Can Efficacious Service Recovery Enable Retention of Complaint-Averse Savvy Customers?

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Abstract

This study examined whether the relationship between service recovery and customer loyalty was statistically significant, and to examine the influence of firm responses on customer loyalty. Descriptive cross-sectional survey and stratified random sampling were used to produce a sample of 384 phone subscribers. Pilot study established reliability and validity of the questionnaire and testing for parametric assumptions performed. Descriptive statistics and inferential statistics (factor analysis, correlations, and regression tests) were used to analyze the data. Results indicated that these relationships were all positive and statistically significant. Moreover, combined impact of service recovery, firm responses, and service quality on customer loyalty was the strongest. Based on the findings, policymakers, and managers of mobile phone companies in Uganda should focus more on service quality, which showed the highest beta values and had a relatively high predictive value for customer loyalty. This study contributes to extant literature by illuminating firms’ responses to service recovery, by offering more explicit clarification of the relationship between service recovery, firm responses and customer loyalty. Mobile phone companies should improve how customer complaints are handled by considering the various dimensions of firm responses. Because of the study’s cross-sectional design, there remains a need to expand our knowledge by conducting similar but longitudinal studies.

Keywords

Mobile Telephone Company, Customer Complaint Behaviour, Customer Loyalty, Service Recovery, Service Quality, Firm Responses
1. Introduction

Nguyen et al. (2023) established the relationship between e-service quality dimensions and consumer post-purchase behavior as perceived value, satisfaction and loyalty in online shopping. The results presented in the same paper (ibid) indicate that information quality aspects (information accuracy, web design, security, ease of use, and website features) positively impact on outcome quality (order condition, timeless, and order accuracy) and outcome quality positively affects customer satisfaction.

Against this background, effective service recovery is pivotal in most service industries (Van Vaerenbergh et al., 2019), and despite much research, how to manage recovery after service failure remains a central question in service research (Kron et al., 2023). Understanding customer loyalty remains one of the most important and intangible competitive advantages a service provider can have (Petzer & Roberts-Lombard, 2021; Roberts-Lombard & Petzer, 2018). Mobile telephone companies in Uganda are faced with the problem of increasing competition, leading to a fear of losing customers to competitors (Osarenkhoe & Byarugaba, 2016; Byarugaba & Osarenkhoe, 2012). These companies have been 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 analysed from the standpoint of customer loyalty with respect to the integration of variables of customer complaint behaviour (CCB), firm responses and service quality. Knowledge about these variables may help to identify common service challenges and to achieve customer loyalty (Tronvoll, 2012; Arghashi, Bozbay, & Karami, 2021).

In our study, the concept of fairness is introduced into the service failure/recovery encounter model to help understand how service recoveries lead to customer loyalty and to deepen the understanding of consumers’ reactions to service recovery. Unfortunately, most customers who are dissatisfied with a service choose not to complain (Babin et al., 2021; Chigwende & Govender, 2021), meaning that companies miss out on an important opportunity to learn from their mistakes and reclaim and improve their relationship with these customers. Also, as customers view the emotions related to an unsuccessful attempt to seek redress as unpleasant, many choose not to complain in the first place (Osarenkhoe et al., 2017). Adequate service recovery is critical for mobile telephone companies to minimise the customers suffering from a double deviation effect which may lead to customer disloyalty.

Service failure in the Mobile Telephone Companies (MTC) of mobile telephone subscribers is inevitable (David, 2019). As used here, “loyalty” refers to the extent to which a customer regards him/herself as loyal, as well as his/her willingness to recommend the company service to others and intention to continue to use the MTC services in the future (Su et al., 2021; Menidjel & Bilghihan, 2021). However, rather than go through service recovery (Osarenkhoe et al., 2017), most dissatisfied customers opt to exit the service instead (Chigwende & Govender, 2021; Prentice et al., 2021).
A growing number of researchers have nevertheless identified service recovery, to maintain loyal customers, as a rather neglected aspect of service marketing that warrants attention (Komunda & Osarenkhoe, 2012). Research on the joint effect of service recovery, firm responses and service quality on customer loyalty in emerging markets has, in addition, not been done.

Increasingly, firms shift towards a co-created process involving the customer and with the ability to adapt recovery to heterogeneous needs (Kron et al., 2023). Entirely avoiding service failures is impossible in most businesses, as long as human factors and circumstantial complexities play a role. Hence, an important aspect of services marketing is how to successfully recover from service failures when they occur (Van Vaerenbergh et al., 2019).

