Coefficient of determination (R^2) value will determine the percentage of Customer Loyalty explained by Service Quality and firm responses.
Objective 6 Establish whether the relationship between customer CCB and customer loyalty is mediated by service quality.	H_6: The relationship between CCB and customer loyalty is mediated by service quality.	Customer Loyalty = f(customer complaint behaviour + service quality) **CL = α +$β_1X_1$ +$β_3 X_3$ +ε1** X_1=Customer complaint behaviour; X_3= Service Quality B_3=Coefficient of Determination	R^2 value will determine the percentage of CL determined by mediation of SQ on CCB and customer loyalty. -Conduct T-test, are useful in comparing three or more variables) for statistical significance.
Objective 7 To examine the joint effect of CCB, firm responses and service quality on Customer Loyalty (CL).	H_7: (a) The joint effect of CCB, SQ & firm responses and customer loyalty is statistically significant.	Customer Loyalty = f (customer complaint behaviour + service quality+ firm responses). **CL= α +$β_1X_1$ +$β_2X_2$ +$β_3X_3$ +ε1;** CL=Customer Loyalty;	R^2 value will determine the percentage of customer retention is determined by a joint effect of service quality, firm responses and CCB. -Conduct T-test. -are useful in comparing variables for statistical significance.

Source: Primary Data

Where CL refers to customer loyalty (dependent variable); α is a constant,

$β_1$, - $β_2$ are coefficients of determination;

X_1 =customer complaint behaviour;

X_2 = firm Responses;

X_3 = Service Quality;

$ε_1$ = Error term.

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Summary of the Chapter

A quantitative study was done to reduce (categorize, order and summarise) data to an intelligible and interpretable form so that the relations of research problems can be studied, tested and conclusions drawn. For the purpose of the study, descriptive statistics was used to make specific observations and interpretations of data by presenting it into a manageable form. The study was based on objectives and hypotheses from the review of literature on the variables of CCB, firm responses, service quality and customer loyalty. The chapter describes the research philosophy, research design, target population, data collection, operationalisation of the study variables and data analysis. Then correlations, analysis of variance, simple and multiple regression was described to derive predictive power for each of the variables to the variations and how they impact on customer loyalty as dependent variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1   Introduction

The current chapter presents the outcome of data analysis and findings done in line with the objectives of the study. Data was analysed using SPSS version 19, using both descriptive and inferential statistics. Tests of assumptions of parametric data were conducted and the results were within the limits and therefore further statistical tests could be conducted. Correlations were conducted between study variables, then seven hypotheses of the study were tested using simple and multiple regressions.

4.2   Response Rate and Data Screening

The study responses were obtained from 336 mobile telephone subscribers which constituted 88% of the sample size. This response rate was good basing on what is conventionally acceptable for surveys. This means that the results can be generalized and considered representative of the population. In other doctoral studies, Bagire (2012) had a response rate of 66% of the sample. The average response rate is 65% (Awino, 2007). Data screening was done to ensure that it was useful, reliable and valid for testing the relationships between study variables. This was done through checks for consistency and completeness before coding and posting in SPSS.

Preliminary checks were carried out to test for reliability of the survey instrument and statistical assumptions on variables aggregate mean scores before the data were used for further statistical analyses. The assumptions tested were linearity, normality, homogeneity and multicollinearity necessary for further statistical tests (linear regression, analysis of variance and multiple regression) as suggested by Hair et al. (1998). Testing for these assumptions was necessary because the validity of the conclusions drawn from a statistical analysis depends on the validity of the assumptions made.

Reliability test to check for internal consistency of the survey constructs was done by computing Cronbach's Alpha Coefficients. The coefficients exceeded the .700 which was the cut off point for reliability of an instrument (Nunnally, 1970; Gliem & Gliem, 2003)

indicating sufficient internal consistency and hence adequately measuring the survey constructs for CCB, firm responses, service quality and customer loyalty.

4.3   Internal Consistency of the Instrument

The study sought to establish the internal consistency of the instrument to establish the reliability of the relevant study variables. Cronbach's alpha coefficient was computed. The results are summarised in Table 4.1.

Table 4.1: Summary of Cronbach's Alpha Reliability Coefficients

Variable	Components of Variable	Cronbach's Alpha Coefficient	Number of Items
Customer Complaint Behaviour	Redress Voice Exit Commitment	.740	20
Service Quality	Reliability Assurance Empathy Tangibility Network quality Responsiveness Service convenience	.936	44
Customer Loyalty	Word of mouth Customer retention	.787	17
Firm Responses	Compensation Employee behaviour Firm procedures	.860	19

Source: Primary Data

Table 4.1 results reveal that service quality had the highest Cronbach's Alpha coefficient (.936) and the lowest Cronabch's Alpha which was still satisfactory for CCB (.740). Scholars have used different Cronbach's Alpha coefficient cut off points (Hair et al., 1998), but reliability in this study exceeded 0.70 cut off point and it was therefore considered acceptable for further analysis (Nunnally, 1970).

Analyses for normality tests were done based on graphical presentations of descriptive statistics, skewness, kurtosis, and Kolomogrove-Smirnov tests. The Kolmogorov-Smirnov test has power to detect departure from normality due to either skewness or kurtosis or both. For Skewness, statistics for CCB, firm responses, service quality and

customer loyalty were fairly normally distributed. Further, normality tests were run using histograms which were fairly normally distributed (Appendix 4).

Linearity was tested by use of analysis of variance (ANOVA) test of linearity which computes both the linear and nonlinear components of a pair of variables whereby nonlinearity is significant if the F significance value for the nonlinear component is below 0.05 (Zhang et al., 2011). All the computed readings were above 0.05 confirming linear relationships (constant   slope)   between   the   predictor   variables   and   the dependent variable. Further, independence of error terms, which implies that observations are independent, was assessed through the Durbin-Watson (D-W) test whose statistic ranges from zero to four. Garson (2012) asserts that scores between 1.5 and 2.5 indicate independent observations. In the current study the test results ranged between 1.98 and 2.02 supporting independence of error terms.

Homogeneity of variance refers to the assumption that the dependent variable exhibits similar amounts of variance across the ranges of values for an independent variable (Hair et al., 2003). Homogeneity of variance was tested by use of Levine's test (1960) for equality of variance using one way ANOVAs procedure. According to Gastwirth et al. (2009), when the Levene statistic is significant at $\alpha= 0.05$, then the data groups lack equal variances. Levene's test therefore measures whether the variance between the dependent and independent variables is the same or not. The test results of the study indicated that Levene's statistics were more than the significance level of 0.01, meaning that the variances were equal (Appendix 7).

 Multicollinearity refers to a linear correlation among study variables and was tested by using SPSS to compute the Variance Inflation Factor (VIF) by examining the correlation coefficients among study variables. In case of multicollinearity, the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. The multicollinearity assumption has a VIF threshold value of 10 maximum (Robinson & Schumacker, 2009). In the current study, the VIF was between one and two way below the threshold therefore implying that there was no multicollinearity.

The threshold levels for the respective test statistics are listed below each assumption. For multicollinearity the variance inflation factor (VIF) values are listed. The assumptions of regression were tested and their results together with those of the test for reliability are summarized in Table 4.2.

Table 4.2: Results of Tests of Statistical Assumptions

Variable	Measure	Sample Size	Reliability	Normality	Linearity	Independence Durbin/Watson	Homogeneity/ Levene's test	Collinearity
	Assumptions		0.6 Min	p>0.05	p>0.05	1.5 to 2.5	p>0.05	VIF 10 max
Customer Complaint Behaviour	Exit, voice, redress and commitment	336	.740	.200	.038	1.987	.945	1.395
Firm Response	Importance attached to: compensation of customer, firm procedures and employee behaviour regarding credibility and customer service	336	.860	.200	.000	1.987	.512	1.944
Service Quality	Service reliability, responsiveness, assurance, tangibility, empathic staff	336	.936	.200	.000	1.987	.349	1.967
Customer Loyalty	Word of mouth and making rebuy decisions	336	.784	.200	N/A	N/A	N/A	N/A

Source: Primary Data
CCB = Customer Complaint Behaviour

Table 4.2 shows the results of parametric tests where the assumptions of regression were met and subsequently the data were subjected to further statistical analysis including tests of hypotheses.

4.4 Demographic Profile of Respondents

The demographic factors of the respondents were an important measure to try to understand the issues about customer complaint behaviour of the individual subscribers. Relevant results for gender, age bracket, education level and marital status of the respondents are presented. The age of the respondent was an important measure to try to understand the issues about CCB of the individual subscribers. The relevant results for age, gender, marital status and level of education are presented in Table 4.3.

Table 4.3: Demographic Profile of Respondents

Profile of Respondent		Frequency	Percent
Gender	Male	186	55.4
	Female	150	44.6
Age	20-24 years	127	38.8
	25-29	63	18.8
	30-34	72	21.4
	35-39	30	8.9
	40 and above	44	13.1
Marital Status	Single	216	64.3
	Married	120	35.7
Level of Education	Certificate	20	6.0
	Diploma	36	10.7
	Undergraduate	164	48.8
	Masters	99	29.5
	PhD	17	5.1
	Total	**336**	**100**

Source: Primary Data

As shown in Table 4.3, more than half (57%) subscribers to the mobile telephone companies of Makerere University were between 20 and 29 years of age. The lowest response was within the age bracket of 35 and above with 22%. All respondents were twenty and above years of age, which implies that the respondents were mature. Further, the respondents had sufficient knowledge about the operations and services of MTCs and therefore the responses of the subscribers are considered to be adequate.

With respect to gender 55.4% were males and 44.6 were females. These results supported the findings of Manikas and Shea (1997) who concluded that male customers complained more than their female counterparts. In other surveys, Heung and Lam (2003); Kau and Loh (2006) contradicted the findings that majority of female complainers were more likely to voice their complaints than their male counterparts. In terms of marital status, the study results revealed that nearly two thirds of the respondents (64.3%) were single. In a nutshell, the study is consistent with the existing literature where customer complainers have been empirically established as being young with higher than average income and education (Heung & Lam, 2003).

4.4.1 Gender and Level of Education

The respondents were required to indicate their highest level of education. This was expected to show whether the respondents were competent to give credible responses about customer complaint behavior in the mobile telephone companies. The pertinent results showed that nearly half of the respondents (48.8%) had undergraduate level of education. The mobile telephone subscribers surveyed were therefore people with different levels of education from the certificate up to the PhD level. This gives confidence that the understanding of the variables of the study were not biased to any single level of education. Further, majority of the respondents were highly qualified and competent enough to provide accurate responses. Kau and Loh, (2006) and Komunda and Osarenkhoe, (2012) assert that customers with a higher level of education were more likely to complain, with the explanation that better educated customers may be more knowledgeable about their rights as consumers, and the method of seeking redress. This has however been disputed by some authors who argue that the elderly, poor and individuals with low education do not necessarily react more passively to perceived dissatisfaction (Day & Landon, 1977). It should be noted that the findings have been fairly consistent with age, income, education and profession as credible determinants of consumer propensity to complain (Heung & Lam, 2003).

 The gender comparison in terms of male and female in respect to education level attained is shown in Table 4.4.

Table 4.4: Gender and Level of Education

Gender	n	Certificate	Diploma	Under-graduate	Masters	PhD	Total (%)
				Level of Education			
Male	186	3.3	5.1	29.2	15.8	2.1	55.4
Female	150	2.7	5.7	19.6	13.7	3.0	44.6
Total	336	6.9	10.7	48.8	29.5	5.1	100.0

Source: Primary Data

Table 4.4 indicates that at undergraduate and master's levels, males are at a higher education level than females. On post graduate level of education, only 17.9% males compared to 16.7% indicating a minor difference between the two gender categories.

4.4.2 Designation and Income

The type of the respondents were categorised as student, academic staff, administrative staff and support staff. Table 4.5 summarizes the different roles of the respondents and income/allowance received in Uganda shillings per month.

Table 4.5: Type of the Respondent and Monthly Income/Allowance

Category	N	Below 0.2m (%)	0.2m-0.7m (%)	0.8m-1.3m (%)	1.4m-1.9m (%)	Above 1.9m (%)	Total (%)
		Personal Monthly income/Allowance					
Student	116	12.1	14.3	3.1	4.4	2.2	36.1
Academic	87	.9	2.2	5.0	5.6	13.4	27.1
Administrative	80	.6	3.7	5.0	9.7	5.9	24.9
Support	38	.6	5.3	4.0	1.6	.3	11.8
Total	**321**	**14.3**	**25.5**	**17.1**	**21.2**	**21.8**	**100.0**

Source: Primary Data

Table 4.5 shows that, as expected, majority of respondents were students (36.1%) while the minority were the support staff (11.8%). More than half of the respondents (56.9%) earned less than Ush 1.4 million per month. Some 21.2% of the respondents earned between 1.4m and 1.9 million while 21.8% said they earned above Ush. 1.9 million Per month.

4.4.3 Subscribers College/School

The respondents were asked to indicate their college/school and the pertinent results are shown in Table 4.6

Table 4.6: Name of College or School and Level of Education

College/ school of subscriber	n	Certificate	Diploma	Under-graduate	Masters	PhD	Total (%)
		Level of Education					
MUBS	59	1.8	3.0	8.9	3.9	.0	17.6
COCIS	71	1.5	2.4	11.9	4.5	.9	21.1
COBMS	45	.9	.6	4.5	6.5	.9	13.4
CEDAT	49	.9	.9	9.5	3.3	.0	14.6
CEES	35	.3	.9	3.3	5.1	.9	10.4
CHS	37	.3	1.8	6.5	1.5	.9	11.0
CHSS	32	0	1.2	2.4	4.2	1.5	9.5
CNS	8	.0	.0	1.8	.6	.0	2.4
Total	**336**	**6.0**	**10.7**	**48.8**	**29.5**	**5.1**	**100%**

Source: Primary Data

Legend:

MUBS = Makerere University Business School

COCIS = College of Computing and Information Science

COBMS = College of Business and Management Science

CEDAT = College of Engineering, Design, Art and Technology

CEES = College of Education and external studies

CHS = College of Health Science;

CHSS = College of Humanities and Social Sciences

CNS = College of Natural Sciences

From Table 4.6, it is discernible that the College of Computing and Information Science respondents constituted 21.1%. This was followed by Makerere University Business School respondents with 17.6%. College of Natural Sciences had a mere 2.4% of the respondents. Majority of respondents were at undergraduate level with slightly less than 50% and minority at PhD level with a mere 5.1%. Since the different colleges and schools of Makerere University are represented as respondents, this gives a wide diversity of perceptions from respondents.

4.4.4   Demographics across Mobile Telephone Companies

The respondents were asked to state the mobile telephone company they were currently connected to some mobile telephone subscribers were connected to more than one mobile telephone company. The relevant results are depicted in Figure 4.1.

Figure 4.1: Distribution of subscribers by Mobile Telephone Companies

Mobile Telephone Company	No of Subscribers	Percentage
MTN	800	55.1%
Airtel	550	32.4
UTL	120	3.9
Orange	60	3.6
		100%

Source: Primary Data

MTN= Mobile Telephone Network, UTL = Uganda Telecom Ltd

The results in Figure 4.1 show that a majority of subscribers (55.1%) were connected to MTN, followed by Airtel with 32.4% and mere 3.6% subscribers to Orange Uganda. The study provides the Mobile Telephone Company connected to with majority of subscribers connected to Mobile Telecom Network (MTN) in Uganda.

4.5   Mean Scores of Study Variables

Mean scores and standard errors were computed in order to summarise the observed data. Field (2006) states that mean scores represent a summary of the data whereas standard error is the estimate of the standard deviation of the sampling distribution. Descriptive statistics were run to establish whether the mean scores satisfied the goodness of fit criteria (Saunders et al., 2007). The relevant results are presented here below.

4.5.1 Assessment of Customer Complaint Behaviour

When customers encounter service dissatisfaction, they act in different ways. In the current study, the dimensions of customer complaint behaviour were redress, voice, exit and commitment. Customer complaint behaviour variable was measured using a scale where 1= not at all, 2= to a small extent, 3= to a moderate extent, 4= to a large extent, and 5 to a very large extent. The relevant responses on redress, voice, exit and commitment are summarized in Tables 4.7 to 4.10.

Table 4.7:   Respondents' Perceptions on Redress

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Discuss the problem with staff of the MTC.	336	2.78	1.26	45.3%
Ask the Company to take care of the problem.	336	2.71	1.10	40.6%
Inform the Company to improve its services.	336	2.62	1.32	50.4%
I seek for an explanation from the MTC.	336	2.61	1.17	44.8%
Overall Mean Score	**336**	**2.62**	**1.21**	**46.1%**

Source: Primary Data

The coefficient of variation expresses the standard deviation as a percentage of what is being measured relative to the sample or population mean.

As shown in Table 4.7, the overall mean score for redress was 2.62, meaning that the perceptions of respondents on redress are 'to a moderate extent', varied by 46.1% from the mean score. The highest coefficient of variation of 50.4% implied that perceptions

of subscribers to mobile telephone operators informing MTS about their services varied by 50.4%. The lowest coefficient of variation of 40.6% was that perceptions of subscribers varied by 40.6% from the mean, meaning that subscribers ask the company to take care of the problem. This implies that to a moderate extent, dissatisfied customers seek for an explanation from the mobile telephone companies.

The respondents' perceptions on voice are summarised in Table 4.8.

Table 4.8: Respondents' Perceptions on Voice

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
When disappointed, I speak to my friends about my bad experience	336	3.16	1.29	40.8%
I complain when the MTC is the source of disappointment.	336	2.84	1.36	47.8%
I may warn other people to stop using Company services.	336	2.54	1.38	54.3%
When disappointed, I would rather complain than defect.	336	2.52	1.29	51.1%
Overall Mean Score	**336**	**2.72**	**1.33**	**48.8%**

Source: Primary Data

Table 4.8 shows that the overall mean score for voice was 2.72, meaning that the perceptions of respondents on voice were "to a moderate extent", with the coefficient of variation=48.8%, that perceptions of mobile telephone subscribers varied by 48.8% from the mean score. The highest coefficient of variation (CV) of 54.3% indicates that perceptions varied by 54.3% implying that subscribers warn other people to stop using company services. The lowest coefficient of variation of 40.8% means that dissatisfied subscribers prefer to complain rather than defect.

The respondents' perceptions on exit are summarised in Table 4.9.

Table 4.9:   Respondents' Perceptions on Exit

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
I stop subscribing to the MTC when other Companies give affordable prices.	336	2.42	1.36	56.1%
When I get dissatisfied I subscribe to more MTC services	336	2.38	1.35	56.7%
I stop subscribing to MTC because of Co incentives	336	2.36	1.35	57.2%
I subscribe to another MTC	336	2.07	1.23	59.4%
Overall Mean Score	**336**	**2.30**	**1.32**	**57.3%**

Source: Primary Data

As shown in Table 4.9, the overall mean score was 2.30 indicating 'to a small extent' perceptions of mobile telephone subscribers varied by 57.3% in regard to exit (stop using company services). The lowest coefficient of variation (CV= 56.1%) indicates that perceptions of subscribers varied by 56.1% from the mean in regard to Mobile Telephone operators stopping to subscribe to the MTC when other Companies give affordable prices. The highest coefficient of variation of 59.4% was that perceptions of mobile telephone subscribers moderately varied by 59.4% implying that when customers get dissappointed, they subscribe to another MTC.

The respondents' perceptions on commitment are summarised in Table 4.10.

Table 4.10:   Respondents' Perceptions on Commitment

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
I only keep using a few selected Co services	336	2.97	1.39	46.8%
I remain committed to subscribing to the MTC only if my needs are met	336	2.90	1.30	44.8%
When disappointed, I keep subscribing to MTC.	336	2.60	1.24	47.6%
When disappointed, I rarely subscribe to MTC	336	2.40	1.22	50.8%
Overall Score	**336**	**2.71**	**1.28**	**47.2%**

Source: Primary Data

Table 4.10 shows that the overall mean score was 2.71, (CV= 47.2%) meaning that the perceptions of respondents on commitment are "to a moderate extent" varied by 47.2% from the mean of 2.71. The highest coefficient of variation was 51% meaning "to a moderate extent", the perceptions varied by 51% indicating that when the mobile telephone subscribers gets disappointed, they rarely subscribe to the MTC. The lowest coefficient of variation of 44.8% indicated that perceptions differed by 44.8% in regard to MTS getting disappointed but remaining committed to subscribing to the MTC only if their needs were met.

The summary of respondents' perceptions on redress, voice, exit and commitment (CCB) are summarised in Table 4.11.

Table 4.11: Summary of Customer Complaint Behaviour attributes

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Redress	336	2.62	1.21	46.1%
Commitment	336	2.71	1.28	47.2%
Voice	336	2.72	1.33	48.8%
Exit	336	2.30	1.32	57.3%
Overall Mean Score	336	2.58	1.28	49.6%

Source: Primary Data

Table 4.11 indicates that the overall score on the CCB variable (mean score=2.58, CV= 49.6%), the perceptions of mobile telephone subscribers varied by 49.6% meaning that 'to a moderate extent' customers respond to dissatisfaction in terms of seeking redress, voice, exit or commitment. The highest coefficient of variation in perceptions regarding CCB was on exit (CV=57.3%) indicating that perceptions differed by 57.3% that mobile telephone subscribers exit the MTC due to the poor service of the MTCs, followed by voice with a variation of 48.8%, then commitment with a variation of 47.2%. The lowest coefficient of variation of 46.1% means that perceptions differed by 46.1% in regard to seeking redress.