Service recovery helps the companies to leave a good impression, to both win back ex-customers and gain new ones. For MTCs, service recovery therefore involves continuous efforts to improve their networks to achieve clear incoming and outgoing calls for their subscribers, with no dropped calls, and efficient sending and receiving of messages, successful zoom calls, etc. However, rather than going through with recovery, some dissatisfied customers may exit due to unfavorable service encounters, such as uncaring, impolite and/or unresponsive MTC employees with insufficient marketing soft skills. When customer complaints are not handled properly, negative consequences such as negative word-of-mouth (WOM) may arise (Supriyanto et al., 2021). It is therefore crucial for MTC managers to understand service recovery in order to effectively recover from service failure and retain customers.

A Mobile Telephone Company needs to establish good relationships with its customers through service recovery, which entails the efforts the organization makes to solve problems, and to improve and maintain those relationships to retain those customers (Chen & Kim, 2019). This means that service providers are highly motivated to ensure service recovery for customers who have experienced service failure (Cheng et al., 2019; Su et al., 2021). In addition, customers evaluate the organization’s service recovery performance based on a number of dimensions of “justice”—i.e. procedural, interactional and distributive justice (Chen & Kim, 2019). The perceived justice in the service recovery process has an impact on the customer’s satisfaction with the service recovery (Chigwende & Govender, 2021).

As reported by the Grigoriou et al. (2018), about 64% of telecom customers, globally, switched brands in 2016, implying a lack of satisfaction and poor service recovery with their previous service providers, with an additional 31% of customers unwilling to recommend their friends to their service providers, leading to customer disloyalty (Jain & Surana, 2017). Customer loyalty is thus not easy to maintain. Rather, it is vulnerable, and even satisfied customers may defect in search of better value, convenience or quality. Loyalty is important for the future of all companies (Osarenkhoe et al., 2017).

While the aim of a company is to attract and retain the customers, vulnerabilities pull the customers towards a substitute (Rowley, 2005). It should be noted
here that not all satisfied customers remain loyal (Kandampully et al., 2015; Osarenkhoe et al., 2017). Many customers are not interested in a long-term relationship and act out of self-interest. Mobile telecom subscribers have alternatives and, due to service failures, customers often switch to substitute companies (Chigwende & Govender, 2021). As noted, customer loyalty is vulnerable, so even if customers are satisfied with the service, they continue to defect if they believe they can get better value elsewhere. In any case, many debates center on what customer loyalty is. As Gee et al. (2008: p. 360) state: “Loyalty is a complex multi-dimensional concept”; it can be behavioral, attitudinal, and a combination of both.

Studies conducted in financial services have shown that increasing customer loyalty by 5% could lead to 25% - 75% profit growth (Kandampully & Suhartanto, 2000). But again, even many satisfied customers do not remain loyal, and after service failure, exit rather than remain loyal (Komunda and Osarenkhoe, 2012).

RQ: Is Complaints Handling a Substitute for Abdicating the Responsibility for Managing Quality and Achieving Customer Satisfaction and Loyalty? To answer this exploratory research question, this study is guided by the research objectives listed below, and the conceptual framework that follows:

1) To establish the relationship between service recovery and customer loyalty.
2) To establish the relationship between firm responses and customer loyalty.
3) To establish the relationship between service quality and customer loyalty.
4) To assess the joint effect of service recovery, firm responses, service quality on customer loyalty.

2. Literature Review
2.1. Theoretical Model

With respect to service recovery, the customer’s perception of fairness (justice) is
the most important variable, which can be reflected in their perception of- and
reactions to-service delivery and their emotional response to complaint-related
encounters in service recovery situations. Little is known about the mediating
role of firm responses to service recovery and the loyalty of customers (Chen &
Kim, 2019). Perceived justice/equity theory is based on a three-dimensional view
of the concept of fairness and includes distributive justice, procedural justice and
interactional justice (Estelami, 2000; Grewal et al., 2008; Cheng et al., 2019).

Justice theory is a concept that helps to explain how dissatisfied customers
evaluate complaint responses. Perceived justice reflects the consumer’s fairness
judgments about different aspects of the exchange of MTC and customer rela-
tionship. Equity theory proposes that customer behaviors are affected by the as-
essment of the customer’s contribution in relation to the reward received (Adams,
1965). When customers perceive inequity in an exchange, they become disap-
pointed. A customer may choose different complaint responses depending on
the action that is most likely to restore equity/justice at the minimum cost. Un-
fortunately for the service provider, the complaint response may not be in favour
of the service provider, leading to lack of service recovery (Figure 1).