4.5.2 Assessment of Customer Loyalty

In the current study, the dimensions of customer loyalty are word of mouth (WOM) and customer retention. The loyalty of customers is defined as behaviour that can be evaluated in form of repurchase decision and word of mouth increasing the scale and scope of a relationship. Loyalty is determined by the strength of the relationship between relative attitude and repeat patronage and it has both attitudinal and behavioural elements. Customer loyalty variable was measured using a scale where 1= not at all, 2= to a small extent, 3= to a moderate extent, 4= to a large extent, and 5 to a very large extent. The respondent's perceptions on word of mouth and customer retention are summarized respectively.

Pertinent results for word of mouth are presented in Table 4.12.

Table 4.12: Respondents' Word of Mouth Behaviour

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Recommend friends to the use of related services	328	3.24	1.11	34.2%
Encourage friends to use Company services	327	3.09	1.07	34.6%
Give positive remarks about MTC	326	3.06	1.02	33.3%
Talk negatively about my experience	326	2.99	1.03	34.4%
Overall Mean Score	**327**	**3.09**	**1.05**	**33.9%**

Source: Primary Data

Table 4.12 shows that the overall mean score for word of mouth was 3.09; CV= 33.9%, meaning that perceptions of respondents on word of mouth are "to a moderate extent", varied by 33.9% from the mean of 3.09. The highest coefficient of variation (CV=34.6%) implied that satisfied subscribers encouraged friends to use company services. The lowest coefficient of variation (33.3%) means that perceptions differed by 33.3% by use of word of mouth where subscribers give positive remarks about MTCs. Word of mouth is very important especially with regard to its implications of trust and associated outcomes in mobile telephone companies.

As regards to customer retention, subscribers were asked to indicate the extent to which they had loyalty to a particular mobile telephone company, intended to keep subscribing and to make repetitive purchases at will without being coerced. The pertinent results are contained in Table 4.13.

Table 4.13:   Respondents' perception on Customer Retention

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Deal with the MTC at will, not being forced	336	3.51	1.21	34.4%
Have a positive feeling about the MTC affordable services.	336	3.27	1.09	33.3%
Have a positive attitude about use of MTC services.	336	3.26	1.01	30.9%
Continue with this MTC even if there are cheaper mobile telephone operators.	336	3.19	1.07	33.5%
Continue to use MTC services with incentives.	336	3.18	1.16	36.4%
Average	**336**	**3.28**	**1.11**	**33.8%**

Source: Primary Data

Table 4.13 shows that the overall mean score was 3.28, (CV=33.8%) meaning that the perceptions of respondents varied by 33.8% from the mean score of 3.28 with regard to customer retention. The highest coefficient of variation (CV=36.4%) implied that perceptions of subscribers varied by 36.4%, meaning that 'to a moderate extent', dissatisfied subscribers continue to use MTC services with incentives. The lowest coefficient of variation was 30.9%, that perceptions differed with regard to subscribers having a positive attitude about use of MTC services.

Customers remain loyal to the mobile telephone company when they keep subscribing and using their services, and using positive word of mouth to recommend the MTC to family and friends. The results for the summary of attributes for customer loyalty are presented in Table 4.14.

Table 4.14: Summary of Respondents' Perceptions on Customer Loyalty

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Customer Retention	336	3.28	1.11	33.8%
Word of Mouth	336	3.09	1.05	33.9%
Overall Mean Score	336	3.18	1.08	33.8%

Source: Primary data

The results in Table 4.14 show the over all mean score for the construct of customer loyalty (mean score= 3.18; CV=33.8%) meaning that the perceptions of respondents on customer loyalty were 'to a moderate extent' varied by 33.8% from the mean score of 3.18. Variations were higher by word of mouth (CV=33.9%), and then customer retention (CV=33.8%).

4.5.3 Perceptions on Firm Responses

Firm responses was the moderating variable between CCB and customer loyalty. The respondents had been asked to state how their complaints were being handled by the staff of MTC. The variable had three constructs namely compensation (discounts, refunds, exchange), employee behavior (apologetic, good listeners, understanding) and firm procedures (clear policies and channels of information).

Compensation refers to refunds, replacements, or a response outcome the company provides to address a customer complaint like an apology in case of social loss to help restore social equity. The current study sought to establish the extent to which the MTCs compensated customers. Compensation construct was measured using a scale where 1= not at all, 2= to a small extent, 3= to a moderate extent, 4= to a large extent, and 5 to a very large extent. The responses are depicted in Table 4.15.

Table 4.15: Respondents' Perceptions on Compensation

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Partial redress is better than none	336	2.67	1.25	**46.8%**
Staffs encourage seeking redress	336	2.38	1.10	**46.2%**
Staffs compensate customers with only discounts, exchanges	336	2.03	1.07	**52.7%**
The company puts in effort to compensate customers	336	1.99	1.04	**52.2%**
Overall Mean Score	**336**	**2.26**	**1.11**	**49.1%**

Source: Primary Data

The results in Table 4.15 show that the overall mean score for the construct of compensation =2.26, with CV= 49.1%, meaning that the perceptions of mobile telephone subscribers varied by 49.1%   'to a small extent' from the mean of 2.26 in regard to compesation from service failure. The highest coefficient of variation was 52.7% where perceptions varied that staff compensate customers with only discounts and exchanges. The lowest coefficient of variation was 46.2% indicating that 'to a moderate extent' perceptions differed by 46.2% in regard to staff who encourage seeking redress.

The results indicate that the subscribers, to a moderate extent, agree with the suggestion that when they get disappointed with the MTC services, some subscribers may get compensation from all service failures and this may be in terms of refunds, exchange or even an apology. Grewel et al. (2008) agree with the suggestion that not all dissatisfactions need to be compensated.

Employee behaviour is described as responsible and informative behaviour of the service person and it covers the interpersonal aspect of complaint handling by embracing attentiveness (listening carefully) and credibility. The current study sought to establish the extent to which employee behaviour of the customers of the MTC have credibility in handling complaints, listening attentively and displaying regret to complainants for any inconvenience. The ratings are given in Table 4.16.

Table 4.16: Respondents' perceptions on Employee Behaviour

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Staffs listen attentively to understand the Customer's complaints.	336	3.20	1.05	32.8%
Staffs have good interpersonal communication for handling customer complaints.	336	2.97	1.25	42%
Staffs put in effort to display regret to the complainant for any inconvenience.	336	2.94	1.00	34%
I did not believe the MTC's explanation regarding why the failure occurred.	336	2.82	1.06	37.5%
Overall Mean Score	**336**	**2.98**	**1.09**	**36.5%**

Source: Primary Data

As depicted in Table 4.16, the overall mean score for the construct of employee behaviour (mean score =2.98; CV =36.5%), meaning that 'to a moderate extent', the perceptions of mobile telephone subscribers varied by 36.5% from the mean of 2.98. The highest coefficient of variation of perceptions of respondents on employee behaviour was 42%, meaning that 'to a moderate extent', the perceptions varied by 42% indicating that staff have good interpersonal communication for handling customer complaints. The lowest coefficient of variation was 32.8%, meaning that the perceptions of staff on employee behaviour varied by 32.8% indicating that 'to a moderate extent' staff need to listen attentively to understand the customer's complaints.

When MTC staff provide complainant's with reasonable information and explanation about why the problem occurred and was put right, this creates understanding and improves the relationship between the MTC and its subscribers if it is listened to attentively.

Firm procedures include facilitation and timeliness (handling customer complaints promptly). The current study sought to establish the extent to which the procedures and policies are used to make timely decisions to address customer concerns especially regarding repurchase decisions. The relevant responses are summarised in Table 4.17.

Table 4.17: Respondents' Perceptions on Firm Procedures

Attribute Description	Frequency	Mean Score	SD	Coefficient of Variation
Procedures for resolving customer complaints are in place	336	3.30	.986	29.8%
Facilitation has a significant impact on negative WOM	336	3.28	1.10	33.5%
Procedures empower staff to address problems.	336	3.20	1.04	32.5%
Complaints data are used to initiate prompt corrective action to prevent problems re-occurrence.	336	2.97	1.25	42%
Overall Mean Score	**336**	**3.18**	**1.09**	**34.2%**

Source: Primary Data

Table 4.17 shows that the overall mean score was 3.18, (CV=34.2%), meaning that to a moderate extent, the perceptions of mobile telephone subscribers varied by 34.2% from the mean of 3.18 in regard to firm procedures. The highest coefficient of variation (CV) was 42%, meaning that perceptions of respondents on firm procedures varied by 42%, indicating that 'to a moderate extent' complaints data were used to initiate prompt corrective action to prevent problems re-occurrence. The lowest coefficient of variation was 29.8%, indicating that 'to a moderate extent', the perceptions varied by 29.8% that firm procedures for resolving customer complaints were in place for corrective action.

The summary of firm responses is presented in Table 4.18.

Table 4.18: Summary of highest Attributes of Firm Responses

Attribute Description	Frequency	Mean Score	SD	Coefficient of Variation
Firm procedures	336	**3.18**	**1.09**	**34.2%**
Employee behaviour	336	**2.98**	**1.09**	**36.5%**
Compensation	336	**2.26**	**1.11**	**49.1%**
Overall Mean Score	**336**	**2.81**	**1.64**	**39.9%**

Source: Primary Data

The results in Table 4.18 reveal that the overall score for firm responses (mean score=2.81), Coefficient of Variation= 39.9%, meaning that to a moderate extent, perceptions of mobile telephone subscribers varied from the mean in regard to firm responses by 39.9%. The highest coefficient of variation (CV=49.1%) implying that perceptions of respondents on compensation varied by 49.1% and the lowest coefficient of variation from the mean was by 34.2%. Mobile telephone operators need to have clear firm procedures in place when handling subscribers' complaints because it enables them to know where to complain during service recovery.

4.5.3 Assessment of Service Quality

Service quality refers to consumer's judgment about a service provider's overall excellence. This judgment is the result of a difference between what a customer believes a service provider should offer (expectations) and his perceptions of the actual performance of the service. Service quality is a key driver to customer loyalty and in the current study, it was an intervening variable between customer complaint behavior and customer loyalty. Service quality variable was measured using a scale where 1= not at all, 2= to a small extent, 3= to a moderate extent, 4= to a large extent, and 5 to a very large extent. The scale items measured information on various dimensions of service quality including empathy, reliability, assurance, tangibility, responsiveness, service convenience and network quality in the Tables 4.19 to 4.25.

Empathy entails provision of individualized attention and care to MTC subscribers by personnel of the firm (Zeithml et al., 2006). In this respect, the mobile telephone subscribers (MTS) feel unique and special when staff in the company gives them respect, care about their needs and preferences and take steps to satisfy them. The pertinent results of the study are summarized in Table 4.19.

Table 4.19:   Respondents' Perceptions on Empathy

Attribute Description	Freguency	Mean Score	SD	Coefficient of Variation
The MTC has convenient operating hours.	336	3.37	1.05	31.1%
The company employees treat me with respect.	336	3.36	1.05	31.2%
Staffs are sincere and caring to their customers	336	3.22	1.04	32.2%
Subscribers accept returned merchandize/products	336	2.86	1.25	43.7%
Overall Mean Score	**336**	**3.20**	**1.09**	**34%**

Source: Primary Data

The results in Table 4.19 show that the overall mean scores for empathy was 3.20; CV=34%. This means that 'to a moderate extent', the perceptions of mobile telephone subscribers varied by 34% in regard to empathy from the mean of 3.20. The company subscribers accept returned merchandize/products with varied perceptions of 43.7%. The lowest variation of perceptions was 31.1% in regard to MTS operating on convenient hours.

Reliability of a service includes convenient location and hours of operation; availability of recharge services, ease of access to service providers, proper record keeping and performing the service as it is designated by time. The relevant study results are presented in Table 4.20.

Table 4.20:   Respondents' Perceptions on Reliability

Attribute Description	Frequency	Mean Score	SD	Coefficient of Variation
The MTC keeps accurate records of complaints from the subscribers	336	3.19	1.13	35.4%
The MTC shows sincere interest in solving its customers' service problems.	336	3.06	1.07	34.6%
MTC keeps its promises to subscribers	336	2.94	1.05	35.7%
The MTC keeps me informed in case of inability to meet my expectations.	336	2.92	.984	33.6%
Overall Mean Score	**336**	**3.02**	**.814**	**26.9%**

Source: Primary Data

The results in Table 4.20 show that the overall score for reliability (mean score=3.02, CV=26.9%), indicating that "to a moderate extent", the perceptions of mobile telephone subscribers varied by 26.9% from the mean of 3.02 in regard to reliability. The highest coefficient of variation (CV=35.7%) was that perceptions varied by 35.7% on MTC keeping promises to subscribers. The lowest coefficient of variation (CV=33.6%) implying that perceptions varied by 33.6% on MTS getting disappointed and the MTC keeping them informed in case of inability to meet their expectations. Basing on assurance, results indicate that the company keeps updating the subscribers regarding what they are doing to solve the problem after failing to meet their expectations.

Assurance embraces competence, courtesy, credibility and security. For mobile telephone companies to get assurance for service quality, they need courteous and knowledgeable employees who can inspire confidence and trust. The relevant results on assurance are summarised in Table 4.21.

Table 4.21: Respondents' Perceptions on Assurance

Attributes	Frequency	Mean Score	SD	Coefficient of Variation
MTC employees are polite and willing to help.	336	3.57	1.10	30.8%
Company staffs always make me feel reassured.	336	3.44	1.10	31.9%
Company employees respect my confidentiality.	336	3.29	1.18	35.8%
MTC employees have customer's best interests	336	3.21	1.11	34.5%
MTC employees make customers feel safe in a service transaction.	336	3.08	1.09	35.3%
Overall Mean Score	**336**	**3.32**	**1.11**	**33.4%**

Source: Primary Data

The results in Table 4.21 show that the overall scores for assurance (mean score=3.32, CV=33.4%) indicating that perceptions of subscribers on assurance varied by 33.4% from the mean of 3.32. The highest coefficient of variation (CV=35.8%) implied that 'to a moderate extent', perceptions of mobile telephone subscriber's varied by 35.8% from the mean in regard to assurance. The lowest coefficient of variation was 30.8% , indicating that perceptions differed by 30.8% in regard to MTC employees being polite and willing to help during service recovery.

Basing on the perceptions of respondents on tangibility of a service, they had been asked to indicate the extent to which they respond to various tangible attributes in terms of staff being appealing to mobile telephone subscribers and the user friendliness of the equipment. The relevant results are given in Table 4.22.

Table 4.22: Tangibility of Service

Attributes of Tangibility	Frequency	Mean Score	SD	Coefficient of Variation
The company provides modern facilities.	336	3.52	1.05	29.8%
The company presents a professional image	336	3.45	1.11	32.1%
Employees are neat and appealing to subscribers.	336	3.44	1.07	31.1%
MTC subscribers find the equipment user friendly.	336	3.31	1.02	30.8%
The company provides pleasant meeting facilities.	336	2.97	1.20	40.4%
Overall Mean Score	**336**	**3.33**	**1.09**	**32.7%**

Source: Primary Data

Table 4.22 indicates that the overall score for tangibility (mean score=3.33, CV=32.7%), implied that perceptions of respondents on tangibility of service were "to a moderate extent" varied by 32.7% from the mean score of 3.33. The attribute that the company provides pleasant meeting facilities recorded the highest coefficient of variation (CV=40.4%) implying that the perceptions varied by 40.4%. The results suggest that "to a large extent", in an attempt to improve the physical evidence as well as the operations of the MTC services, the company has facilities, well laid out offices, official documents like mobile telephone starter parks, reload cards and access to information on fliers. The

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lowest coefficient of variation (CV=29.8%) indicating that perceptions of subscribers varied by 29.8% on the issue of the company providing modern facilities.

Responsiveness concerns the willingness or readiness of employees to provide a service (Parasuraman, 1988). Responsiveness of a MTC staff is concerned with dealing with the subscriber's complaints promptly and attentively. Additionally, it is concerned with staff's availability, having a mechanism of responding to and handling mobile telephone subscriber's complaints to their expectation. The relevant results are presented in Table 4.23.

Table 4.23: Respondents' Perceptions on Responsiveness

Attribute Description	Frequency	Mean Score	SD	Coefficient of Variation
MTC provides accurate service by meeting Customer's expectations.	336	3.08	1.09	35.3%
MTC employees are always easily contacted by subscribers using telephone	336	2.94	1.15	39.1%
MTC staffs give subscribers a prompt service.	336	2.89	1.13	39.1%
I get quick response from MTC without keeping me waiting for long.	336	2.77	1.17	42.2%
Overall Mean Score	**336**	**2.92**	**1.13**	**38.6%**

Source: Primary Data

The results in Table 4.23 show that the overall score for responsiveness (mean score=2.92, CV=38.6%), indicated that the subscribers perceptions on responsiveness of staff to customer complaints was 'to a moderate extent' varying by 38.6%. The highest coefficient of variation of 42.2%, indicating that to a moderate extent, the perceptions varied by 42.2% on the mobile telephone subscribers getting quick response from MTC without keeping them waiting for long. To be successful, companies may need to look at responsiveness from the point of view of the customers rather than the company's perspective. When MTCs respond to complaints promptly, it means that they are dependable in addressing customer complaints. However, the lowest coefficient of variation of 35.3% implied that perceptions varied by 35.3% in regard to MTCs providing accurate service.

Perceptions on Network Quality was another dimension for service quality. Basing on this dimension, complaining customers "have already been inconvenienced by the company once and just want their problem solved with the minimum of delay" (Boshoff and Allen, 2000, p. 82). Therefore, mobile telephone subscribers who have experienced a dissatisfaction desire a speedy problem solution so that they can have a good feeling about the mobile telephone operator. The Pertinent results are displayed in Table 4.24.

Table 4.24: Respondents Perceptions on Network Quality

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
The MTC has big net work coverage.	336	3.54	1.08	30.5%
The MTC always provides subscribers with information about its complementary services.	336	3.53	1.11	31.4%
The MTC has good voice quality services.	336	3.48	1.08	31%
The MTC net work connection has no drop calls.	336	3.36	1.06	31.5%
Have no intention to keep subscribing with a particular MTC with poor voice quality	336	3.19	1.10	34.4%
Overall Mean Score	**336**	**3.42**	**1.08**	**31.5%**

Source: Primary Data

Table 4.24 indicates that the overall scores for network quality (mean score= 3.42; CV=31.5%), meaning that 'to a moderate extent', the perceptions of mobile telephone subscribers varied by 31.5% from the mean of 3.42. The highest coefficient of variation of 34.4% indicated that perceptions varied by 34.4% with subscribers had no intentions to keep subscribing with a particular MTC with poor voice quality. The least coefficient of variation of 30.5% implied that perceptions varied by 30.5% on the issue that MTC subscribers have no intention to keep subscribing with a particular mobile telephone company with poor voice quality and high dropped calls.

Service convenience involves ease of access to the customers. The respondents had been asked to state the extent to which they received convenient services from MTC operators in terms of hours of operation, location and ease of access. Customers do not want to waste unnecessary time in reaching out to the service provider. MTS accord priority to convenient hours of operation and convenient location of telephone operator's outlets. The relevant results are summarized in Table 4.25.

Table 4.25: Perceptions on Service Convenience

Attributes	Frequency	Mean Score	SD	Coefficient of Variation
There is easy availability of recharge services for the MTS.	336	3.58	1.19	33.2%
MTC has convenient hours of operation for the subscribers.	336	3.44	1.07	31.1%
MTC has convenient location of service provider's outlets.	336	3.43	1.06	30.9%
Subscribers are accorded convenient channels for airing their complaints	336	3.06	1.08	35.2%
Overall Mean Score	**336**	**3.37**	**1.10**	**32.6%**

Source: Primary Data

From Table 4.25, the results show the overall score for service convenience (mean score=3.37, CV=32.6%), that "to a moderate extent", the perceptions of mobile telephone subscribers on service convenience were varied by 32.6% from the mean score of 3.37. The highest coefficient of variation regarding perceptions of service convenience varied by 35.2% regarding subscribers getting channels for airing their complaints in a

convenient manner. This means that on average, subscribers can access channels where they can make complaints about their dissatisfaction to the MTC. The lowest coefficient of variation of 30.9% indicated that perceptions on service convenience varied by 30.9%. The dimensions for service quality include service convenience, tangibility, network quality, assurance, empathy, responsiveness and reliability. The summary of overall mean scores for service quality is depicted in Table 4.26.

Table 4.26: Summary Statistics for Service Quality

Attribute	Frequency	Mean Score	SD	Coefficient of Variation
Service Convenience	336	3.37	1.10	32.6%
Tangibility	336	3.33	1.09	32.7%
Assurance	336	3.32	1.11	33.4%
Network Quality	336	3.42	1.08	31.5%
Empathy	335	3.20	1.09	34%
Responsiveness	336	2.92	1.13	38.6%
Reliability	336	3.02	.814	26.9%
Overall Mean Score	**336**	**3.22**	**1.06**	**32.8%**

Source: Primary Data

The results in Table 4.26 show that the overall mean score for service quality (mean score=3.22, CV = 32.8%), indicating that perceptions of mobile telephone subscribers varied by 32.8% from the mean score of 3.22, the dimension of responsiveness had the highest coefficient of variation (38.6%), and the lowest coefficient of variation was for reliability with 26.9%. Customers look out for a reliable service regarding mobile telephone regarding less drop calls, sending and receiving messages and mobile money services.

4.5.4. Summary of the study variables

Descriptive statistics using frequency mean scores and standard errors were computed for all the study. The pertinent results of the summary of the study variables are in Table 4.27.

Table 4.27: Summary of the Study Variables

	Item Description	Frequency	Mean Score	SD	Coefficient of Variation
Customer Complaint Behaviour	Voice	336	2.72	1.33	48.8%
	Commitment	336	2.71	1.28	47.2%
	Redress	336	2.61	1.21	46.1%
	Exit	336	2.30	1.32	57.3%
	Mean Score	**336**	**2.58**	**1.28**	**49.6%**
Service Quality	Service convenience	336	3.37	1.10	32.6%
	Tangibility	336	3.33	1.09	32.7%
	Assurance	336	3.32	1.11	33.4%
	Network quality	336	3.42	1.08	31.5%
	Empathy	336	3.20	1.09	34%
	Responsiveness	336	2.92	1.13	38.6%
	Reliability	336	3.02	.814	26.9%
	Mean Score	**336**	**3.22**	**1.06**	**32.8%**
Firm Responses	Employee behaviour	336	2.98	1.09	36.5%
	Firm Procedures	336	3.18	1.09	34.2%
	Compensation	336	2.26	1.11	49.1%
	Mean Score	**336**	**2.81**	**1.64**	**39.9%**
Customer Loyalty	Customer Retention	336	3.28	1.11	33.8%
	Word of mouth	336	3.09	1.05	33.9%
	Mean Score	**336**	**3.18**	**1.08**	**33.8%**

Source: Primary Data

The results presented in Table 4.27 indicate that the mean score for the study variable's ranged between 2.58 to 3.22, implying that the perceptions of mobile telephone subscribers were 'to a moderate extent'. Basing on coefficient of variation that ranged between 32.8% to 49.6%, the perceptions of mobile telephone subscribers varied fairly as the coeffient of variation are below 50%.

4.6   Factor Analysis

Factor Analysis (FA) was used to validate the questionnaire by testing for convergent validity, discriminant validity and construct validity; applying KMO and Bartlett's Test

for sampling adequacy and then principal component analysis and varimax methods to extract the factors or constructs that measured the study variables as shown in preceding sections. Principal component analysis and varimax rotation method was done using eigen values greater than or equal to 0.5. Factors with eigen values greater than one (1) were extracted and items with factor loadings with greater or equal 0.5 were retained. The pertinent results are in Table 4.28.

Table 4.28: Summary of KMO and Bartlett's Test

Variable	KMO	Bartlett's Test of Sphericity		
		Chi-square (χ)	df	Sig. Level
Customer Complaint Behaviour	0.680	630.5	66	.000
Service Quality	0.781	1109.3	171	.000
Firm Responses	0.788	1086.9	45	.000
Customer Loyalty	0.665	345.4	21	.000

Source: Primary Data

From Table 4.28, sampling adequacy of Customer Complaint Behaviour was determined by Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .680, Bartlett's Test =630.5, df=66 and Sig.=.000; which implied that the sample was adequate for CCB. Sampling adequacy of service quality was determined by Kaiser-Meyer-Olkin (KMO) at .781 Bartlett's Test of =1109.3, Sig.000. The sampling adequacy of firm responses was determined by KMO Measure of Sampling Adequacy=.788, Bartlett's Test of =1086.9, Sig.000. Further, the sampling adequacy of firm responses was determined by KMO Measure of Sampling Adequacy=.665, Bartlett's Test of =345.4, Sig.000; meaning that the sampling adequacy was significant and moderate at 78.8%.

In a nutshell, communalities and rotated component matrices were run. Basing on communalities of variables of CCB, firm responses, service quality and customer loyalty, the sampling adequacy was significant at p<.05, with a loading above 0.50, therefore closely measuring the same variable. In the same way, basing on rotated component matrixes for the mentioned variables, factors with eigen values greater than one were extracted and items with factor loadings greater or equal to 0.5 were retained.

The last variable was firm responses with three factor loadings – employee behaviour (28.1%); firm procedures (22%); compensation (17%). Factor analysis details are in Appendix 5.

4.7   Correlation Analyses

Pearson correlation coefficient (r) was used to determine the level of significance of the bivariate relationships of independent variables and dependent variable.   When the correlation coefficient (r) =+/-1.00, there is a perfect positive or negative correlation between the variables (Coopers and Schindler, 2003). While r=.09 indicates a very high correlation, r=0.01 indicates a very weak correlation, and r=0 indicates that there is no relationship between the study variables.

4.7.1 Correlation between Demographic Data and Customer Loyalty

Firstly, the study was sought to establish the relationship between demographic data and the dependent variable (customer loyalty). To attain this, a correlation analysis was done. Pearson correlation coefficient (r) was used to determine the level of significance of the bivariate relationships of demographic factors and dependent variable.   When the correlation coefficient (r) =+/-1.00, there is a perfect positive or negative correlation between the variables (Coopers and Schindler, 2003). While r=.09 indicates a very high correlation, r=0.01 indicates a very weak correlation, and r=0 indicates that there is no relationship between the study variables. The correlation results are presented in Table 4.29.

Table 4.29: Correlation between Demographic Data and Customer Loyalty

Variable	Pearson Correlation	Gender	Age	Marital Status	Education Level	Category	Monthly Income	Customer Loyalty
Gender	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	336						
Age	Pearson Correlation	.119[*]	1					
	Sig. (2-tailed)	.029						
	N	336	336					
Marital Status	Pearson Correlation	.118[*]	.564[**]	1				
	Sig. (2-tailed)	.031	.000					
	N	336	336	336				
Education Level	Pearson Correlation	.024	.402[**]	.356[**]	1			
	Sig. (2-tailed)	.667	.000	.000				
	N	336	336	336	336			
Category	Pearson Correlation	.035	.411[**]	.207[**]	-.110[*]	1		
	Sig. (2-tailed)	.522	.000	.000	.044			
	N	336	336	336	336	336		
Monthly Income	Pearson Correlation	.045	.559[**]	.436[**]	.560[**]	.255[**]	1	
	Sig. (2-tailed)	.424	.000	.000	.000	.000		
	N	321	321	321	321	321	321	321
Customer Loyalty	Pearson Correlation	-.030	-.049	.047	-.040	-.016	-.128[*]	1
	Sig. (2-tailed)	.578	.373	.394	.462	.768	.022	
	N	336	336	336	336	336	321	336

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

Table 4.29 indicates that there was weak negative relationship between personal monthly income/allowance and the dependent variable (customer loyalty) with r=-.128*, P-value= .022. According to Uwalomwa and Olamide (2012), the relationship is

considered significant when the probability value is equal to or below .05. Therefore the relationship between personal monthly income/allowance and customer loyalty is significant but weak. The study further indicates that there was no significant relationship between other demographic variables (regarding age, gender, category of the respondent and level of education) and customer loyalty) where significance was above .05.

4.7.2 Correlation between Customer Loyalty and Independent Variables

In this section, the research findings are presented using statistical techniques basing on tests of hypotheses. The results are interpreted in view of the conceptual and theoretical model. In order to address the objectives and test the hypotheses of the study, zero order correlation analysis was carried out. The objective of doing this was to determine whether there was a significant linear relationship between the predictor variable (CCB) and the moderating, mediating and the dependent variables. As shown in the previous section, the data satisfied the parametric conditions and consequently, the bivariate correlation analyses were performed and Pearson correlation coefficients generated to measure the magnitude of the relationship between the study variables.

Correlation analysis was run using Pearson Product Moment Correlation Coefficient technique to establish the relationship between customer complaint behaviour, firm responses, service quality and customer loyalty. The results were discussed in line with the literature in order to establish the extent to which they relate to existing knowledge. The correlation coefficient provided a numerical summary of the direction and strength of the linear relationship between the variables. As depicted in Table 4.30 all the Pearson correlation coefficients (r) ranged within -1 and +1.

Table 4.30: Correlations Matrix of the Study Variables

Variable		Customer Complaint Behaviour	Firm Responses	Service Quality	Customer Loyalty
Customer Complaint Behaviour	Pearson Correlation	1			
	Sig. (2-tailed)				
Firm Responses	Pearson Correlation	.237**	1		
	Sig. (2-tailed)	.000			
Service Quality	Pearson Correlation	.242**	.574**	1	
	Sig. (2-tailed)	.000	.000		
Customer Loyalty	Pearson Correlation	.255**	.531**	.653**	1
	Sig. (2-tailed)	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

The results in Table 4.30 indicate that the relationship between customer complaint behavior and customer loyalty was positive and statistically significant (r=.255**, P-value=.000). The study finding suggests that an improvement in handling complaints will lead to an increase in customer loyalty. Similarly, the relationship between firm responses and customer loyalty was positive and statistically significant (r=.531**, P-value=.000). The finding suggests that when customers receive quality service, they remain committed and keep subscribing to the Mobile Telephone Company. This implies that when the mobile telephone operators handle customer complaints to the expectations of their subscribers (compensation, listening attentively, prompt responsiveness), they have willingness to keep seeking for redress and understanding from the service provider in case of service failure.

In the same way, the correlation results show that there was a high positive significant relationship between service quality and customer loyalty (r=.653**, P-value=.000) where service quality directly relates customer loyalty. The implication of the results is in

terms of reliability, responsiveness, empathy, tangibility, assurance of the services by mobile telephone company staff as they work towards attaining a positive word of mouth about the company and consequently retaining customers into a long term relationship. Finally, there was a positive and significant relationship between customer complaint behaviour and service quality (r=.242**, P-value=.000). The implication of the results is that favourable CCB (redress seeking, voicing complaints to service operators and using selected services of the MTC) will lead to an enhancement of service quality.

The correlations of study variables basing on the dimensions of the dependent variable (Appendix 14a) indicate the relationships between customer retention with CCB dimensions being positive and statistically significant with redress (.212**) and commitment (.252**); but was not statistically significant with voice and exit. The relationships between word of mouth with CCB dimensions were all positive and statistically significant basing on redress (.164**), voice (191**), exit (.122**) and customer retention (.413**). Finally, there was a positive and significant relationship between the dimensions of customer complaint behaviour, firm responses and service quality with customer retention and word of mouth (customer loyalty dimensions), apart from voice and exit dimensions of customer complaint behaviour.

4.7.3   Summary of Correlation Analyses

The section on correlation analyses evaluated the linear relationships between the study variables. All correlations for four study variables were positive and statistically significant with the highest correlations of service quality with both firm responses and customer loyalty. Firm responses were highly correlated with customer loyalty and it had dimensions of compensation, employee behaviour and firm procedures. The way in which staff of mobile telephone companies (MTC) respond to the dissatisfied customer positively and significantly influences customer loyalty. Another variable with high correlation was service quality and customer loyalty dimensons (Figure 14c). The relationships between customer loyalty with firm responses, as well as customer complaint behaviour and service quality were positive and statistically significant.

4.8   Tests of Hypotheses

The researcher tested the hypotheses using simple and hierarchical multiple regression analyses. The aim of this analysis was to establish the predictive power (relative importance) of each variable. The following sections describe the results for the hypotheses. Simple and multiple linear regression analyses were used because the hierarchical method has the advantage of establishing the contribution of each predictor at different stages in the regression model and in testing the theoretical aspects (Field, 2006; Hair et al., 2006). In addition, aggregate mean scores were computed for the independent, mediator, moderator and dependent variables used in regression runs including tests for mediation and moderation effects.

The standardized regression coefficient was used because it removes the unit of measurement of the predictor and outcome variables. This enables the researcher to compare the relative effects of predictor variables measured on different scales. The results of the regression analyses were then used to test the hypotheses. Standardized beta coefficients were used in discussing results and in model estimates as these allow for comparison of the relative impacts of various model variables in regressions since they are independent of the units of measurement (Tronvoll, 2007; Johnson, 2012). To establish statistical significance of the respective hypotheses, simple and multiple regression analyses were conducted at 95% confidence interval.

4.8.1   Test of Hypothesis one

The first objective of the study was to determine the relationship between CCB and customer loyalty of Mobile Telephone Subscribers. Customer complaint behaviour comprised redress, voice, exit and commitment dimensions. To determine the CCB and customer loyalty relationship, the hypothesis was tested which stated that:

> **H$_1$: There is a statistically significant relationship between Customer Complaint Behaviour and Customer Loyalty.**

The linear regression was used to assess the ability of CCB to predict customer loyalty. The regression was preferred because it allowed the assessment of an independent variable on prediction of the dependent variable. Therefore, after entering the independent variable in the model, the overall model was evaluated basing on its ability to predict the dependent variable (customer loyalty). The results of the regression of customer loyalty on customer complaint behaviour are in Table 4.31.

Table 4.31: Regression of Customer Loyalty on Customer Complaint Behaviour

	R	R^2	F	Sig. (P)	Constant	B	Se	β (Beta)	t
Customer Complaint Behaviour (H$_1$)	.263	6.9%	24.267	.000	2.329	.293	.060	.263	4.926
B = Unstandardised coefficient; se = standard error; b is standardized coefficient; Dependent Variable: Customer Loyalty Independent Variable: Customer Complaint Behaviour									

Source: Primary Data

Table 4.31 provides the model summary of customer complaint behaviour and customer loyalty where the coefficient of determination (R^2) under model 1 was .069 which meant that the independent variable (CCB) explained 6.9% of the variations in customer loyalty, with 93.1% of the variations remaining unexplained. This signifies that the selected independent variable had little explanatory power of the dependent variable.

There was a statistically significant linear relationship between customer complaint behaviour and customer loyalty (β = 0.263, p< 0.05) and hence the study supported hypothesis H$_1$. Regarding customer complaint behaviour, respondents were required to indicate the percentage level of CCB. The influence of customer complaint behaviour on customer loyalty was low as the model accounted for only 6.9% variability (R^2 =.069).

The resulting multiple linear regression model that can be used to predict the level of loyalty for a one standard deviation improvement in the performance level of customer complaint behaviour can be expressed as:

$CL = α + β_1 X_1 + β_2 X_2 + ε1$

Where CL refers to customer loyalty (dependent variable); α is a constant,

β_1, - β_2 are coefficients of determination (coefficients in values)

$X_1 - X_2$=customer complaint behaviour construct;

CCB=customer complaint behaviour; ε_1 = error term

Model: CL=2.329 + 0.263CCB, p< 0.05, R^2= 6.9% .... (1)

where CL= Customer Loyalty; CCB= Customer Complaint Behaviour.

Model 1 had R^2 = 6.9%, which meant that model 1 explained 6.9% of the variation in customer loyalty, and left 93.9% unexplained. The model therefore provided a relatively weak fit because it only explained 6.9% of the variation in customer loyalty basing on model 1. Basing on ANOVA, the model had F-value of 24.267 and P-value = .000. This means that the model was statistically significant at α = 0.05 level in explaining the simple linear relationship between customer complaint behaviour and customer loyalty.

The study examined the coefficients of determination of customer complaint behaviour and the standardized beta coefficient .263 represented the expected improvement in customer loyalty for a unit standard deviation improvement in the performance of customer complaint behaviour. It implies that, other factors constant, a one standard deviation improvement in customer complaint behaviour would raise the level of customer loyalty by a factor of about 0.06 of a deviation. The regression results indicate that CCB positively influence level of customer loyalty. P-value = .000, this means that CCB had significant relationship with customer loyalty and therefore the hypothesis 1 which tests the relationship between customer complaint behaviour and customer loyalty was supported. The test therefore failed to reject hypothesis one.

4.8.2. Test of Hypothesis Two

Objective two was to assess the relationship between firm responses and customer loyalty of mobile telephone subscribers. Firm responses embraced compensation, employee behaviour and firm procedures dimensions. The respondents had been asked to indicate the extent to which the staff of mobile telephone companies responded to the subscribers

in case of dissatisfaction. To assess the degree of relationship between firm responses and customer loyalty, the following hypothesis was stated:

H$_2$: **There is a statistically significant relationship between Firm Responses and Customer Loyalty**

The study went on to determine the effects of firm responses on customer loyalty. The simple regression analyses revealed that firm responses had a positive influence on customer loyalty and had statistically significant effects at P<0.05. The results are indicated in Table 4.32.

Table 4.32: Regression of Customer Loyalty on Firm Responses

	R	R^2	F	Sig. (p)	Constant	B	Se	β (Beta)	T
Firm Responses (H$_2$)	.548	30.1%	137.567	.000	1.790	.461	.039	.548	11.729
B = Unstandardised coefficient; se = standard error; b is standardized coefficient;									
Dependent Variable: Customer Loyalty									
Independent Variable: Firm Responses									

Source: Primary Data

The model summary in Table 4.32 shows that in the mean model, the value of R^2 was 30.1%. This means that firm responses elements explained only 30.1% of the variations in customer loyalty in a linear relationship between the two, leaving out 69.9% of the variations unexplained. This therefore means that the mean model in hypothesis two (H$_2$) provided a moderate fit. The model had a moderate beta coefficient (β= 0.548, p< 0.05) and explained 30.1% of the observed variation. From the results, the model that would be used to predict the expected level of customer loyalty for a given level of firm responses was expressed:

CL= 1.790+ .548FR, p< 0.05, R^2= 30.1%... (2)

Where Y= Customer Loyalty and FR= level of firm responses.

Table 4.32: The model summary of firm response, the resulting ANOVA shows that F-value was 137.567 and the p-value was =.000. This means that model 2 was statistically significant α = 0.05 level in explaining the linear relationship between firm responses and customer loyalty. In addition, the coefficient of determination was examined and firm

responses had a significant P-value of .000 and therefore the hypothesis was not rejected meaning that there was a significant relationship between firm responses and customer loyalty. Since model 2 explained 30.1% of its variation (R^2=.301), it provided a relatively good fit, meaning that CCB explained 30.1% of the variation in customer loyalty.

The standardized regression coefficient value of the computed scores of firm responses was Beta =.548, and significance level of p-value =.000. This implies that firm responses statistically influence customer loyalty of mobile telephone subscribers. The implication of the result is that firm responses in terms of compensation, favourable employee behaviour and having appropriate firm procedures lead to enhancement of customer loyalty. Therefore the study results failed to reject hypothesis 2.

4.8.3 Test of Hypothesis Three

The third hypothesis of the study was to assess the relationship between CCB and service quality of Mobile Telephone Companies. Service quality dimensions were reliability, assurance, tangibility, empathy, network quality, service convenience and responsiveness dimensions. The respondents had been asked to indicate the extent to which staff of the mobile telephone company responded to the subscribers in case of dissatisfaction. To measure the degree of relationship between customer complaint behaviour and service quality, the following hypothesis was tested.

H$_3$: **There is a statistically significant relationship between Customer Complaint Behaviour and Service Quality**

Favourable CCB (voicing complaints to service operators, seeking redress, using selected services of the MTC) will lead to an enhancement of service quality. The results of simple regression analysis with predicting service quality are shown in Table 4.33.

Table 4.33: Regression of Service Quality on Customer Complaint Behaviour

	R	R^2	F	Sig (P)	Constant	B	Se	β (Beta)	T
Customer Complaint Behaviour (H$_3$)	.239	5.7%	20.052	.000	2.429	.276	.076	.239	4.478
B = Unstandardised coefficient; se = standard error; b is standardized coefficient; Dependent Variable: Service Quality Independent Variables: Customer Complaint Behaviour									

Source: Primary Data

The results in Table 4.33 show that customer complaint behaviour had a statistically significant influence on service quality; and the coefficient of determination R^2 was .057, meaning that it explained 5.7% of its variation (R^2=.057). In this case, the independent variable explained 5.7% of the variations in service quality, with 94.3% of the variations remaining unexplained. This means that model 3 provided a relatively weak fit since only 5.7 % of the variation in service quality is explained.

The standardized regression coefficient value of the computed scores of service quality was Beta =.239, significance level of p-value =.000. This implies that customer complaint behaviour influences service quality of mobile telephone companies. The standardised regression coefficient was used because it removes the unit of measurement of the predictor and outcome variables and this consequently enables one to compare the relative effect of predictors measured on different scales.

This study was based on the premise that there was a relationship between customer complaint behaviour and service quality. Service quality had seven constructs of assurance, empathy, reliability, responsiveness, tangibility, convenience and network quality. To establish the statistical significance of the respective hypotheses, a simple regression analysis was conducted at 95% confidence interval. The simple regression is indicated in the model (3).

SQ= 2.429+ .239CCB, p< 0.05, R^2= 5.7%.. (3)

Where SQ= level of Service Quality, CCB = Customer Complaint Behaviour

Regression result of customer complaint behaviour and service quality was useful for comparing two variables to see whether controlling for other independent variables would affect the model. The results model 3 show that customer complaint behaviour had a statistically significant influence on service quality, but the model explained merely 5.7% of its variation (R^2=.057). This means that 94.3% was left unexplained. The model provided a relatively weak fit, meaning that customer complaint behaviour explained 5.7% of the variation in service quality, basing on the model 3. Therefore the study failed to reject hypothesis 3.