Scholars regard customer loyalty as a long-term asset (Kandampully et al., 2015)
as well as a key business outcome (Kim et al., 2016). Having loyal customers is a
requirement for various companies, due to customer loyalty’s important role in
creating sustainable competitive advantage (Cheng et al., 2019; Su et al., 2021).

2.2. Service Recovery and Customer Loyalty

Service recovery has been analyzed from a variety of different angles, including:
customer satisfaction and loyalty (Komunda & Osarenkhoe, 2012); the impact of
customer satisfaction and customer image on customer loyalty (Zaid et al., 2021;
Babin et al., 2021); customer satisfaction and customer loyalty (Cheng et al.,
2019; Chigwende & Govender, 2021). According to Sheth et al. (2000), service
recovery refers to the actions taken by a service provider in an attempt to resolve
the problem that led to the service failure. Effective service recovery results in
complainant satisfaction and recovery (Karatepe & Ekiz, 2004; Chigwende &
Govender, 2021). Researchers have also identified the relationship between ser-
vice recovery and customer loyalty as a rather neglected aspect of services and
have called for greater attention to the topic (Harrison-Walker, 2019; Komunda
& Osarenkhoe, 2012).

Customer loyalty is a multifaceted concept that has evolved over the years
(Oliver, 1999). While early research emphasized mostly the behavioral dimen-
sion of loyalty (Parasuraman et al., 2005), later work has also recognized attitu-
dinal and cognitive dimensions (Chang, 2018). Uncles et al. (2003) defined attitu-
dinal loyalty as “a customer’s intention to remain committed to specific pro-
vider in the marketplace by repeating their purchasing experiences.” Oliver
(1999), on the other hand, defined customer loyalty as “a deeply held commit-
ment to rebuy or re-patronize a preferred product/service consistently in the fu-
ture, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior” (p. 34).

A common approach in defining customer loyalty is to distinguish between a consumer’s behavioral loyalty and attitudinal loyalty (Thaichon & Jebarajakir-thy, 2016), where behavioral loyalty is expressed as repeated transactions (or percentage of total expenditures in a category) and can sometimes be measured quite simply with observational techniques, and attitudinal loyalty is where customers are much less susceptible to negative information about the brand than non-loyal customers. Realistically, firms cannot completely eliminate the occurrence of service failures (Osarenkhoe et al., 2017; Su et al., 2021). To minimize service failure and create loyal customers, however, they should carry out service recovery and develop solutions to prevent future recurrences. We therefore hypothesize that:

\[ H_1: \text{Service recovery has a positive effect on customer loyalty.} \]

### 2.3. Firm Responses and Customer Loyalty

Customer loyalty is an intangible asset and important for the future of a company (Ferguson & Brohaugh, 2018). While “sustainers” attract and retain customers, vulnerabilities push the customers towards a substitute (Rowley, 2005; Su et al., 2021). Customer loyalty is vulnerable because, even when satisfied with the service, customers may continue to defect if they believe there is better value to be had elsewhere. As noted above, customer loyalty is a “complex multidimensional concept” (Gee et al., 2008) and can be behavioral, attitudinal or a combination thereof, definitions with which various researchers agree (Su et al., 2021).

Davidow (2003) described firm responses as actions taken by companies in order to exert significant positive effects on complaint satisfaction and loyalty, focusing on six complaint-handling factors that influence the perceived justice of the procedure. These responses represent values for the customer, such as redress, apology, attentiveness, explanation, effort, facilitation and timeliness, and affect the post-service recovery relationship with the customer. Firm responses have also been summarized into three constructs: employee behavior, compensation, and company procedures (Grewal et al., 2008). The debate on firm responses to complaint-handling is ongoing and represents an avenue for a potential further contribution to the firm responses literature.

The significance of customer loyalty is emphasized as essential to successful operations of a business (Seth et al., 2008; Ali et al., 2016). Unfortunately, products and services in any business are prone to failure. Research shows that, on average, one satisfied customer will tell of his/her positive service experience to three other people (Kotler & Armstrong, 2010). With negative WOM and a customer’s exit, an organization often loses the opportunity to remedy and learn from the situation, suffers reputation problems, and forfeits its investment and any potential future gains from that customer’s patronage (Michel et al., 2009).
Our second hypothesis is therefore:

\[ H_2: \text{Firm responses have a positive effect on customer loyalty.} \]

2.4. Service Quality and Customer Loyalty

Due to the difficulty of both defining and measuring service quality, it is a concept that has generated considerable interest and debate in the research literature, with no overall consensus having emerged regarding either aspect (Parasuraman, Zeithaml, & Berry; 1988; Parasuraman et al., 2005; Osarenkhoe et al., 2017). The lack of consensus on service quality may be due in part to its dimensions of reliability, assurance, tangibility, responsiveness and empathy (Bayad et al., 2021; Supriyanto et al., 2021), from which the SERVQUAL research instrument was developed (Parasuraman et al., 2005; Parasuraman, Zeithaml, & Berry, 1988). The quality of a particular service is whatever the customer perceives it to be; Services are subjectively experienced processes where production and consumption activities take place simultaneously (Su et al., 2021); and since service failure is inevitable, it becomes a challenge to retain customers.

Extant literature argues that, for true loyalty to exist, there must be a strong attitudinal commitment to a brand (Khoa, 2020). In other words, loyalty reflects the extent to which a customer regards him/herself as loyal, his/her willingness to recommend the service company to others, and his/her intention to continue to use (in this case) an Mobile telephone company’s services in the future. Customer loyalty is important for the future of a company (Nguyen et al., 2020) and as noted, is not easy to maintain. In the contextual area of the current study on customer loyalty (i.e. the loyalty of mobile phone subscribers) where as even satisfied customers may by from competitors in search of better value, this makes service quality all the more important, and our third hypothesis is that:

\[ H_3: \text{Service quality has a positive effect on customer loyalty.} \]

2.5. Service Recovery, Firm Responses, Service Quality and Customer Loyalty

Customer complaints are a natural consequence of any service activity (Albrecht et al., 2019) because mistakes are an unavoidable feature of all human endeavors and also of service delivery (Babin et al., 2021). Gruber (2011) maintains that service recovery should be the cornerstone of an organization’s customer satisfaction strategy. Service failure has consequences, such as customer dissatisfaction (Osarenkhoe et al., 2017), reduction or loss of customer trust, negative word-of-mouth (Kim et al., 2016) profit losses and rising costs, as well as demotivated employees and performance effects (Babin et al., 2021). In such cases, poor service recovery can threaten the long-term survival of a business (Khoa, 2020). Organizations that carry out effective complaint-handling, on the other hand, can see a great impact on customer retention rates, curb the spread of negative WOM, and improve service recovery.

Surveys have shown that service recovery leads to customer loyalty (Khoa, 2020; Giao et al., 2020; Nguyen et al., 2020; Alam & Noor, 2020; Cheng et al., 2019). As previously mentioned, service recovery involves a service providers ac-
tions to resolve problems caused by a failure (Sheth et al., 2000), and effective service recovery results in complainant satisfaction (Gandhi et al., 2019). The capacity to effectively recover from failures is a key responsibility of a company’s operations function (Borah et al., 2020; Babin et al., 2021). Understanding the impact of service recovery on customer loyalty thus has important implications for the design of one’s service delivery and recovery systems (Miller et al., 2000). However, to be successful, these systems require timely, fair, courteous, clear, efficient and interactive solutions.

The firm responses in the current study include apology, explanation, redress, attentiveness and promptness (Ali et al., 2021). An apology is a psychological exchange offered to express regret for the inconvenience or problem that the customer faced. According to Komunda and Osarenkhoe (2012), when provided appropriately, an apology and explanation for the inconvenience reduces the recipient’s perception of injustice and this, in turn, may lead to redress, affecting his/her loyalty. Redress refers to a “fair settlement or fix” for the problem that arose between the company and the customer. Davidow (2003) asserts that customers who feel they have received a fair settlement are more likely to be satisfied and show repatronage. Ali et al. (2021) explain that the promptness of a company’s response is an important factor and affects customer satisfaction and repurchase behaviors.

Thus our fourth hypothesis:

\[ H_4: \text{Service recovery, firm responses and service quality have a joint effect on customer loyalty.} \]

3. Methodology

The current study used a descriptive cross-sectional design. The descriptive element of the study involved a description of phenomena associated with the subject population with respect to the who, what, when, where and how of the topic under study. A cross-sectional survey was carried out, where data was collected at a point in time. Cross-sectional studies are appropriate in cases where the overall objective is to establish a significant relationship between variables at a particular point in time (Mugenda & Mugenda, 2003). This research design offered an opportunity to establish the relationships between service recovery, firm responses, service quality and customer loyalty.