4.8.4 Test of Hypothesis four

The fourth hypothesis of the study was to assess the relationship between service quality and customer loyalty of mobile telephone subscribers. To assess the degree of relationship between service quality and customer loyalty, the following hypothesis was tested:

H_4: There is a statistically significant relationship between Service Quality and Customer Loyalty

This study was based on the premise that there was a relationship between service quality and customer loyalty. The regression result of service quality on customer loyalty was useful for comparing two or more variables to see whether controlling for other independent variables would affect the model. The pertinent results of the regression of customer loyalty on service quality in Table 4.34.

Table 4.34: Regression of Customer Loyalty on Service Quality

	R	**R^2**	**F**	**Sig (P)**	**Constant**	**B**	**Se**	**β (Beta)**	**t**
Service Quality (H_4)	.662	43.8%	251.140	.000	1.184	.600	.038	.662	15.847
B = Unstandardised coefficient; se = standard error; b is standardized coefficient; Dependent Variable: Customer Loyalty; Independent Variables: Service Quality									

Source: Primary Data

Table 4.34 shows that service quality had a statistically significant influence on customer loyalty. In a linear regression, the study went on to determine the effect of service quality on customer loyalty. The model summary shows that the value of $R^2 = 43.8\%$. This means that service quality elements explained only 43.8% of its variation in customer loyalty, leaving out 56.2% of the variations unexplained.

The resulting ANOVA table shows that under the model, the F-statistic =251.140. Finally, the standardized regression coefficient (b) value of the computed scores of service quality was Beta =.662, with a t-test of 15.847; significance level of p-value =.000. This implies that service quality influences customer loyalty of mobile telephone subscribers. The standardised regression coefficient was used because it removes the unit of measurement of the predictor and outcome variables, and this consequently enables one to compare the relative effect of predictors measured on different scales. This is shown in a model (4), Table 4.34.

CL= 1.184+ .662SQ,   p< 0.05, R^2= 43.8%.. (4)

Where CL= Customer Loyalty and SQ= level of Service Quality

The model provided a relatively good fit, meaning that service quality explained 43.8% of the variation in customer loyalty, basing on the model 3. Therefore the study results failed to reject hypothesis 4.

The summary of linear regressions is indicated in Table 4.35.

Table 4.35: Summary of Simple Regressions of study variables

	R	R^2 (%)	F	Sig (P)	Constant	B	Se	β (Beta)	t
Customer Complaint Behaviour (H₁)	.263	6.9	24.267	.000	2.329	.293	.060	.263	4.926
Firm Responses (H₂)	.548	30.1	137.567	.000	1.790	.461	.039	.548	11.729
Customer Complaint Behaviour (H₃)	.239	5.7	20.052	.000	2.429	.276	.076.	.239	4.478
Service Quality (H₄)	.662	43.8	251.140	.000	1.184	.600	.038	.662	15.847
B = Unstandardised coefficient; se = standard error; b is standardized coefficient; Dependent Variable: Customer Loyalty Independent Variables: Customer Complaint Behaviour, Firm Responses and Service Quality									

Source: Primary Data

4.8.5 Test of Hypothesis Five

Firm responses moderated the relationship between customer complaint behaviour and customer loyalty. The moderating effect involved testing the main effect of the independent variable (CCB) and the moderator variable (firm responses) on the dependent variable with the interaction term. To assess the moderation effect of firm responses, the following hypothesis was tested:

H₅: **Firm Responses statistically and significantly influences the relationship between Customer Complaint Behaviour and Customer Loyalty**

The study sought to assess the moderating effect of firm responses on the relationship between customer complaint behaviour and customer loyalty. Moderation is assumed to take place when the interaction between the independent variable (customer complaint behaviour) and the moderating variable (firm responses) is significant. Firm responses hierarchical regression model was employed to determine the moderation effect. The interaction terms were introduced in the third stage, which was created by multiplying CCB by firm responses. The results indicated that firm responses moderated the relationship between CCB and customer loyalty.

To create an interaction term, the product of the two measures CCB and firm responses was run. The relevant results are presented in Table 4.36.

Table 4.36: The Moderation Effect of Firm Responses on Customer Complaint Behaviour and Customer Loyalty

a. **Goodness of Fit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424[a]	.180	.175	.57671
2	.503[b]	.253	.246	.55114

Source: Primary

Table 4.36 (a) shows the model summary of CCB, firm responses and customer loyalty that the coefficient of determination R^2 under Model one (R^2= .180), implies that CCB

contributed 18% to the variations in customer loyalty, with 82% of the variations remaining unexplained. Under change statistics, results reveal that the R^2 change increased by 9.9% from .180 to .253 (R^2 change=.073) when the moderating variable (firm responses was added in model two. Even after the addition of a moderating variable, model 2 still provided a relatively fair fit, meaning that firm responses would now explain 25.3 %, an addition of 7% of the variation, yet leaving 74.7% of the variations to customer loyalty unexplained.

(b) Analysis of Variance

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	23.517	2	11.759	35.355	.000[a]
Residual	107.427	323	.333		
Total	130.944	325			
Regression	33.134	3	11.045	36.360	.000[b]
Residual	97.810	322	.304		
Total	130.944	325			
a. Predictors: (Constant), Firm Responses, Customer Complaint Behaviour b. Predictors: (Constant), Firm Responses, CCB and Interaction term c. Dependent Variable: Customer Loyalty					

Source: Primary Data

The ANOVA was used to assess the overall significance of the regression model. Table 4.36 (b), model one gives the F-value=35.355, P-value=.000. For model two after the introduction of the interaction term, F-value increased (F-value=36.360, P-value=.000). This meant that the two models (one and two) were both still significant with P-values less than 0.05 in explaining the linear relationships between CCB, firm responses and customer loyalty.

c. Regression Coefficients

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | |
	B	Std. Error	Beta			Zero order	Partial	Part
(Constant)	1.891	.158		11.949	.000			
CCB	.197	.058	.176	3.379	.001	.265	.185	.170
FR	.247	.038	.343	6.567	.000	.388	.343	.331
(Constant)	-.126	.389		-.323	.747			
CCB	.896	.136	.800	6.582	.000	.265	.344	.317
FR	1.009	.140	1.400	7.200	.000	.388	.372	.347
Interaction Term	-.261	.046	-1.386	-5.627	.000	.362	-.299	.271
Dependent Variable: Customer Loyalty								

CCB = Customer Complaint Behaviour

FR   = Firm Responses
Interaction Term = Product of CCB and FR

The results in Table 4.36 (c) which is based on the coefficients of determination shows a significant relationship between CCB, firm responses and customer loyalty. The change was statistically significant at α=.05, where the regression coefficients for customer complaint behaviour (β=.800, p-value=.000) indicating that there was a linear dependence of customer loyalty on customer complaint behaviour. On the other hand, there was a statistically significant relationship between firm responses and customer loyalty (β=1.400, p-value=.000). In addition, there was a negative statistically significant relationship of customer loyalty on the multiplicative term of customer complaint behaviour and firm responses (β=-1.386, p-value=.000). This implies that changes in firm responses may negatively affect customer complaint behaviour and customer loyalty relationship as the direction of the relationship is now negative. In light of the above results, the multiple regression equation used to estimate the moderating effect of firm responses on CCB and customer loyalty relationship is stated as follows:

CL=-.126+ .800 CCB + 1.400 FR – 1.386 CCBFR, R^2=25.3%

Where: CL= Customer Loyalty; CCB= Customer Complaint Behaviour

FR= Firm Responses, K=Product of CCB and Firm Responses

The current study results imply that with an improvement in firm responses (employee behaviour, compensation and firm procedures), customer loyalty is enhanced. The hypothesis that firm responses moderate customer complaint behaviour and customer loyalty relationship was supported. The relevant results are summarized in Table 4.37.

Table 4.37: Partial Correlation between Customer Complaint Behaviour and Customer Loyalty Moderated by Firm Responses

Moderating Variable	Correlation	Correlation Coefficient	Significance (P-value); 2-Tailed
Firm Responses	CCB and customer loyalty	.800	.000
	Firm Responses	1.400	.000
	Interaction term	-1.386	.000

Source: Primary Data

As shown in Table 4.37, correlation coefficients are all statistically significant. These results support the hypothesis that the relationship between CCB and customer loyalty is significantly moderated by firm responses. This implies that introduction of the moderator variable (firm responses) significantly enhances the influence of customer complaint behaviour on customer loyalty. The moderation of customer complaint behaviour and customer loyalty by firm responses was further demonstrated in the modGraph (Figure 4.2).

Figure 4.2: ModGraph where Firm Responses moderate Customer Complaint Behaviour and Customer Loyalty
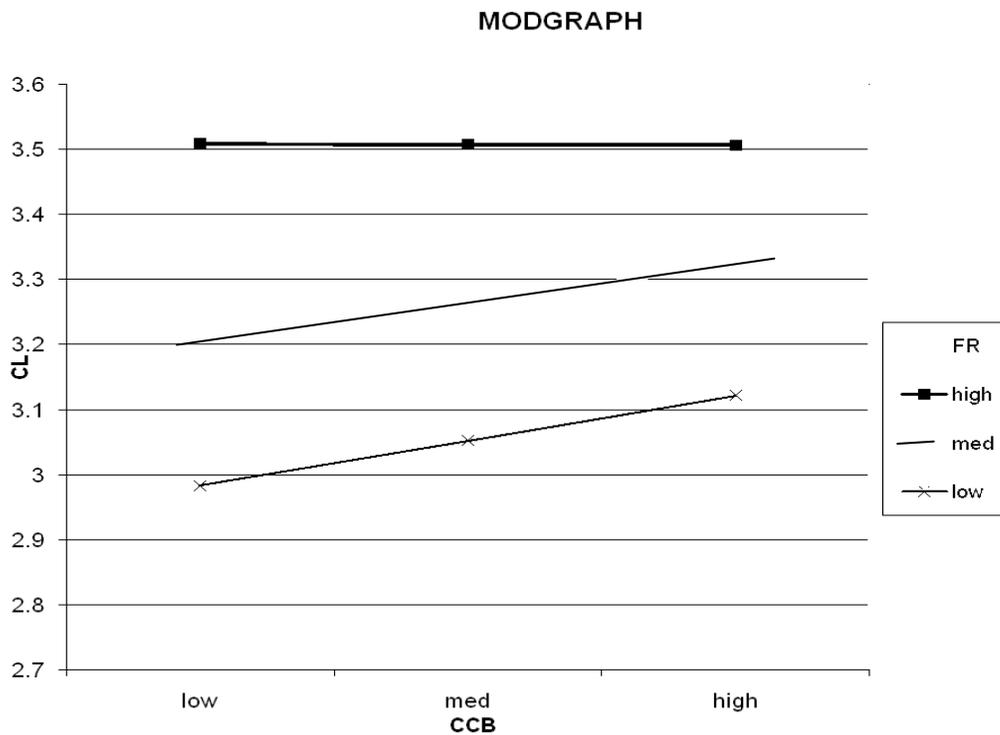
MODGRAPH

Source: Primary Data

CCB= Customer Complaint Behaviour; **CL**= Customer Loyalty

The ModGraph (in Figure 4.2) shows that there was a statistically significant moderation of firm responses on the relationship between customer complaint behaviour and customer loyalty. Therefore, basing on the regression and modGraph, hypothesis 5 is not rejected. The moderation effect of firm responses on customer complaint behaviour and customer loyalty is illustrated in Figure 4.3.

Figure 4.3:   Summary Result of Moderation Test from ModGraph
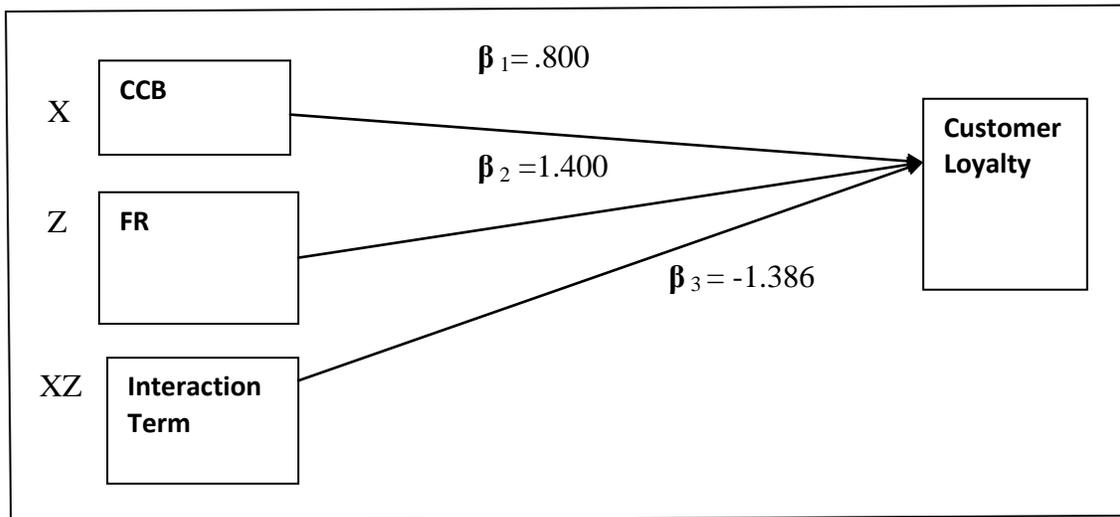
Source: Primary Data

4.8.6 Test of Hypothesis Six

The test for mediation was done to examine the relationship between the predator and the mediator variables and the relationship between the predictor and dependent variables. The relationship between customer complaint behaviour and customer loyalty should be reduced to zero (in case of total mediation) after controlling the relationship between the mediator and criterion variables. Hypothesis six demonstrates this.

H_6: Service Quality mediates the relationship between Customer Complaint Behaviour and Customer Loyalty.

The study sought to assess the mediating effect of service quality on the relationship between customer complaint behaviour and customer loyalty. The results indicated that service quality mediated the relationship between CCB and customer loyalty. The mediating effect of Service Quality on the relationship between customer complaint behaviour and customer loyalty is indicated in Table 4.38.

Table 4.38: Regression of Customer Loyalty on Customer Complaint Behaviour (Step One).

a) **The Goodness-of-Fit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.263[a]	.069	.066	.61144

Source: Primary Data

b) **Analysis of Variance[b]**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.073	1	9.073	24.267	.000[a]
Residual	121.880	326	.374		
Total	130.952	327			
a. Predictors: (Constant), Customer Complaint Behaviour					
b. Dependent Variable: Customer Loyalty					

Source: Primary Data

c) **Regression Coefficient**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	2.329	.152		15.313	.000
CCB	.293	.060	.263	4.926	.000

Source: Primary Data

CCB= Customer Complaint Behaviour

The results in Table 4.38 (a) show that CCB explains only 6.9 % of the variation in customer loyalty (R^2=.069). The first step (Table 4.38b) implies that the relationship between CCB and customer loyalty is positive and statistically significant at P-value=.000; F=24.267 (Table 4.38c).

In the second step, a regression analysis of service quality on customer complaint behaviour was conducted. In this step, customer complaint behaviour was treated as

the independent variable and service quality as the dependent variable. The results are summarized in Table 4.39.

Table 4.39: Regression of Service Quality on Customer Complaint Behaviour
(Step Two).

a) Goodness of Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.239[a]	.057	.054	.63716

Source: Primary Data

Analysis of Variance[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.141	1	8.141	20.052	.000[a]
	Residual	134.378	331	.406		
	Total	142.519	332			
a. Predictors: (Constant), Customer Complaint Behaviour, service Quality						
b. Dependent Variable: Customer Loyalty						

Source: Primary Data

(c) Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	2.429	.157		15.458	.000
	CCB	.276	.062	.239	4.478	.000
a. Predictors: (Constant), Customer Complaint Behaviour, service Quality						
b. Dependent Variable: Customer Loyalty						

Source: Primary Data

The results in Table 4.39 reveal that CCB explains only 5.7 percent of the variation in customer loyalty (R^2=.057). The results of the study indicate that the relationship between CCB and service quality is positive and statistically significant at α=.05 (F=20.052, p-value=.000). This means that CCB may predict service quality outcome of

the MTC. The beta coefficient also indicates that there was a statistically significant linear relationship between service quality and CCB detected at (β=.239, p=.000).

In Step three, customer loyalty (dependent variable) was regressed on service quality (independent variable) to determine the beta coefficient for path (b) and to establish its significance. The pertinent results are presented in Table 4.40.

Table 4.40: Regressing Customer Loyalty on Service Quality (Step three)

a. **Goodness of Fit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.662 a	.438	.436	.43377	.438	251.140	1	322	.000

b. **Analysis of Variance**

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.253	1	47.253	251.140	.000[a]
	Residual	60.586	322	.188		
	Total	107.838	323			
	a. Predictors: (Constant), Service Quality b. Dependent Variable: Customer Loyalty					

c. **Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.184	.120		9.875	.000
SQ	.600	.038	.662	15.847	.000
a. Dependent Variable: Customer Loyalty					

Source: Primary Data

SQ = Service Quality

The results in Table 4.40 show that CCB explains 43.8% of the variation in customer loyalty (R^2=.438). The results of the overall model reveal that the

relationship between service quality (SQ) and customer loyalty is positive and statistically significant at α=.05 (F= 251.140, p-value=.000). This means that CCB predicts service quality outcome of the MTC. The beta coefficient also indicates that there was a statistically significant linear relationship between service quality and CCB measured at (β=.662, p- value=.000).

Customer loyalty was further regressed on the CCB and service quality to assess if there was a significant change in the relationship between the study variables. The pertinent results are shown in Table 4.41.

Table 4.41: Regression of Customer Loyalty on Customer Complaint Behaviour and Service Quality

a). **Goodness of Fit**

Model	R	R^2	Adj R^2	Std. Error of the Estimate
1	.263	.069	.066	.61144
2	.597	.350	.346	.51180

b. Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.073	1	9.073	24.267	.000[a]
	Residual	121.880	326	.374		
	Total	130.952	327			
2	Regression	45.822	2	22.911	87.468	.000[b]
	Residual	85.130	325	.262		
	Total	130.952	327			
a. Predictors: (Constant), Customer Complaint Behaviour, service Quality b. Dependent Variable: Customer Loyalty						

Source: Primary Data

c) Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.329	.152		15.313	.000		
	CCB	.293	.060	.263	4.926	.000	1.000	1.000
2	(Constant)	1.052	.167		6.302	.000		
	CCB	.151	.051	.135	2.938	.004	.945	1.058
	SQ	.524	.044	.545	11.845	.000	.945	1.058
a. Predictors: (Constant), Customer Complaint Behaviour,								
b. Predictors: (Constant), Customer Complaint Behaviour, service Quality								
c. Dependent Variable: Customer Loyalty								

Source: Primary Data

CCB=Customer Complaint Behaviour; SQ= Service Quality

Basing on Table 4.41, customer complaints behaviour contributes significantly to customer loyalty (35%), R square change .281; p-value = .000. The results reveal that the variance explained by service quality is significant (F=24.267, p-value=.000). The results further revealed that the regression coefficients for CCB, increased from .135 to .545 (F=87.468 to P-value= .000) when SQ was added to the regression model suggesting that service quality may be exerting a partial mediating effect.

Finally, a regression analysis was performed and the betas examined for the strength, direction and significance of the relationship. In step one, customer loyalty was regressed on the CCB and in step two, customer loyalty was regressed on SQ to assess if there was a significant change. The pertinent results are in Table 4.42.

Table 4.42: Regression results of Customer Complaint Behaviour, Service Quality and Customer Loyalty

a. The Goodness of Fit of Service Quality and Customer Complaint Behaviour

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662[a]	.438	.436	.43377
2	.670[b]	.450	.446	.43003
a. Predictors: (Constant), Service Quality				
b. Predictors: (Constant), Service Quality, Customer Complaint Behaviour				

Source: Primary Data

The model summary of service quality and customer loyalty in Table 4.42 (a) shows that the coefficient of determination R^2 under model one was .438 which meant that the dimensions of SQ (with dimensions of reliability, assurance, empathy, responsiveness, network quality and tangibility) explained 43.8% of the variations in customer loyalty, with 56.2% of the variation remaining unexplained. However, with the addition of variable CCB (with dimensions of redress, voice, exit and commitment) in model two, results show that the coefficient of determination R^2 increased (r=.450) and it therefore provided a fairly good fit, meaning that the model would explain 45% of the variation in customer loyalty, leaving 55% of the variation unexplained.

b. Analysis of Variance Statistics of Service Quality and Customer Loyalty

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.253	1	47.253	251.140	.000[a]
	Residual	60.586	322	.188		
	Total	107.838	323			
2	Regression	48.477	2	24.239	131.073	.000[b]
	Residual	59.361	321	.185		
	Total	107.838	323			
a. Predictors: (Constant), Service Quality						
b. Predictors: (Constant), Service Quality, Customer Complaint Behaviour						

The analysis of variance (ANOVA) was used to assess the overall significance of the regression model. Model 1 in Table 4.42(b), the F-value was 251.140 and the P-value was .000. In model 2, F-value was 131.073, and the P-value was .000. This means that both models one and two were significant with p-values =.000 at α =.05 level of significance in explaining the relationship between CCB, service quality and customer loyalty.

c. Coefficient of the Model of CCB, Service Quality and Customer Loyalty

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.184	.120		9.875	.000
SQ	.600	.038	.662	15.847	.000
2 (Constant)	.977	.143		6.820	.000
SQ	.576	.039	.636	14.927	.000
CCB	.112	.044	.110	2.573	.011
a. Dependent Variable: Customer Loyalty					

Source: Primary Data

 Where SQ = Service Quality;   CCB= Customer Complaint Behaviour

Basing on Table 4.42 (c), the coefficients of the mediated model shows a significant relationship between CCB, service quality and customer loyalty where Beta=.636, P-value=.000 at α =.05 level of significance. This show that service quality (a mediating variable) had a statistically significant influence on customer loyalty where R^2=45% and P-value=.000. After mediation, the results improved to 45% of its variation (R^2=.450). The standardized regression coefficient (b) value of the computed scores of service quality was Beta=.110, F=131.073; and significance level of p-value=.011. Since the Beta coefficient was not equal to zero, and was statistically significant (p-value=.011), therefore, service quality had a significant mediating effect. The pertinent results are summarized in a Table 4.43.