The study population included mobile phone subscribers, made up of students, faculty, and administrative and support staff of Makerere University in Uganda. The choice of the Makerere University community was made because it represents a cosmopolitan group of people from all parts of Uganda. At the time of the study (academic year 2020/2021), the total population of mobile telephone subscribers in the university community was 50,949.

3.1. Sampling Design

Based on Krejcie and Morgan (1970), a sample size of 384 was determined to be representative. Stratified random sampling was used to determine the sample,
stratifying administrators, support, academic staff and students. In addition, purposive sampling technique was also used to select specific respondents based on those who owned mobile phones.

3.2. Data Collection

The primary data for the study was collected from Makerere University mobile telephone subscribers (students and staff) using a semi-structured, self-administered questionnaire. The questionnaire was designed to capture the items necessary to address the research objectives, divided into four sections based on: service recovery, firm responses, service quality, and customer loyalty. 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, 5 = to a very large extent) because the scale is fairly robust. The survey items were developed from the literature with appropriate modifications to reflect the context of the current study.

3.3. Reliability and Validity of the Instrument

For purposes of language clarity, relevance and comprehensiveness of content, the researcher sought the guidance of various research experts to correct any errors in the questionnaires. The final questionnaires were then pre-tested on selected respondents to check the validity of the data collection tool. This was to ensure that the questionnaire described and quantified what it was meant to measure. Reliability is described as the absence of differences in the results if the research was repeated (Collis & Hussey, 2009). Cronbach’s alpha was used to test the measurement scales to ascertain the reliability of the five-point rating scale used in the survey. A cut-off alpha value of 0.70 is sufficient. The data was analyzed using SPSS Version 26, and the alpha coefficient of the instrument was high, with an overall measure of 0.751. The Cronbach’s alpha values exceeded the acceptable level of 0.70, as recommended by Nunnally (1978), which means that the scale was reliable.

Content validity was assessed using expert judgment, where experts confirmed that the theoretical dimensions came out as conceptualized. To further confirm and improve content validity, the questionnaire was pilot-tested. The questionnaire was pretested on 81 respondents selected from the population who were knowledgeable in the area of study in carrying out a pilot study. The content validity index (CVI) was found to be greater than 0.6 and therefore considered relevant.

The pretested data was then tested using SPSS Version 26, where correlations and regressions were run to test the relationships and predictive value of the study variables.

3.4. Pearson Correlation

Pearson’s correlation analysis was conducted to measure the strength of linear associations between the study variables and is denoted by (r). The Pearson cor-
relation coefficient \( (r) \) can take a range of values from +1 to −1. The study variables were measured on a continuous scale, and thus the Pearson correlation was found to be the most appropriate to test the relationships between the variables.

From Table 1, the overall measure of the coefficient was high with overall measure of 0.751. Basing on the variables, service quality had the highest measure 0.936 and the least was customer complaint behaviour with 0.740. The Cronbach’s alpha values exceeded the acceptable level of 0.70 as recommended by Nunnally (1978), which means that the scale was reliable.

**4. Empirical Findings**

The findings of the study are presented basing on descriptive statistics using frequency, mean score, standard deviation and coefficient of variation; then correlations and regression results.

**5. Descriptive Statistics**

Descriptive statistics using frequency mean scores and coefficient of variation were computed for all the study. The pertinent results of the summary of the study variables are in Table 2.

The results in Table 2 shows that the overall mean score for service recovery (mean score = 2.58, CV = 49.6%) which indicates that perceptions of service recovery varied by indicating that perceptions of subscribers on service recovery varied by 49.6% from the mean score of 2.58. This implies that dissatisfied subscribers prefer to seek for service recovery from failure of services in mobile

**Table 1. Reliability of the instrument.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>No of items</th>
<th>Alpha coefficient</th>
<th>CVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Recovery</td>
<td>9</td>
<td>0.740</td>
<td>0.738</td>
</tr>
<tr>
<td>Firm responses</td>
<td>9</td>
<td>0.860</td>
<td>0.856</td>
</tr>
<tr>
<td>Service quality</td>
<td>29</td>
<td>0.936</td>
<td>0.932</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>17</td>
<td>0.784</td>
<td>0.780</td>
</tr>
</tbody>
</table>

Source: primary data.