CL= .977+ .636 SQ+.110 CCB = 45% ………………….Model 6

Table 4.43: Summary of Mediating Effect of Service Quality on Customer Complaint Behaviour and Customer Loyalty

Analysis	R	R Square	R Square Change	B	Significance (P-Value)
Analysis One Customer Loyalty and CCB	.263	.069		.263	.000
Analysis Two Service Quality and CL	.239	.057		.239	.000
Analysis Three Step 1: Customer loyalty on SQ	.662	.438		.662	.000
Step 2: Customer Loyalty and CCB	.670	.450	.011	.636	.000

The results in Table 4.38 reveal that the correlation between customer complaint behaviour and customer loyalty was moderate and statistically significant at α=.000 (r=.263, p-value=.000) while that of service quality on customer complaint behaviour was weak and statistically significant (r=.239, p-value=.000). The mediated relationship is represented in Figure 4.4.

Figure 4.4: MedGraph programme graphically depicting mediation among variables of CCB, service quality and customer loyalty.
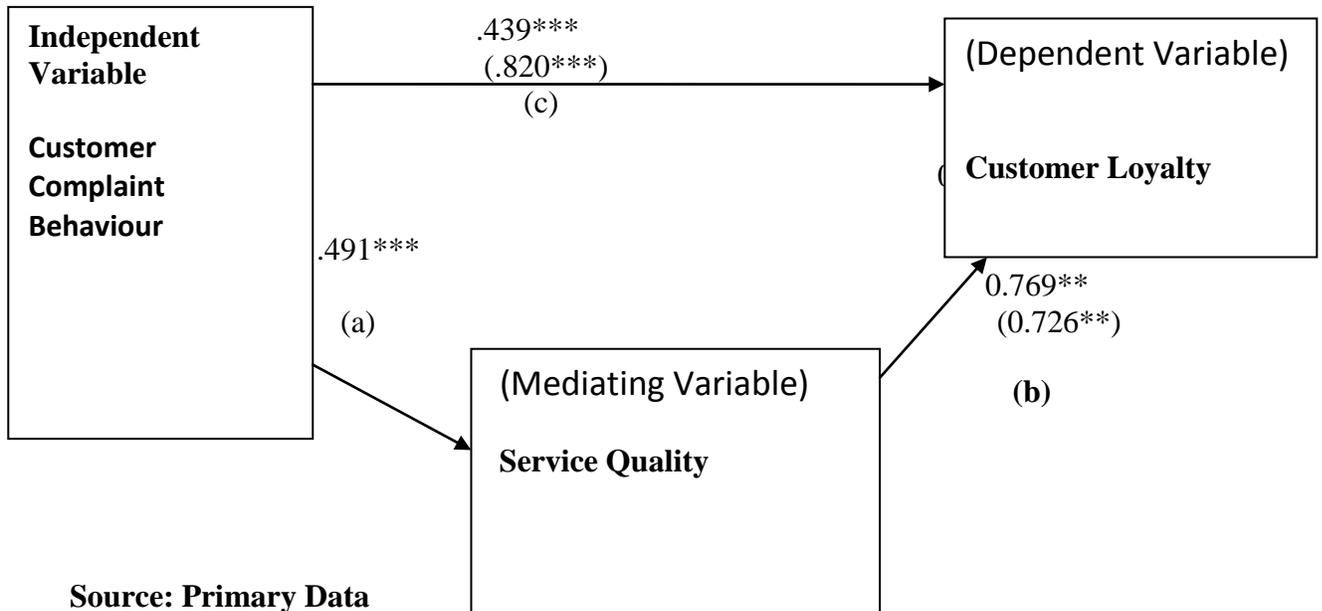
Figure 4.4:   MedGraph of Mediation of Service Quality

Figure 4.4 represents a MedGraph of Service Quality. The mediation of service quality on the relationship between customer complaint behaviour and customer loyalty was further confirmed by use of a medGraph which generated results. The type of mediation is Sobel Z value 4.36048, P=0.000013. There was 95% symmetrical confidence interval where the lower was =.20794; higher =0.54747.

The results imply that the Sobel z value is large and significant, it further confirmed that service quality mediates the relationship between customer complaint behaviour and customer loyalty. Service quality is therefore a significant mediator in the association between customer complaint behaviour and customer loyalty, and this reduces the relationship between the two variables by 1% in the mobile telephone company. This means that the presence of service quality weakens the direct relationship between service quality and customer loyalty. While service quality accounts for 61.7% of the indirect relationship, yet the direct relationship accounts for 61.8%. The main conclusion to be drawn from the relationship was that service quality partially mediates the

relationship between CCB and customer loyalty in Uganda Mobile Telephone Companies. Service quality slightly weakens the direct association between customer complaint behaviour and customer loyalty.

The unstandardized indirect effect: a*b = 0.37771; SE = 0.08661. Basing on effective size measures of the standardized coefficients, the direct measure was .820, the indirect measure was was .535 and the indirect to total ratio measure was .811. The overall total standard coefficient = .439. Further, service quality has a direct relationship with customer loyalty with Beta = .820. Customer complaint behaviour and customer loyalty is significantly mediated by service quality where Beta=.726***; Sig =.000. There is a relationship between service quality and customer loyalty with a statistically significant correlation coefficient of .769**.

4.8.7 Test of Hypothesis seven

The study sought to determine the joint effect of customer complaint behaviour, firm responses, service quality and customer loyalty. To assess the joint effect, hypothesis seven was formulated as follows:

H7: The joint effect of CCB, Firm Responses, Service Quality on Customer Loyalty is statistically significant.

The regression analysis was to establish the joint effect of the study variables (customer complaint behaviour, firm responses and service quality) and customer loyalty if it was statistically significant.

Table 4.44:   Joint effect of Customer Complaint Behaviour, Firm Responses Service Quality and Customer Loyalty

a) **Goodness of Fit**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.439	.43404
2	.695[b]	.483	.480	.41813
3	.700[c]	.490	.485	.41593
a. Predictors: (Constant), Service Quality				
b. Predictors: (Constant), Service Quality, Firm Response				
c. Predictors: (Constant), Service Quality, Firm Response Customer Complaint Behaviour				

Source: Primary Data

The model summary in Table 4.44 (a) shows three models were generated using hierarchical regression analysis. Model one (regression of customer loyalty on service quality) resulted into R^2 value of .441, meaning that 44.1% of the variation in customer loyalty was explained by service quality, leaving 55.9% of the variations unexplained. Model two (regression of customer loyalty on firm response) had R^2 value of .483, which meant that 48.3% of the variations was explained by firm response (with dimensions of compensation, employee behavior and firm procedures); however, 51.7% of the variations in customer loyalty were left unexplained. Model three (regression of customer loyalty on customer complaint behaviour) had R^2 value of .490 which meant that 49% of the variation in customer loyalty was explained by CCB (with dimensions of redress, voice, exit and commitment), leaving 51% of the variations unexplained. Model three in the Table 4.44 (a) with R^2 value of 49% provided a fairly moderate fit, relative to the other two models, it provides the best fit.

b). Analysis of Variance of Customer Complaint Behaviour, Firm Responses, Service quality and Customer loyalty.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.549	1	47.549	252.396	.000[a]
	Residual	60.284	320	.188		
	Total	107.833	321			
2	Regression	52.060	2	26.030	148.883	.000[b]
	Residual	55.773	319	.175		
	Total	107.833	321			
3	Regression	52.820	3	17.607	101.775	.000[c]
	Residual	55.013	318	.173		
	Total	107.833	321			
a. Predictors: (Constant), Service Quality						
b. Predictors: (Constant), Service Quality, Firm Response						
c. Predictors: (Constant), Service Quality, Firm Response Customer Complaint Behaviour						
d. Dependent Variable: Customer Loyalty						

Source: Primary Data

Table 4.44 (b) the ANOVA statistics show that Model one had F- value of 252.396 and with a P-value of .000. Model two had an F-value of 148.883 and a P-value of .000 and then model three had an F-value of 101.775 and a P-value of .000. The results of models one, two and three were all statistically significant with p-value=.000, at α = .05 level in explaining multiple relationships between service quality, firm responses, customer complaint behaviour (CCB) and customer loyalty. Therefore, there was a significant relationship between customer complaint behaviour, firm responses, service quality and customer loyalty.

c. Regression Coefficients of the Integrated Model of Customer Complaint Behaviour, Firm Responses, Service Quality and Customer Loyalty

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.325	.139		9.536	.000
	SQ	.558	.044	.579	12.768	.000
2	(Constant)	1.262	.140		9.015	.000
	SQ	.494	.050	.513	9.877	.000
	FR	.095	.037	.131	2.528	.012
3	(Constant)	1.021	.167		6.120	.000
	SQ	.478	.050	.496	9.562	.000
	FR	.078	.038	.109	2.079	.038
	CCB	.135	.052	.121	2.599	.010
a. Dependent Variable: Customer Loyalty						

Source: Primary Data

SQ= service Quality; FR= Firm Responses; CCB = Customer Complaint Behaviour

Basing on coefficients of determination in Table 4.44 (c), it shows that the three independent variables namely service quality, firm responses and customer complaint behaviour were all significant (P-value=.000). This implies that all the three output (coefficients of determination) were significant at α=.05 level of significance explaining variations in customer loyalty. It is therefore concluded that there was a significant relationship between CCB, firm responses, service quality and customer loyalty of Mobile Telephone Companies in Uganda.

Table 4.45: Summary of the Regression Models (Stepwise Regression)

Independent	Dependent Variable								
	Model 1			Model 2			Model 3		
	B	Beta	t	B	Beta	t	B	Beta	t
Constant	1.175**		9.787	1.007**		8.367	.851**		6.035
SQ	.603**	.579**	15.887	.473**	.513**	10.599	.461**	.496**	9.562
FR				.095**	.131**	2.528	.078**	.109**	2.079
CCB							.135*	.121**	2.599
R^2	.441			.483			.490		
Adj R^2	.439			.480			.485		
F	252.396**			148.883**			101.775**		
R^2 Change	.441**			.042**			.007**		
F-change	252.396**			25.805**			22.292**		

* Sig. at 0.05;   ** Sig at 0.01
Source: Primary data

From Table 4.45, the following regression equations are derived:
Model 1: CL= α +β₁SQ
Model 2: CL= α +β₁SQ+β₂FR
Model 3: CL= α + β₁SQ+ β₂FR+ β₃CCB

Customer Loyalty=1.021 +.579 SQ+ .131 FR +.121 CCB, R^2=49% ....Model 7
Where:
α = a constant;
CL= Customer Loyalty   SQ= Service Quality
FR= Firm Responses;   CCB=Customer Complaint Behaviour

As indicated in the summary of the regression models (Table 4.45), the first regression model (Model 1) shows that service quality had a significant effect on customer loyalty accounting for 44.1% (F=252.396**; Beta = .579; P-value <0.01) of the variance in customer loyalty among the sampled mobile telephone subscribers in Uganda. In model 2, there was an inclusion of firm responses and the resulting analytical model led to a significant contribution in the variance, accounting for 48.3% (F=148.883**; R^2=48.3%); with Beta=.131, p-value < 0.01). This implies that firm responses were a significant

predictor of customer loyalty, giving an additional explanatory power of the model. It accounted for an additional 4.2% of the variance in customer loyalty (p-value<0.01).

With respect to model 3, with the inclusion of customer complaint behaviour, it led to an additional .007 to the explanatory power of the model. This means that customer complaint behaviour accounted for only 7% of the variance in customer loyalty, with F statistic=101.775**; P-value=0.01). Customer complaint behaviour, firm responses and service quality significantly predicted customer loyalty with 49%, with Beta=.121). In conclusion, there was a statistically significant positive effect on customer loyalty with all the three models accounting for 49%. The mathematical model three (3) therefore provides the best fit in explaining the relationship between CCB, firm responses, service quality on customer loyalty.

The study sought to determine the joint effect of customer complaint behaviour, service quality and firm responses on customer loyalty. The joint effect of CCB, firm responses, service quality and customer loyalty is shown in Table 4.46.

Table 4.46 (a): Regression of joint effect of independent variables and Customer retention.

Independent	Dependent		
	Model 1		
	B	Beta	T
Constant	2.519		34.403**
CCBFRSQ	.030**	.509**	10.813**
R^2	.259**		
Adj R^2	.257**		
F	116.955**		

Source: Primary Data
CR= 2.519 + .509 CCBFRSQ, R^2= 25.9%
WOM = 2.260 + .443 CCBFRSQ, R^2= 19.6%

CR= Customer Retention, WOM = Word of Mouth FR= Firm Responses SQ= Service Quality, CCB= Customer Complaint Behaviour

Table 4.46 (b): Regression of Joint Effect of Independent Variables and WOM

Independent	Dependent		
	Model 1		
	B	Beta	T
Constant	2.260		28.030
CCBFRSQ	.027*	.443**	9.022
R^2	.196**		
Adj R^2	.194**		
F	81.399**		

Source: Primary Data

As shown in Table 4.46 (a), the interaction effect of customer complaint behaviour, firm responses and service quality (CCBFRSQ) on customer retention explains only 25.9% (F= 116.955**, P-value=.000). This means that customer complaint behaviour, firm responses and service quality significantly explained 25.9% of customer retention. As shown in Table 4.46 9(b), the interaction effect of customer complaint behaviour, firm responses and service quality (CCBFRSQ) on WOM explains only 19.6%. This means that customer complaint behaviour, firm responses and service quality significantly explained 19.6% of customer loyalty (F=81.399; P-value=.000). The joint effect of independent variables on both WOM and customer retention is less than the effect of individual contribution. The sum of individual contribution (Table 4.44) through R-square change in the hierarchical regression was 49%.

The R square change of the joint effect is a sum of the effects (.618); yet the individual variables accounted for the sum of the effects (.617), which makes it greater by .001 (1%). However, from Table 4.45 based on Hypotheses 7, the product of the joint effect of CCB, service quality and firm responses on word of mouth was r=.196**; and for word of mouth the combined effect was significant at r=.259**. This means that the hypothesis 7 (The joint effect of CCB, service quality and firm responses is greater than the sum of the effects of individual variables on customer loyalty) was rejected.

The hypothesis seven should be: The sum of the effects of individual variables of customer complaint behaviour, firm responses and service quality is greater than the joint effect of the variables on customer loyalty.

The summary of hypotheses testing is given in Table 4.47.

Table 4.47: Summary of Hypotheses Testing

Hypothesis	Analytical Model	R	R^2 value	ANOVA (P-value)	β-Value	Coefficient (P-Value)	Decision
H_1: There is a significant relationship between CCB and customer loyalty.	CL=2.329+ 0.263CCB, p<.05, R^2= 6.9%	.263	6.9%	.000	.263	.000	Hypothesis not rejected
H_2: There is a significant relationship between firm responses and customer loyalty ne subscribers.	CL=1.790+.548 FR, p<0.05, R^2= 30.1%	.548	30.1%	.000	.548	.000	Hypothesis not rejected
H_3: There is a significant relationship between CCB and service quality.	SQ=2.429 +.239CCB, p<0.05, R^2= 5.7%	.239	5.7%	.000	. 239	.000	Hypothesis not rejected
H_4: Thereis a significant relationship between service quality and customer loyalty.	CL=1.184+.662 S, p< 0.05, R^2= 43.8%	.662	43.8%	.000	.662	.000	Hypothesis not rejected
H_5: The relationship between CCB and customer loyalty is significantly moderated by firm responses.	CL=126+.800C CB +1.400FR- 1.386K, p<0.05, R^2= 25.3%	.503	25.3%	.000	.503	.000	Hypothesis not rejected.
H_6: The Relationship between CCB and customer loyalty is mediated by service quality.	CL=.997+.636S Q +.110CCB, P<.05, R2=45%.	.636	45%	.000	.636	.000	Hypothesis not rejected
H_7: The joint effect of CCB, firm responses, service quality on customer loyalty is statistically significant.	CL=1.021+.579 SQ+.131FR+ .121CCB, p< 0.05, R^2= 49%	.726	49%	.000	.726	.000	Hypothesis not rejected.

Source: Primary Data

The results in Table 4.47 give a summary of the objectives, hypotheses, findings and conclusions. The findings failed to reject all the study hypotheses except (Hypothesis seven) the one relating to the joint effect of study variables of CCB, firm responses, service quality and customer loyalty. Service quality mediates the relationship between customer complaint behaviour and customer loyalty. However, the partial effect of firm responses (moderating effect) through an interaction on CCB was statistically significant but negative. They support the study proposition that firm responses statistically and significantly moderates customer complaint behaviour and customer loyalty.

4.9   Discussion of Results

This section discusses the results of data analysis in line with the objectives and the conceptual hypotheses of the study and was also compared with the findings of other researchers at national and international levels. The researcher developed a conceptual framework derived from the existing customer loyalty literature and empirically tested the relationships. The conceptual model outlined the relationship between the variables and described how the variables are linked to the various hypotheses. The results are in agreement with some of the findings while others suggest some improvements especially regarding the moderating and mediating variable of the study.

4.9.1   Customer Complaint Behaviour and Customer Loyalty

Objective one was to determine the relationship between CCB and customer loyalty of mobile telephone subscribers in Makerere University. Table 4.31 provides the model summary of customer complaint behaviour and customer loyalty where the coefficient of determination (R^2) was .069 which meant that the independent variable (CCB) explained 6.9% of the variations in customer loyalty. There was a statistically significant linear relationship between CCB and customer loyalty (β= .263; $p < 0.05$) and hence the study failed to reject hypothesis H_1.

The influence of customer complaint behaviour on customer loyalty was low as the model accounted for merely 6.9% variability, having little explanatory power of the dependent variable.

The study established that there were four dimensions of CCB, namely redress, voice, exit and commitment. The results disagree with the suggestion of Hirschman (1970) regarding CCB about exit, voice or loyalty and the findings of Day and Landon, (1977) that had dimensions of customer complaint behaviour as private action and public action. On the other hand, the findings of the study agree with Hirschman's 1970 suggestion that consumer response to decrease in quality was a function of the nature of the industry.

Subscribers complain when the MTC is the source of disappointment seeking for an explanation about their dissatisfaction from the company. This happens when complaining becomes easier and redress becomes more certain, that consumers may be more likely to speak up. Priluck and Lala (2009) were in agreement with the findings and they add that such companies have a defensive attitude towards customer complaints. Consequently, they seek to spend as little as possible on resolving customer complaints and therefore may fail to retain the dissatisfied customers. Kau and Loh (2006) suggest that complaining was done by people with little else to do. Johnston and Michel (2009) add that customer complaint behaviour is the expression of unfavourable attitude towards an object, person or situation. Unfortunately, some companies who do not rise to the challenge of complaining customers are turning down an important opportunity of getting information on customer dissatisfaction and on reclaiming and improving a relationship with the customers (Rothenberger et al., 2008).

4.9.2   Firm Responses and Customer Loyalty

The second objective of the study was to assess the relationship between firm responses and Customer Loyalty. The model summary in Table 4.32 shows that the value of R^2 was 30.1%, meaning that firm responses elements explained only 30.1% of the variations in customer loyalty in a linear relationship between the two, with β= .548, P-value=.000.

This means that there was a high positive significant relationship between firm responses and customer loyalty and therefore failed to reject the hypothesis.

In addition, the current study sought to establish the extent to which company procedures and policies are in place to make timely decisions to address customer concerns especially regarding handling customer complaints. The study established that procedures for handling mobile telephone subscriber's complaints were in place (Table 4.17). Gruber (2011) agrees that procedures for handling subscriber's complaints are important, but adds that the challenge is whether such procedures are well communicated to the MTS. Gelbrich and Roschk (2010) are in agreement that firm procedures are a key contributor to the achievement of loyal customers. Basing on employee behaviour, MTC staff need to handle customer complaints with courtesy and attentiveness to establish the cause of dissatisfaction, whether it is likely to reoccur or not. Gruber (2011) asserts that companies ought to have contact employees with sufficient service knowledge like attentive listening skills and experience to ably handle customer complaints. In addition, Komunda and Oserankhoe (2012) suggest that staff need to go beyond smiling to have empathy and try to appreciate the problem of the dissatisfied customer.

4.9.3 Customer Complaint Behaviour and Service Quality

The objective of the study was to examine the relationship between customer complaint behaviour and service quality. In a linear regression, Table 4.33 shows that service quality had a statistically significant influence on customer loyalty. The model summary shows that the value of $R^2 = 43.8\%$, ($\beta= 239$, P-value= .000), impling that service quality influences customer loyalty of mobile telephone subscribers.

In this study, network quality, tangibility and service convenience came out with the highest mean scores among the service quality dimensions (Table 4.27). In addition, this study found that dissatisfaction causes complaints. To a moderate extent, the subscriber speaks to friends and relatives about his/her bad experience", with mean score, 3.23 (Table 4.16). Heung and Lam (2003) is in agreement with these findings and states that the subscribers who speak to their friends may be a result of bad experience in the past

where they were handled with rudeness when seeking redress from the mobile telephone company. Consistent with previous studies, Michel and Meuter (2008) suggest that poor service quality and ineffective service recovery may threaten the long-term survival of the organisation. However, the mobile telephone companies which carry out effective complaint handling may provide reliable services.

4.9.4 Service Quality and Customer Loyalty

The objective of the study was to establish the relationship between service quality and customer loyalty. In a linear regression, Table 4.34 shows that service quality had a statistically significant influence on customer loyalty. The model summary showed that $R^2 = 43.8\%$, P-value= .000), meaning that service quality elements explained only 43.8% of its variation in customer loyalty, with β=.662. The statistic significant relationship in the model implies that service quality highly influences customer loyalty of mobile telephone subscribers. Ramzi and Mohamed (2010) confirm that dimensions of service quality such as empathy, assurance and reliability significantly predict customer loyalty.

In their conceptualisation of service quality, Parasuraman et al. (1988) suggested the traditional five dimensions of service quality namely reliability, assurance, empathy and tangibility from which they got the SERVQUAL (service quality measurement instrument) scale. This study queried the service quality scale and their dimensions that service quality dimensions may vary from one service sector to another basing on technology factors. However, the findings of this study corroborate all the five dimensions of Parasuraman but suggest some two extra dimensions which were extracted in the factor analysis namely network quality and service convenience (Appendix 12b).

Che and Ting (2002) identified 12 dimensions of service quality (SQ) as communication, security, understanding the customer, competency, reliability, courtesy, accessibility, tangibility, responsiveness and credibility. They bring out reliability as having the greatest influence on customer loyalty. However, this study demonstrates seven dimensions of SQ that influence customer loyalty among mobile telephone subscribers of Makerere University but the service dimension with the highest predictive power of

customer loyalty was network quality. The results confirmed the shortfall of the SERVQUAL scale by Parasuraman (1988) in terms of dimensionality which was also observed by (Buttle, 1996) and Hutchinson et al. (2007). The results support previous study findings by Hutchinson et al. (2007) who suggested the additional dimensions of SQ, namely network quality and service convenience (based on the technology related services). With regards to network quality, Lai et al. (2007) assert that network coverage, all time availability and no drop calls were important aspects that affect customer perceptions of mobile telephone subscribers on service quality. Basing on service convenience, Kim et al. (2003) confirmed that customers prefer ease of access and convenient operating hours in selecting telephone operators. In this regard, the hypothesis that there was a significant relationship between SQ and customer loyalty was not rejected.

4.9.5 Customer Complaint Behaviour, Firm Responses and Customer Loyalty

The objective of the study was to determine the influence of firm responses on the relationship between service quality and customer loyalty. Basing on Baron and Kenny (1986), the moderating effect was computed. In this case, it involved testing the main effect of the independent variable (CCB) and the moderator variable (firm responses) on the dependent variable (customer loyalty). Moderation is assumed to take place when the interaction term between independent variable and the moderating variable is significant (Hayes, 2009; MacKinnon and Fairchild, 2009). The relationship between linear study variables (CCB and customer loyalty) was statistically significantly (R^2=18%), however this improved after moderation by firm responses in Table 4.36 (R^2= 25.3%, P-value=.000). This means that there was an improvement in the relationship between CCB and customer loyalty with the introduction of the interaction term, and the relationship was positive and statistically significant (P-value= .000). Gruber (2011) confirms the importance of firm responses that for companies to be able to handle customer complaints effectively, they have to understand the critical contact employee behaviours from a customer's point of view. In addition, respondent's value employees who are courteous have empathy and create understanding in the process of handling the

complaints of MTC subscribers, and this has an impact to respondents feeling secure (assurance) and consequently leading to customer retention.

Table 4.16 indicated that "to a moderate extent", the subscribers do not believe the MTC's explanation regarding why the failure occurs (mean score=2.58). However, Gruber (2011) agrees with the findings that dissatisfaction that results from an unsatisfactory experience like rude and unapologetic staff as well as inadequate compensation will incite consumers to undertake another form of action like complaining to family and friends (negative WOM). In agreement, Grewal et al. (2008) asserts that dissatisfied customers who are not well handled will be disloyal to the company. A mobile telephone company needs to ensure that mobile telephone subscribers are handled with courtesy and by attentive listening staff to be able to handle their complaints to their expectations. In any case, staff who do not provide a logical explanation to the customer are unable to recover failures and this is consistent with the findings of Davidow (2000).

Previous studies confirm that firm responses moderate CCB and customer loyalty and the relationship were positive and statistically significant; and this was confirmed by Priluck and Lala (2009). From Table 4.17, well established firm procedures was "to a moderate extent" important for the mobile telephone companies with a mean score=2.96. This means that it is only fair that procedures are in place and well communicated when mobile telephone subscribers provide information on how and where to complain.

Table 4.15 indicates that "to a small extent", dissatisfied customers get compensation from all service failures and this may be in terms of refunds, exchange or even an apology. Gruber (2011) confirmed the finding that customers could be satisfied with only a partial refund, but added that they had to be treated kindly and respectfully. On the contrary, MTS who are treated unpleasantly may not continue having a relationship with the service operator and may engage in negative WOM even in the case of a total refund.

4.9.6 Customer Complaint Behaviour, Service Quality and Customer Loyalty

The objective of the study was to assess the effect of service quality (mediator variable) on the relationship between customer complaint behaviour and customer loyalty. After

mediation, the result in Table 4.42 show that service quality had a statistically significant influence on customer loyalty as a mediating variable where the significance level was p-value=.000, β= 636, with the coefficient of determination (R^2=.450), meaning that the mediating variable made a contribution of 45%. The main conclusion to be drawn from the relationship was that service quality partially mediates the relationship between CCB and customer loyalty in the Uganda Mobile Telephone Companies. From the modGraph results, service quality accounts for 61.7% of the indirect relationship, yet the direct relationship accounted for 61.8%. Service quality slightly weakens the direct association between CCB and customer loyalty.

The study established the mediation of service quality on CCB and customer loyalty, revealing that the mediating effect of service quality was positive and statistically significant and therefore the hypothesis six was not rejected. The results suggest that service quality may play an important role in influencing the relationship between customer complaint behaviour and customer loyalty. Previous studies show a linear positive and statistically significant relationship between customer complaint behaviour and customer loyalty (Komunda & Osarenkhoe, 2012; Gruber, 2011).

4.9.7: The Joint Effect of Study Variables

The objective of the study was to determine the joint effect of customer complaint behaviour, firm responses and service quality on customer loyalty.

The study failed to reject the hypothesis that the joint effect of CCB, firm responses, service quality on customer loyalty was statistically significant. In Table 4.44, findings indicate that the sum of the individual variables of customer complaint behaviour, firm responses and service quality significantly predicted customer loyalty with 49%, with Beta=.726. In conclusion, there was a statistically significant positive effect on customer loyalty with all the three models accounting for 49%. The mathematical model in Table 4.46 therefore provides the best fit in explaining the relationship between CCB, firm responses, service quality on customer loyalty. This means that the joint effect of CCB, firm responses and service quality (independent variables) had a moderate effect on

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customer loyalty with 25.9% by prediction of customer retention by independent variables; and there was a 19.6% prediction of word of mouth by indendent variables. The joint effect of CCB on customer loyalty was positive and statistically significant. The regression analysis was useful for comparing two variables to see whether controlling for other independent variables would affect the model.

For the first independent variable (CCB), the argument was that with improved customer complaint behaviour, this would lead to improved WOM and more retention of Mobile Telephone subscribers. According to Sweeny et al. (2012), some people view word of mouth as a recommendation, while others view it as giving or recieiving any comment about a product or service. Mazzarol et al (2002) asserts that the emotive aspect of WOM messages is a strength of advocacy that relates to the intended power in delivering a common message. Brown et al. (2005) suggests that WOM has its own credibility. This is because WOM usually follows a complaint and a subsequent recovery effort. Kilby (2007) and DeCarlo et al. (2007) agree that WOM is very important especially with regard to its implications to trust and associated outcomes, as well as its known credibility. In addition, WOM was found to be common among customers who voiced complaints. Voorhees et al. (2006) found that customers who choose to complain indicated higher levels of negative affect and perceived regret and were less satisfied and less likely to repurchase in the future than those who did not complain.

Then the second independent variable (mediator) was added in the regression that the quality of service (reliability, responsiveness, empathy, tangibility, convenience, network quality and assurance) would influence the complaining behaviour when MTS got a dissatisfaction experience. In addition, the firm responses was measured by employee behaviour, compensation and firm responses. This is in agreement with the findings from Wong and Sohal (2003) that service quality is the most powerful competitive weapon which many leading organisations possess. Service quality and the level of satisfaction are thought to determine the likelihood of repurchase decisions. They add that organisations which strive to have and maintain a service quality may gain loyal customers. Consistent with previous studies, this idea suggests that companies no longer compete on cost but on their ability to satisfy customers.

Basing on employee behavior, the items were used to explain whether the staff were polite and able to explain the problem helping the MTC subscribers to understand; or were willing to compensate subscribers for their loss in terms of anticipated benefits. In addition, firm procedures included facilitation having impact on negative WOM, repurchase intentions and having procedures for resolving customer complaints in place. Both the moderation and mediation were positive and statistically significant measures.

From previous findings, there is an apparent disregard of customer complaints, and this is worsened by the seriousness of customer dissatisfaction in the short and long term leading to negative word-of-mouth (Lerman, 2006). Further, exiting/switching to competitor firms is a possible option to subscribers because they have alternatives available, switching barriers exist but are low. Helms and Mayo (2008) suggest that lack of soft skills of contact employees (being rude and not paying attention to customers is the most crucial problem that causes customers to defect to other service providers. Consequently, customer defection may inevitably lead to the high costs of acquiring new customers (Helms & Mayo, 2008).

Alternatively, a positive approach to dealing with customer complaints should help to maintain customer relationships and generate positive communication about the company. Moreover, Gruber, (2012) states that complaining gives the customer an opportunity to receive an apology for the inconvenience, be offered a fair solution of the problem, be treated in a manner where the service company appreciates the customer's problem and to be offered some value-added atonement for the inconvenience. Customers want to feel that they are in good hands and expect fair treatment ("justice") from the MTC. Having invested time and effort in bringing a problem(s) to the attention of the MTC, complaining MTS expect management/staff to make appropriate responses. Respondents expect staff of MTC to be friendly, courteous and respectful.

Based on the results of the study, the results are presented in the modified conceptual framework in Figure 4.5.

Figure 4.5: The New Conceptual Model
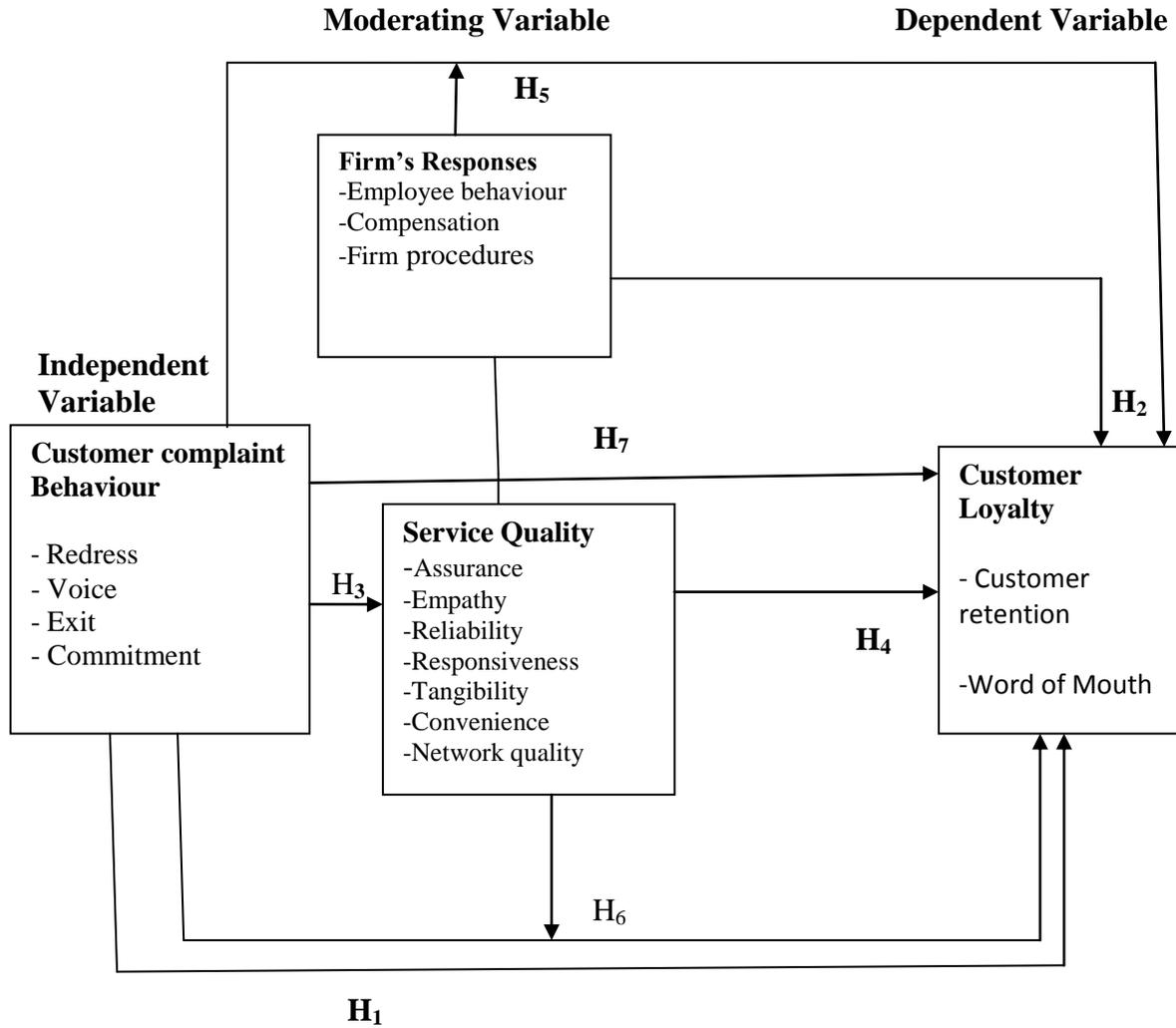
Models

H_1: CL=2.329 + .263CCB, R^2= 6.9

H_2: CL+1.790+.548FR, R^2=30.1%

H_3: SQ=2.429 + .239CCB, R^2= 5.7%

H_4: CL= 1.184+.662SQ, R^2= 43.8%

H_5: CL = -.126 +.800CCB+ 1.400FR-1.386, R^2= 25.3

H_6: CL= .997 + .636SQ +.110CCB, R^2=45%

H_7: CL = 1.021 + .579SQ+ .131FR+ .121CCB, R^2= 49%

Conceptual model (Figure 4.5) shows the inter relationships among study variables

4.9.8:   Chapter Summary

The chapter presented the results of the key study variables. The hypotheses tests were computed in line with objectives. The results revealed statistically significant results at P-value= .05 significant level between customer complaint behaviour and customer loyalty, firm responses and customer loyalty, service quality and customer loyalty; the effect of the moderating factor (firm responses) on customer complaint behaviour and customer loyalty; the effect of the mediating factor (services quality) on customer complaint behaviour and customer loyalty. Then finally the joint effect of customer complaint behaviour, firm responses, service quality on customer loyalty was statistically significant and had the best model fit compared to the linear relationships, the mediating and moderating relationships. The chapter also presented the discussion of results in line with theoretical and empirical studies.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1   Introduction

This chapter presents a summary of the key study findings, conclusions and recommendations based on the research objectives. The researcher developed a conceptual framework derived from the existing customer complaint behaviour, firm responses, service quality and customer loyalty literature and then empirically tested the relationship between the study variables. The chapter further discusses the theoretical and managerial implications, identifies policy recommendations, highlights limitations to the study and finally presents areas for further research.

5.2   Summary

The overall objective of the study was to determine the effects of customer complaint behaviour, firm responses and service quality on customer loyalty of mobile telephone subscribers. The current study sought to establish the influence of CCB on customer loyalty of mobile telephone subscribers and assessed how firm responses (moderator) and service quality (mediator) influenced this relationship. The study hypothesized the existence of a significant relationship between CCB and customer loyalty and the seven hypotheses about these relationships were tested using primary data. This section summarizes the major findings.

The results of the study revealed that the influence of CCB on customer loyalty of the mobile telephone operators was positive and statistically significant (β=.263, p< 0.05) and was partially mediated by service quality. Further, firm responses had a statistically significant moderating effect on CCB and customer loyalty. This means that the concepts of firm responses (compensation, employee behaviour and firm procedures) can be used to lead MTS to be loyal. However, the joint effect of customer complaint behaviour, firm responses and service quality was less than the sum of the effects of individual variables on customer loyalty. The research findings contribute to the general body of knowledge on consumer behaviour by providing a basis for linkage (integration)

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of isolated variables of CCB, firm responses, service quality and customer loyalty and presents a relationship between the study variables.

An assessment of the effect of CCB, firm responses and service quality on customer loyalty revealed a statistically significant positive linear relationship, indicating that CCB, firm responses and service quality in stepwise regression (individually) had more impact on customer loyalty than as a joint effect. Service quality had positive and significant direct relationship with variables namely CCB and customer loyalty and also as a mediating variable. Therefore the management and policy makers of MTCs need to pay attention to service quality in terms of service convenience, tangibility, network quality, responsiveness, assurance, empathy and reliability dimensions in trying to improve the loyalty of mobile telephone subscribers.

Firm responses had a positive and significant linear correlation with customer loyalty (β=.548, p<0.05). The moderating effect (customer complaint behaviour*firm responses) and customer loyalty was statistically significant where β =-.261, p<0.05. The management of MTCs need to pay attention to firm response dimensions namely: employee behaviour in terms of the company employing credible staff. The company staff should be attentive listeners and put in effort to create an understanding when dealing with customer complaints in trying to improve the loyalty of mobile telephone subscribers. Further, the management of MTCs needs to establish clear firm procedures in terms of giving an apology for the problem and possible inconveniences suffered, then promptly handling complaints and facilitating the subscriber with the information regarding the process of handling the complaint. In the same vein, compensation should be made in a timely and courteous manner; otherwise the MTC will fail to recover failure leading to negative referrals, unfavourable WOM and consequently to low repurchase decisions.

5.3   Conclusions

The study established statistically significant correlations among the study variables. Based on the results obtained from the tests of the study hypotheses it was concluded that the influence of CCB on customer loyalty was direct and partially mediated by service quality. Both influences are positive and statistically significant ($p < 0.05$). In addition, the influence of CCB and customer loyalty was partially but negatively moderated by firm responses. The moderation effect of firm responses on the relationship between CCB and customer loyalty was statistically significant. This implies that MTCs in Uganda need to actively pay attention to firm responses in terms of compensation to meet expectations of the mobile telephone subscribers for example by giving discounts; employee behaviour like listening to complaints attentively, use of "soft skills" like courtesy, empathy, friendliness and confidentiality. The factors of firm procedures that were important to the study were having clear procedures and promptly handling complaints. In addition, customer loyalty measures were positive WOM communication and retention of customers.

Further, service quality had positive and statistically significant direct effect on customer loyalty ($p < 0.05$). This suggests that any improvements on the quality of services like service quality dimensions namely tangibility, service convenience, network quality, assurance, empathy and responsiveness have direct but varying impacts on customer loyalty. To sustain the loyalty of telephone subscribers, the research results showed that the management of MTCs should put emphasis on dimensions of service quality as well as on firm responses (employee behaviour, compensation and clearly well communicated and applied firm procedures). This will enable the MTC to behave in the desired manner of seeking redress even when they have been disappointed by the services. Finally, the joint effect of CCB, firm responses and service quality was statistically significant and was the best fit, implying that the integration of the study variables of CCB, firm responses, service quality was greater than effects of individual variables on customer loyalty.

5.4   Recommendations

It is recommended for policy makers and management of mobile telephone companies in Uganda to improve on handling mobile telephone subscribers' complaints by considering firm responses and service quality. This is because firm responses has a moderating effect on customer complaint behaviour and customer loyalty while service quality has a mediating effect on customer complaint behaviour and customer loyalty and their effect was statistically significant. The factors for firm responses were employee behaviour, firm procedures and compensation; and those for service quality were service convenience, tangibility, network quality, assurance, empathy, responsiveness and reliability (in order of importance). These factors should be identified and closely addressed in order to improve loyalty of mobile telephone subscribers.

Mobile telephone companies should take a keen interest in the moderator variable (firm responses) dimensions like compensation of complaining customers with discounts, exchanges, free SMS and free airtime. In case of employee behaviour, staff should create an understanding with the MTC subscribers by explaining how the failure occurred and what the company is doing/planning to do to remedy the situation to stop recurrence. Finally, firm procedures should be well known to the MTS for effective handling of customer complaints like facilitation and empowerment of staff to handle complaints and a well communicated system in handling complaints.

Companies should compensate MTS on basis of their expectations (although it may be costly), and should use the customer expectations as a benchmark. They should also handle complaints in the quickest and best way possible by saving the subscriber's time (acting promptly). This should be to the subscribers' convenience.   Further, service failure should be recovered with courtesy, with assurance/confidence about security of future service operations by promising and working towards minimizing dropped calls and mobile money inaccessibility.

As a policy issue, MTC should recruit staff who have (but not limited to) soft skills like talking nicely to both fellow staff and the MTS and having good interpersonal

relationship. The target should be to work towards winning and retaining MTS by creating a good impression through friendly interactions. For successful complaint resolutions, MTC management should design training programmes for staff in effective communication and handling customer complaints. Like Gruber (2011) suggests, staff should go beyond just smiling to having a warm hearty response to treat subscribers nicely when handling complaints.

MTCs should have a positive approach to dealing with customer complaints like "a complaint is gold" to help maintain relationship with the MTS and generate positive communication about the company for image creation and consequently customer retention. This implies that management should encourage dissatisfied customers to complain to express their feelings and suggest how best they would want their problems to be addressed. Management of MTCs should provide timely convenient channels for MTS to express their disappointment about the service failures.

In addition, management should put in place easily accessible avenues through which subscribers can voice their complaints, like using customer care centres, suggestion boxes and 24 hour automated services regarding frequently asked questions instead of leaving subscribers to complain privately to their social groups. This can be by use of prompt service recovery in situations of encountering service failures which lead them to switch, quietly walk away or complain privately to their social groups through social media like facebook, whatsApp and twitter or complain directly to friends and family. Mobile telephone operators should be proactive by anticipating negative WOM and minimizing such words from getting to the social media/networks.

The MTCs can have a positive approach to dealing with the customer complaints to help maintain customer relationship. Management of MTCs should design a programme like "The wonders of Mobile Telephone" where subscribers who have been delighted by the MTC services could be interviewed on the radio, television and newspaper like those who get rescued by the assistance of mobile telephones; successfully tracking thieves and terrorists with mobile telephones, and success in business due to use of mobile telephone networks.

Finally, MTC should put in place a system of recording all complaints from the subscribers, then effectively communicating these to the staff of the company and working towards avoiding recurrence of the same problems. The notes will be used to find solution to the problem and kept as a record to be used in the future to avoid recurrence (stability in terms of attribution theory) which may hinder subscribers from voicing complaints in future.

5.5   Implications of the Study

The research examined the relationship between customer complaint behaviour, firm responses, service quality on customer loyalty of mobile telephone subscribers. The findings from this research present a number of issues that have implications for the theory of marketing, managerial practices and policy issues.

On managerial implications, when firm responses moderated CCB and customer loyalty, results showed that the MTC operators need to improve their performance across services especially on employee behaviour, compensation and firm procedures when handling complaints to match customers' expectations.

 The results of mediation and moderation testing have several managerial implications. CCB and customer loyalty was partially mediated by service quality. This implies that the mobile telephone company operators were considered to have a quality service for customer loyalty if they provided services as promised, are dependable and could handle complaints of the subscribers promptly meeting their expectations. Management of MTC should consider and monitor the SQ dimensions especially the convenience, tangibility and network quality which weighed "to a moderate extent" (Mean score above 3.00) to be of importance for monitoring customer dissatisfaction and aim at providing services that exceed customers expectations. Mobile Telephone Companies need to routinely survey on CCB so as to keep track of how mobile telephone subscribers respond to complaints, that is whether they voice, seek redress, keep committed to the company or exit as this impacts on their loyalty to the operators. Consequently, the MTC operators will be able to handle their subscriber's dissatisfactions as or before they arise.

The study results evidence that firm responses (employee behaviour, compensation and firm procedures) had a strong linear influence on customer loyalty. From the employee behaviour perspective, managers of MTC need to pay close attention on 'customer care strategies' of courtesy, empathy and effective communication to achieve customer loyalty. Further, results of the test for moderation effect of firm responses had partial moderation between CCB and customer loyalty which was statistically significant. The moderation negatively but significantly impacted on customer loyalty.

MTC can improve on loyalty of subscribers if management of mobile telephone operators can improve on the services of the company in terms of compensation of staff who get dissatisfaction with the services; employee behaviour ought to be monitored in terms of staff having courtesy, listening attentively to mobile telephone subscriber's complaints and consequently handling those complaints to customer's expectations. Firm responses have to be clearly communicated by management of MTC to subscribers on what the company is doing/planning to do about the complaint, timeliness regarding handling the complaints and having clear firm procedures to help subscribers on what to do after the dissatisfaction; where they can complain, how to make follow up and get feedback.
Finally, policy makers of UCC and Ministry of Information and Communications Technology should work together with Mobile Telephone Companies by giving them skills basing on employee behaviour and firm responses to ensure quality service delivery and adequate handling of complaints from MTS.

5.6   Limitations and Future Research

Cross sectional research design is a cost and time saving method (given the time constraint of the study) but it may limit deeper investigations of many other possible causal relationships in the study. Consequently, a longitudinal study would provide more insightful findings of the study.

Another limitation lies in the retrospective nature of the questionnaire procedure. Although this allowed the collection of a large sample of service encounters with real failures, problems associated with memory lapses, validation tendencies or consistency

factors could have biased the results. Thus, it would be advisable to employ techniques where information is collected at the time when the event under study is happening. Nevertheless, this study analysed real customer experiences, not simulated behaviours based on hypothetical scenarios. This gives an important contribution of the study, although it creates a heterogeneity problem regarding the specific circumstances of service encounters.

In addition, the study examined only one service context of mobile telephone companies, which was intended to maintain the similarity of customer complaint behaviour. Nevertheless, as a consequence, the results may not be generalisable to other services like hospitality, education, finance and transport. Since the study was done in the academic environment, there is a need to conduct the study in another context. Further, the respondents had to recall a negative service encounter they had recently experienced and then answer questions based on their perceptions of customer complaint behaviour firm responses, service quality and customer loyalty, as opposed to absolute values. Perceptions vary with time and this can bias the results.

Finally, there are several possibilities regarding future research. The same study may be done with a different methodology using longitudinal study design. Finally, more research is needed to unearth the reasons why satisfied customers may still complain in a developing country context, and in particular mobile telecommunication services. We therefore propose further research regarding the formation of customer complaining behaviour in other services with a high potential to generate satisfactory evaluations such as financial, hospitality and medical services.

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APPENDICES

Appendix 1

LETTER OF INTRODUCTION

To whom it may concern

Dear Sir/Madam

RE: Request to Collect Data on the Topic titled: The Influence of Customer Complaint Behaviour, Firm Responses, and Service Quality on Customer Loyalty among Mobile Telephone Subscribers in Uganda.

I am a Doctoral Candidate at the University of Nairobi, School of Business, Department of Business Administration. As part of the requirements for the award of the degree, I am expected to undertake an empirical research study which involves data collection, analysis and report writing. The purpose of this study is "to investigate the influence of customer complaint behaviour, firm responses, service quality on customer loyalty among mobile telephone subscribers.

I hereby request your participation by taking a few minutes out of your busy schedule to complete the attached questionnaire. The information you provide will be used for only research purposes. Only summary results will be made available to the public. Please rest assured that all the information collected will be treated with confidentiality.
Your full cooperation in filling the questionnaire will be highly appreciated.

Yours faithfully,

Mabel Birungi Mayombo
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Appendix 2

QUESTIONNAIRE

MAKERERE UNIVERSITY

COMPLAINING BEHAVIOUR AND CUSTOMER LOYALTY AMONG MOBILE TELEPHONE SUBSCRIBERS

Good morning/afternoon. My name is Mabel Birungi Mayombo, a lecturer at MUBS and a Doctoral candidate at the School of Business, University of Nairobi. I am currently collecting data for my Doctoral thesis on: "The Influence of Customer complaint Behaviour, firm responses, service quality on customer Loyalty among Mobile Telephone Subscribers. The case of Makerere University". I will be therefore being grateful if you spare a few minutes out of your valuable time to provide the information elicited in this questionnaire. The information you provide will be used for academic purpose only. I assure you that all the information provided will be treated in strict confidence. Please respond by putting a tick in the appropriate box for each statement/question.

NB: MTC: Mobile Telephone Companies

SECTION A: DEMOGRAPHICS OF THE RESPONDENTS
Please provide the following information about yourself:

1. **Age bracket: Upto** 24) [ ]   (25-29) [ ]   (30-34) [ ]   (35-39) [ ]   40 and above [ ]

2. **Gender**:   Male   [ ] Female   [ ]

3. **Marital status** Single   [ ]   Married   [ ]   Other   [ ]   Specify

4. **Level of Education:** Certificate   [ ]   Diploma [ ]   Undergraduate [ ]   Masters [ ]   PhD [ ]

5. **Category:** Student   [ ]   Academic staff [ ]   Administrative staff [ ]   Support staff [ ]

6. **School/College** of the institution for the student/staff...

7. **Personal monthly income/allowance (in shillings)?** Below **Ug sh** 0.2m [ ]   0.2m-0.7m   [ ]
        0.8m-1.7m   [ ]   1.8m-2.4m   [ ] Above 2.4m [ ]

Please provide the following information about your mobile telephone subscription:

	UTL	MTN	ORANGE	Airtel	Other (Specify)
8. Name of the MTC you are currently connected to					
9. How long have you been a customer with this company? Insert the relevant number using the following scale: 1. : <1year 2. : (1-4)years 3. : (5-8) years 4. : (9-14) years 5. : 15 years and above					

SECTION B: CUSTOMER COMPLAINT BEHAVIOUR

Instructions:

Listed here below are statements regarding customer complaint behaviour. Please indicate the extent to which you agree with the statements by inserting a number that reflects your rating of each MTC using a rating scale where **1=Not at all, 2=To a small extent, 3= To a moderate extent, 4= To a large extent, 5=To a very large extent.**

Customer Complaint Behaviour	UTL	MTN	ORANGE	Airtel	Other (Specify)
Redress: **In case of dissatisfaction, I**					
1.Discuss the problem with the representative of the Mobile Telephone Company (MTC) services.					
2. Ask the Company to take care of the problem.					
3.Inform the Company (CO) so that they may improve on their services in future.					
4.Seek for an explanation from the MTC.					
5.Seek for a refund from the MTC.					
Voice					
6.I complain when the MTC is the source of disappointment.					
7.I speak to my friends and relatives about my bad experience					
8.When disappointed about MTC services, I may warn other people to stop using company services.					
9.When disappointed, I express my concerns in social media.					

Instructions: Please indicate the extent to which you agree with the statements by inserting a number that reflects your rating of each MTC using a rating scale where **1=Not at all, 2=To a small extent, 3= To a moderate extent, 4= To a large extent, 5=To a very large extent.**					
10.When disappointed, I would rather complain to friends and family than defect.					
Exit **When disappointed, I :**					
11.Stop subscribing to MTC					
12.Subscribe to another MTC.					
13.Stop subscribing to the MTC when other companies give affordable prices.					
14.I stop subscribing to MTC because of other MTCs incentives e.g. free SMS, free internet , etc					
15.When I get dissatisfied I subscribe to more than two MTCs. **Commitment**					
16.I remain committed to subscribing to the mobile telephone company only when my needs are met.					
17.I am committed to subscribing to MTC even when I am disappointed by the company services.					
18.When disappointed, I only keep using a few selected services (e.g. SMS) from the company.					
19.When disappointed, I rarely subscribe to MTC services company.					
20.When disappointed, I forget about the incident of the MTC and do nothing.					
Other customer complaint behaviour (Please specify)					

SECTION C: SERVICE QUALITY

Instructions: Listed here below are statements regarding customer loyalty. Please indicate the extent to which you agree with each statement by inserting a number that reflects your rating using a scale where **1= Not at all, 2=to a small extent, 3= to a moderate extent, 4= to a large extent, 5=to a very large extent**

	UTL	MTN	ORANGE	Airtel	Other (Specify)
Reliability					
21.The Mobile Telephone Company (MTC) keeps its promises to the subscribers.					
22.The MTC shows sincere interest in solving its customers' service problems.					
23.The MTC keeps accurate records of use of service by its subscribers					
24.The MTC provides accurate services by meeting customers' expectations.					
25.The MTC refers me to another service provider when unable to meet my expectations.					
26.The MTC staffs keep to their appointed time when they promise to do something.					
27.The MTC keeps me informed in case of inability to meet my expectations.					
28.The MTC keeps to its promises.					
Responsiveness					
29.The MTC staffs tell subscribers exactly when the service will be performed.					
30.MTC staffs give me a prompt service.					
31.I get quick response from MTC without keeping me waiting for too long.					
32.I always get information from the MTC without my having to talk to many people.					
33.MTC Employees are always easily contacted by subscribers using telephone.					
34.There is an effective mechanism for quick handling of complaints by the MTC.					
35.MTC employees anticipate the needs of their subscribers and proactively respond to them.					

Instructions:
Listed here below are statements regarding possible MTC's responses to subscriber complaints. Please indicate the extent to which you agree with the statement by inserting a number that reflects your rating of each statement using the scale where **1= Not at all, 2=To a small extent, 3= To a moderate extent, 4= To a large extent, and 5=To a very large extent.**

Assurance	UTL	MTN	ORANGE	Airtel	Other (Specify)
36.MTC employees make customers feel safe in a service transaction.					
37.When handling complaints, MTC employees are polite and willing to help.					
38.When handling complaints, MTC employees have customer's best interests at heart.					
39.When handling complaints, employees instil faith in the service provider's competence.					
40.When handling complaints, Company staffs always make me feel reassured.					
41.When handling complaints, company employees respect my confidentiality.					
42.When handling complaints, employees have the knowledge to answer my questions.					
Tangibles					
43.Employees are neat and appealing to the mobile telephone subscribers.					
44.MTC subscribers find the equipment user friendly.					
45.The company provides MTC subscribers with useful documentation.					
46.The company presents a professional image					
47.The company provides modern facilities.					
48.The company provides pleasant meeting facilities.					
Service Convenience					
49. MTC has convenient hours of operation for the subscribers.					

Instructions:

Listed here below are statements regarding possible MTC's responses to subscriber complaints. Please indicate the extent to which you agree with the statement by inserting a number that reflects your rating of each statement using the scale where **1= Not at all, 2=To a small extent, 3= To a moderate extent, 4= To a large extent, and 5=To a very large extent.**

	UTL	MTN	ORANGE	Airtel	**Other (specify**
50. MTC has convenient location of service provider's outlets.					
51.There is easy availability of recharge services for the customers.					
52.Subscribers are accorded convenient channels/procedures of airing their complaints					
53.MTC subscribers have ease of access to service providers.					
Empathy					
54.Employees always understand how I feel.					
55.The MTC is willing to accept returned merchandise/products.					
56.The MTC gives individualised attention.					
57.Staffs are sincere and caring to their customers					
58.The company has convenient operating hours.					
59.The company employees treat me with respect.					
Network quality					
60.The MTC has good voice quality services.					
61.The MTC net work connection has no drop calls.					
62.The MTC has big net work coverage.					
63.The MTC always provides subscribers with information about its complementary services.					
64.In case of service failure, the MTC quickly rectifies the network connection.					
Other service quality (please specify)					

SECTION D: CUSTOMER LOYALTY

Instructions:
Listed here below are statements regarding possible MTC's responses to subscriber complaints. Please indicate the extent to which you agree with the statement by inserting a number that reflects your rating of each statement using the scale where **1= Not at all, 2=To a small extent, 3= To a moderate extent, 4= To a large extent, and 5=To a very large extent.**

|	UTL	MTN	ORANGE	AIRTEL	Other (Specify)
Customer Retention					
65.Have loyalty to a particular mobile telephone company.					
66.Have no intention to keep subscribing with a particular mobile telephone company (MTC) in the future.					
67.Make repetitive purchases from the same MTC.					
68.Continue with this MTC even if there are cheaper MTCs.					
69.Have a positive attitude about the purchase of MTC services.					
70.Continue to use MTC services due to their incentives.					
71.Consider the current MTC as my first choice in the next few years.					
72.Deal with the MTC at will, not being forced to.					
73.Have a positive feeling about the mobile telephone company's affordable services.					
74.Subscribe to a competitor that has more attractive prices.					
75.Switch to competitor(s) because of experiencing poor MTC services.					
Positive Word of Mouth **To what extent do you :**					
76.Talk negatively to other people (friends) about my experience with the company (CO).					
77.Give positive remarks about MTC to other people.					
78.Defend the MTC service provider's qualities/merits like no drop calls.					
79.Recommend the CO to a friend					
80.Encourage relatives and friends to use CO services like making phone calls					
81.Recommend friends and family to use other related products of the company like using mobile money.					

SECTION E: MTC (FIRM) RELATED RESPONSES

FIRM RESPONSES	UTL	MTN	ORANGE	AIRTEL
Compensation 82.The company compensates me from all service failures.				
83.The company puts in effort to compensate customers to their expectations.				
84.Staffs compensate customers with only discounts, exchanges and cash equivalent.				
85.Staffs encourage disappointed customers to seek redress.				
86. Partial redress is better than no compensation.				
Employee Behaviour				
87.Staffs are *credible* in handling customer complaints				
88.Staffs *listen attentively* to understand the customer's complaints.				
89. Staffs put in effort to display regret to the complainant for any inconvenience.				
90.Staffs have good interpersonal communication for handling customer complaints.				
91.I did not believe the MTC's explanation regarding why the failure occurred.				
Extent to which MTC's Organisational Procedures lead to the indicated Behaviour				
92.Facilitation (e.g. toll free No.) has a significant impact on negative word of mouth.				
93.Facilitation has a significant impact on repurchase intentions.				
94.Procedures empower staff to make timely decisions to address customer concerns.				
95.Procedures for resolving customer complaints are in place.				
96.Procedures for resolving customer complaints are well known by subscribers.				
97.Proper Procedures for evaluating and improving customer relationships are in place.				
98.Feedback is sought on the effectiveness of a service				
99.Company has procedures to follow up with customers on recent transactions in order to build relationships.				
100.Complaints data are used to initiate prompt corrective action to prevent the problem from recurring.				
Other firm responses (please specify)				

THANK YOU VERY MUCH FOR YOUR COOPERATION

Appendix 3

TEST FOR NORMALITY USING SCATTERPLOTS

(a) Scatterplot for Customer Loyalty on CCB   (b) Scatterplot for Customer Loyalty on Firm Responses
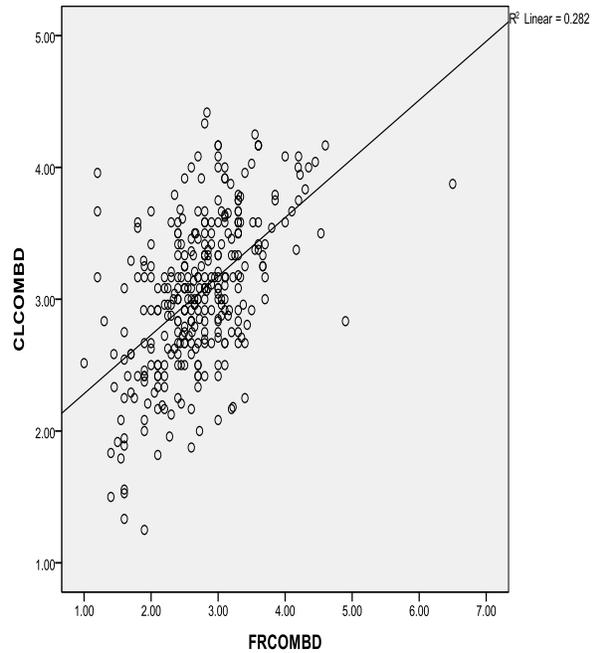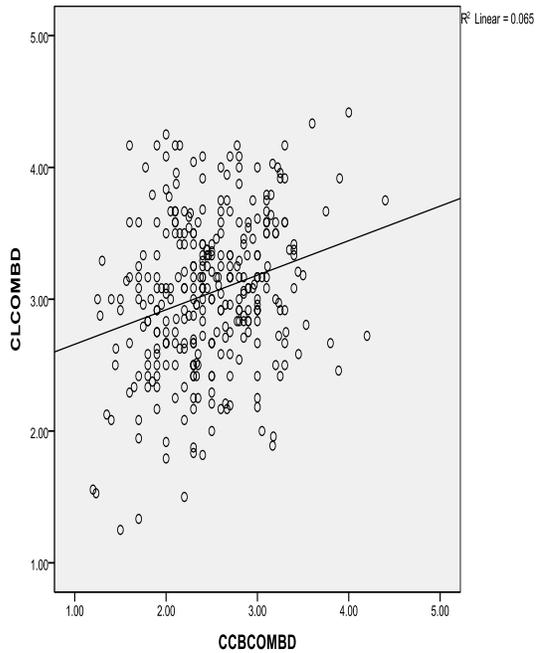
(c) Scatterplot for Customer Loyalty on Service Quality
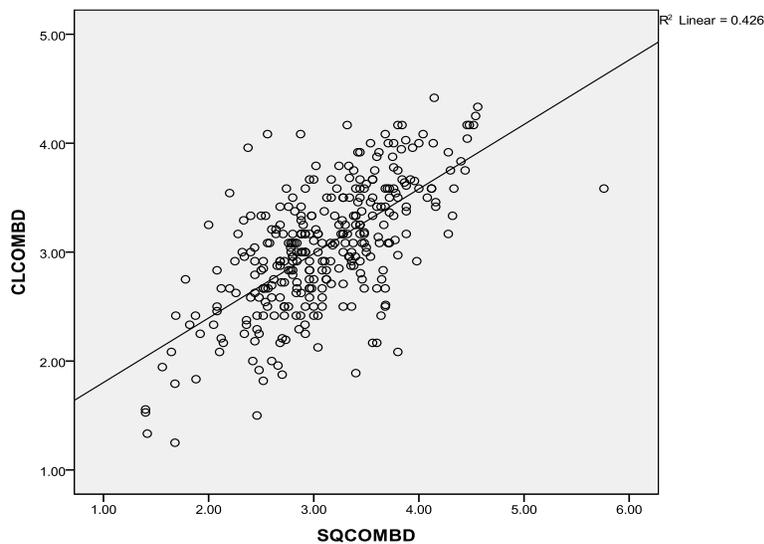
Source: Primary Data

Appendix 4

NORMALITY TEST USING HISTOGRAMS

a) **Firm Responses**
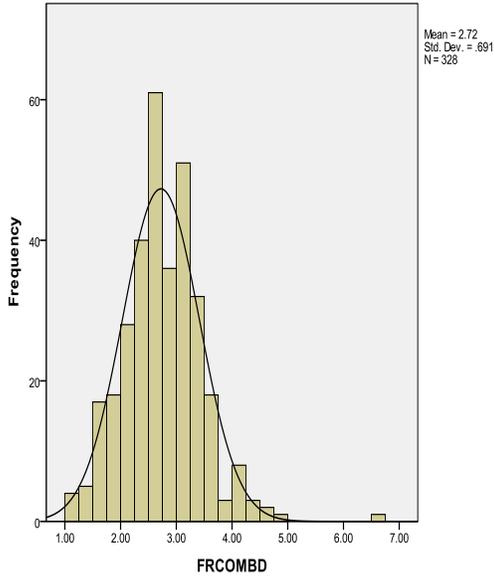
b) **Customer Complaint Behaviour**
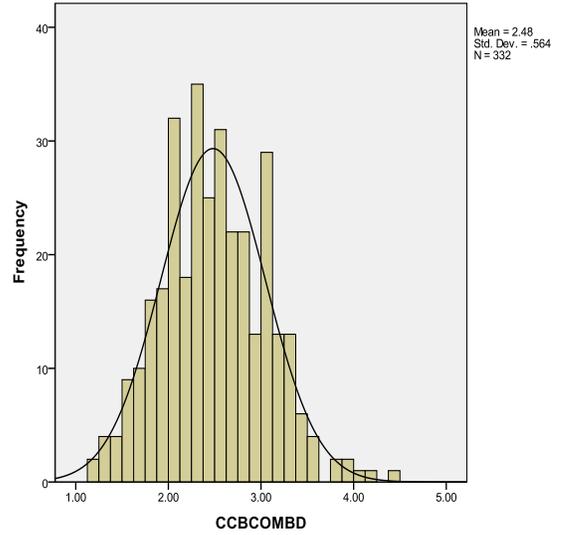
FR= Firm Responses   CCB= customer complaint behaviour

c) **Customer Loyalty**
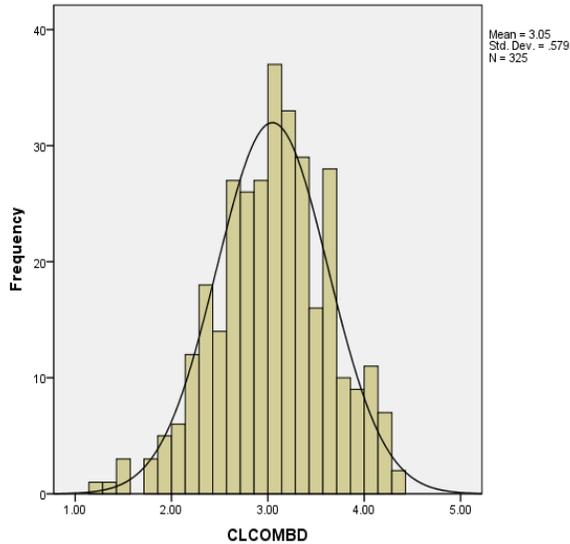
d) **Service Quality**
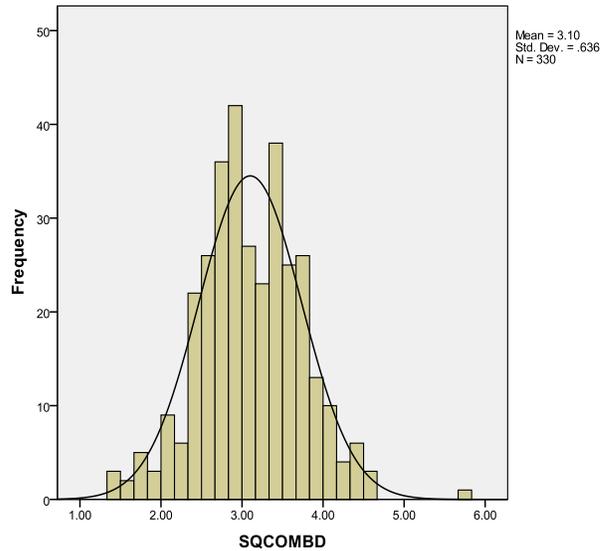
CL: Customer loyalty

SQ: Service Quality

Source: primary Data

Appendix 5

TEST FOR NORMALITY USING SKEWNESS AND KURTOSIS

	N	Mean		Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
CCB	336	2.5804	.03066	.187	.133	-.063	.265
Service Quality	336	3.2619	.03686	.037	.133	.115	.265
Customer Loyalty	336	3.1756	.03585	-.074	.133	-.470	.265
Firm Responses	336	2.8482	.03592	.235	.133	.695	.265

Source: Primary Data

CCB= Customer Complaint Behaviour

Appendix 6

TEST FOR NORMALITY USING KOLMOGOROV SMIRNOV

	Gender	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Customer Loyalty	male	0.109	26	.200[*]	0.961	26	0.41
	female	0.121	17	.200[*]	0.96	17	0.64
Service Quality	male	0.094	26	.200[*]	0.973	26	0.71
	female	0.157	17	.200[*]	0.965	17	0.72
Firm Responses	male	0.116	26	.200[*]	0.975	26	0.76
	female	0.129	17	.200[*]	0.981	17	0.97
Customer Complaint Behaviour	male	0.104	26	.200[*]	0.97	26	0.62
	female	0.11	17	.200[*]	0.951	17	0.48

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Source: Primary Data

TEST OF HOMOGENEITY OF VARIENCE

		Levene Statistic	df1	df2	Sig.
Customer Complaint Behaviour	Based on Mean	.005	1	334	.945
	Based on Median	.046	1	334	.830
	Based on Median and with adjusted df	.046	1	333.940	.830
	Based on trimmed mean	.033	1	334	.856
Service Quality	Based on Mean	.878	1	334	.349
	Based on Median	.495	1	334	.482
	Based on Median and with adjusted df	.495	1	333.350	.482
	Based on trimmed mean	.961	1	334	.328
Customer Loyalty	Based on Mean	.006	1	334	.937
	Based on Median	.117	1	334	.733
	Based on Median and with adjusted df	.117	1	333.544	.733
	Based on trimmed mean	.021	1	334	.884
Firm Response	Based on Mean	.432	1	334	.512
	Based on Median	1.034	1	334	.310
	Based on Median and with adjusted df	1.034	1	333.946	.310
	Based on trimmed mean	.852	1	334	.357

Source: Primary Data

Appendix 8

NORMALITY TEST USING P-P PLOTS

Customer Complaint Behaviour P-P Plot
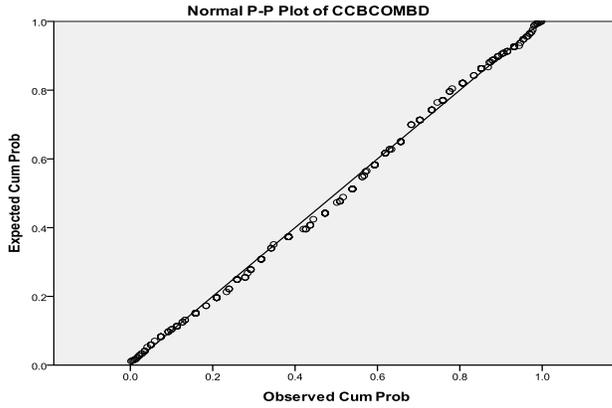
Normal P-P Plot of CCBCOMBD

Customer Loyalty P-P Plot

Normal P-P Plot of CLCOMBD

Firm Responses P-P Plot

Normal P-P Plot of SQCOMBD

Service Quality P-P Plot

Normal P-P Plot of FRCOMBD
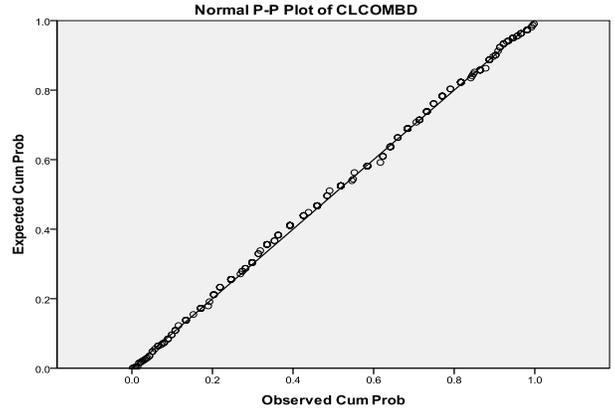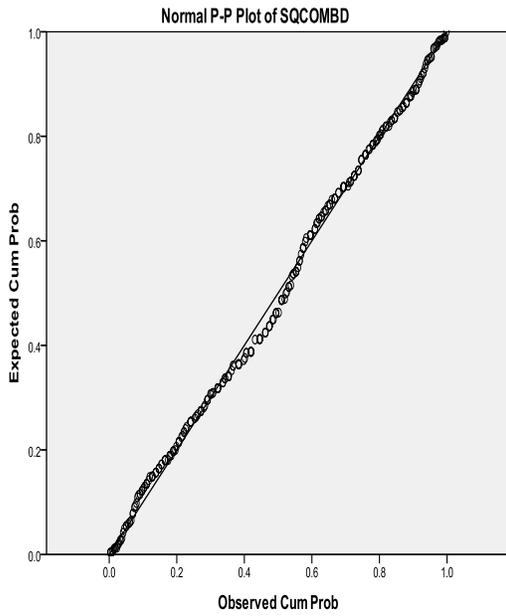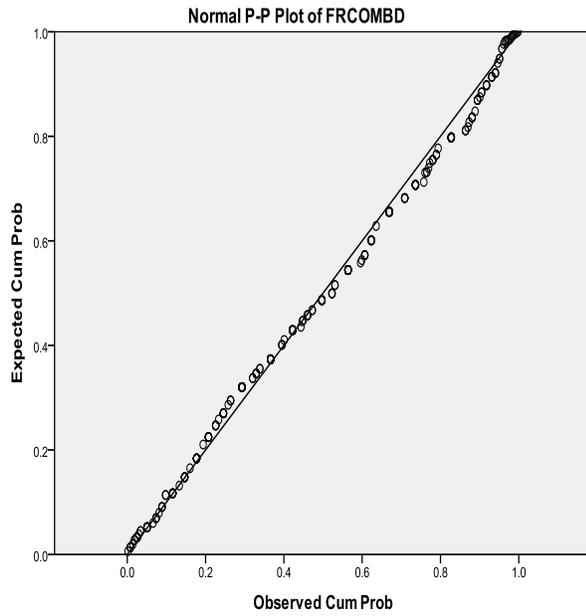
Source: Primary Data

Appendix 9

LINEARITY TEST OF CUSTOMER LOYALTY AND CUSTOMER COMPLAINT BEHAVIOUR
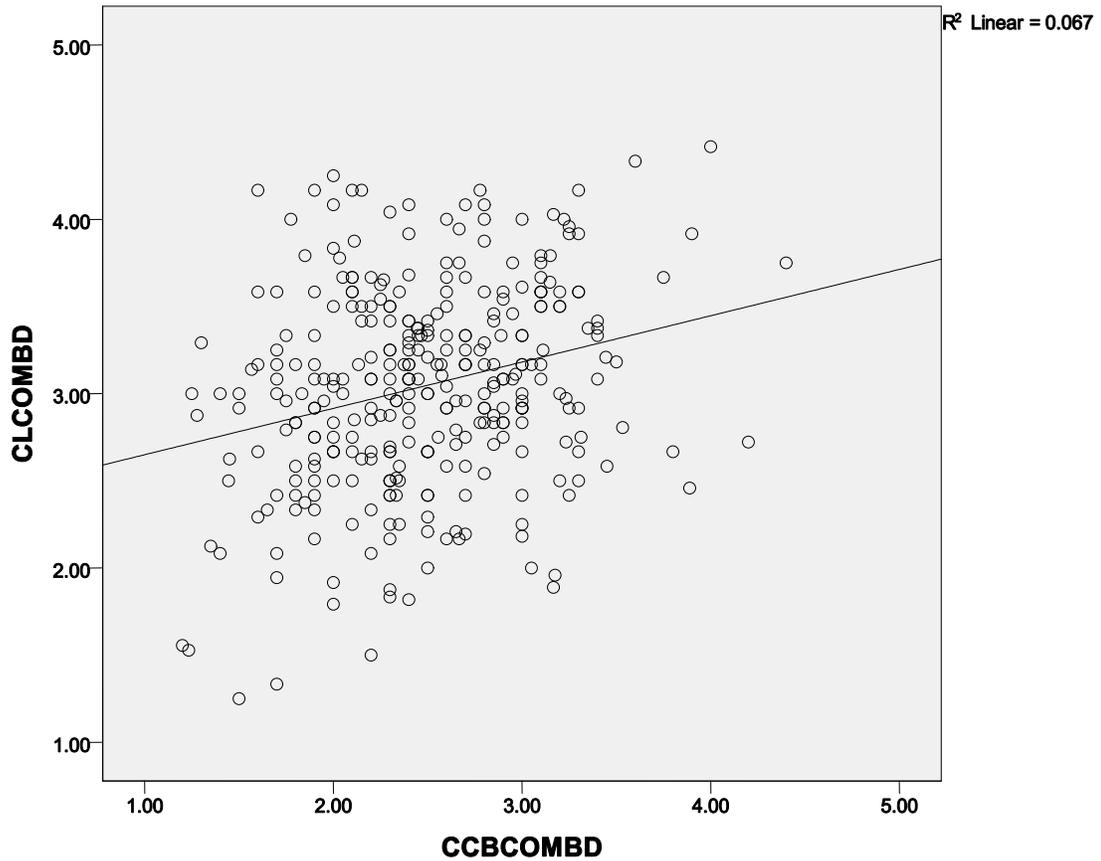
CCBCOMBD= Customer Complaint Behaviour

CLCOMBD=   Customer Loyalty

Source: Primary Data

Appendix 10

TEST OF MULTICOLLINEARITY USING PEARSON CORRELATIONS

		Customer Complaint Behaviour	Firm Responses	Service Quality	Customer Loyalty
Customer Complaint Behaviour	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	332			
Firm Responses	Pearson Correlation	.237**	1		
	Sig. (2-tailed)	.000			
	N	328	328		
Service Quality	Pearson Correlation	.242**	.574**	1	
	Sig. (2-tailed)	.000	.000		
	N	330	327	330	
Customer Loyalty	Pearson Correlation	.255**	.531**	.653**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	325	323	325	325

** Pearson Correlation Coefficient
Source: Primary Data

Appendix 11

TEST OF MULTICOLLINEARITY USING TOLERANCE AND VIF

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.103	.612		1.803	.079		
Firm Response	.223	.220	.190	1.016	.316	.527	1.896
Customer Complaint Behaviour	.396	.163	.372	2.426	.020	.787	1.271
Service Quality	.088	.228	.075	.386	.701	.493	2.028

Dependent Variable: Customer Loyalty
Source: Primary Data

Appendix 12

FACTOR ANALYSIS

a. Rotated Component Matrix for Customer Complaint Behaviour

	Component			
	Exit	**Redress**	**Voice**	**Commitment**
13. MTS stop subscribing to the Company	.848			
14. I stop subscribing because of other company's incentives	.801			
12. I subscribe to another MTC	.770			
18. I only keep using a few selected services				
2. I ask company to take care of problem		.794		
3. I inform Co so that they can improve services		.789		
4. I seek for an explanation from MTC		.730		
9. Disappointed about MTC, I go to social media			.797	
8. I warn other people to stop using services			.739	
20. I ignore the bad incident of MTC				.837
17. I keep committed to subscribing to Co even when disappointed.				.550
Eigen value	2.265	1.988	1.546	1.223
% Variance	18.874	18.565	12.887	10.188
Cumulative % of variance	18.874	35.439	48.326	58.514

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Source: Primary Data

a. Rotated Component Matrix for Service Quality

	Component					
	Assurance	Tangible	Responsiveness	N quality	Empathy	Convenience
MTC make customers feel safe	.915					
Staff are polite and helpful	.543					
Employees are neat and appealing		.795				
MTC equipment is user friendly		.759				
Staff give me prompt service			.782			
Staff tell subscribers when service will be provided			.757			
MTC has big network connection				.737		
MTC has has no drop calls				.729		
MTC quickly rectifies network problem				.573		
Staff understand how I feel					.800	
Co willingly accepts returned goods					.605	
Subscribers have convenient channels						.632
Having easy access to Co services						.542
Accessibility of recharge services						.508
Eigen value	**3.015**	**2.393**	**2.360**	**1.873**	**1.855**	**1.217**
% Variance	**15.017**	**11.966**	**11.801**	**9.365**	**9.274**	**6.085**
Cumulative % of variance	**15.017**	**27.043**	**38.844**	**48.209**	**57.483**	**63.568**

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Source: Primary Data

b. Rotated Component Matrix for Customer Loyalty

	Component	
	Customer Retention	**Word of Mouth**
Defending the service provider's virtues/merits.	.849	
Recommend the company to someone who seeks advice.	.835	
Have a positive attitude about the purchase of company services	.833	
Continue with this company even if there is high competition	.804	
Recommend friends & family to use other related company services.	.743	
Always use company services due to their incentives.	.711	
Have loyalty to a particular employee		.849
Take current business to a competitor that has more attractive prices.		.822
Have no intention to shop with a particular employee in the future.		.713
Eigen Value	**4.124**	**1.989**
%age of Variance	**48.613**	**23.163**
Cumulative % Variance	**48.613**	**71.776**

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Source: Primary Data

c. Rotated Component Matrix for Firm Responses

Firm Responses	Component		
	Employee Behaviour	Firm Procedures	Compensation
89. Staff put in effort to display regret to complain	.853		
88. Staff listen attentively	.848		
90. Staff have good interpersonal communication	.790		
87. staff are credible in handling complaints	.741		
93. Co gives facilitation		.785	
Facilitation given has impact on negative WOM		.770	
100. Co uses data to prompt action		.672	
83. Co puts in effort to compensate customers			.862
84. Staff compensates customers with discounts			.846
Eigen Value	**2.814**	**2.207**	**1.709**
%age of Variance	**28.142**	**22.069**	**17.087**
Cumulative % Variance	**28.142**	**50.211**	**67.299**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 4 iterations.

Source: Primary Data

Appendix 13

SUMMARY OF MEAN SCORES

	N	Sum	Mean Score	SD	CV
	Statistic	Statistic			
Redress	336	840.00	2.5000	.85693	33.4%
Voice	336	881.00	2.6220	.84817	30.8%
Exit	336	755.00	2.2470	1.00223	42.4%
Commitment	336	869.00	2.5863	.76392	27%
Reliability	336	953.00	2.8363	.74111	26.2%
Responsiveness	336	960.00	2.8571	.86239	27.9%
Assurance	336	1127.00	3.3542	.86189	25.5%
Tangibility	336	1162.00	3.4583	.88675	22.7%
Service Convenience	336	1165.00	3.4673	.82070	22.5%
Empathy	335	1042.00	3.1104	.82061	26%
Network quality	336	1133.00	3.3720	.83308	23.9%
Customer Retention	336	1110.00	3.3036	.65798	18.5%
Word of Mouth	336	1037.00	3.0863	.76976	23%
Compensation	336	744.00	2.2143	.84035	30.9%
Employee Behaviour	336	1060.00	3.1548	.82490	24%
Firm Procedures	336	994.00	2.9583	.79816	25.3%

Source: Primary Data

Appendix 14

CORRELATIONS FOR STUDY VARIABLES

a. Correlations of Customer Complaint Behaviour Constructs with Customer Retention and Word of Mouth

		Redress	Voice	Exit	Commitment	Customer Retention	Word of Mouth
Redress	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	336					
Voice	Pearson Correlation	.224**	1				
	Sig. (2-tailed)	.000					
	N	336	336				
Exit	Pearson Correlation	.084	.245**	1			
	Sig. (2-tailed)	.123	.000				
	N	336	336	336			
Commitment	Pearson Correlation	.149**	.108*	.099	1		
	Sig. (2-tailed)	.006	.047	.069			
	N	336	336	336	336		
Customer Retention	Pearson Correlation	.212**	.061	-.014	.252**	1	
	Sig. (2-tailed)	.000	.268	.798	.000		
	N	336	336	336	336	336	
Word of Mouth	Pearson Correlation	.164**	.191**	.122*	.112*	.413**	1
	Sig. (2-tailed)	.003	.000	.026	.040	.000	
	N	336	336	336	336	336	336

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).