**Table 2. Summary of the study variables.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Mean score</th>
<th>Standard deviation</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Recovery</td>
<td>336</td>
<td>2.58</td>
<td>1.28</td>
<td>49.6%</td>
</tr>
<tr>
<td>Service quality</td>
<td>336</td>
<td>3.22</td>
<td>1.06</td>
<td>32.8%</td>
</tr>
<tr>
<td>Firm responses</td>
<td>336</td>
<td>2.81</td>
<td>1.64</td>
<td>39.9%</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>336</td>
<td>3.18</td>
<td>1.08</td>
<td>33.8%</td>
</tr>
</tbody>
</table>

Source: Primary data.
telephone subscribers of dropped calls, poor network quality.

In addition, the 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. Such services are in terms of how reliable, how easily accessible, how tangible the services are, as well as how empathetic the service providers (employees) are to the customers. Customers look out for a reliable service regarding mobile telephone in terms of less dropped calls, ease in sending and receiving messages as well as easy accessible use of mobile money services.

The results in Table 2 further 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 Mobile telephone operators need to have clear firm procedures in place regarding whom to contact, when and where to complain when handling subscribers’ complaints because it enables them to know the process of service recovery.

Regarding customer loyalty, Table 2 further shows that the overall mean score was 3.18, (CV = 33.8%) meaning that the perceptions of respondents varied by 33.8% from the mean score of 3.18 with regard to customer retention and word of mouth perceptions, meaning that “to a moderate extent”, dissatisfied subscribers continue to use MTC services. This implies that Customers will 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 presented in Table 2 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” agreed to being loyal mobile telephone subscribers. Basing on coefficient of variation that ranged from 32.8% to 49.6%, the perceptions of mobile telephone subscribers varied fairly as the coefficient of variation are below 50%.

6. Correlations

The findings are presented below according to the four hypotheses relationship between service recovery and customer loyalty; the relationship between service quality and customer loyalty, the relationship between firm responses and customer loyalty.

6.1. Correlations Results

The results in Table 3 indicate that the relationship between service recovery and customer loyalty was positive and statistically significant (r = 0.255**, p-value = 0.000). This finding suggests that an improvement in handling complaints to attain service recovery will lead to an increase in customer loyalty. The relationship between firm responses and customer loyalty was also positive and
Table 3. Correlation matrix of study variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Service Recovery</th>
<th>Firm Responses</th>
<th>Service Quality</th>
<th>Customer Loyalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service recovery</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm responses</td>
<td>0.237**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service quality</td>
<td>0.242**</td>
<td>0.574**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>0.255**</td>
<td>0.531**</td>
<td>0.653**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed). Source: Primary data.

statistically significant ($r = 0.531 **$, $p$-value $= 0.000$), suggesting that when a company adequately responds to customer complaints and customers receive adequate compensation for service failure, they remain committed and keep subscribing to the MTC. This implies that when MTCs handle customer complaints to the expectations of their subscribers, the subscribers have a willingness to go through service recovery.

The correlation results similarly show a high positive significant relationship between service quality and customer loyalty ($r = 0.653 **$, $p$-value $= 0.000$), where service quality directly relates to customer loyalty. The implication of these findings has to do with the reliability, responsiveness, empathy, tangibility, assurance and network quality of the services provided by MTC staff as they work to attain a positive word-of-mouth about the company and, consequently, retain customers in long-term relationships.

There was a positive significant relationship between service recovery and service quality ($r = 0.242 **$, $p$-value $= 0.000$). The implication of this result is that favorable service recovery will lead to enhanced service quality.

6.2. Regression Results

$H_1$: There is a significant relationship between service recovery and customer loyalty

The results in Table 4 indicate a statistically significant linear relationship between service recovery and customer loyalty ($β = 0.263$, $p < 0.05$), and hence support hypothesis $H_1$. In the case of service recovery, respondents were asked to indicate a percentage level. The influence of service recovery on customer loyalty was low ($R^2 = 0.069$), indicating that the model (Model 1) provided a relatively weak fit as it only explained 6.9% of the variation in customer loyalty. Based on ANOVA, the model the $p$-value $= 0.000$. This means that the model was statistically significant at the level of $α = 0.05$ in explaining the simple linear relationship
between service recovery and customer loyalty. Therefore, hypothesis one (H1), which tests the relationship between service recovery and customer loyalty, is supported.

**H2:** There is a significant relationship between firm responses and customer loyalty

The model summary in Table 5 shows that, in the mean model, the value of \( R^2 \) was 30.1%. This means that firm response elements explained 30.1% of the variation in customer loyalty in a linear relationship between the two. The mean model in hypothesis two (H2) thus provided a moderate fit. The model had a moderate beta coefficient (\( \beta = 0.548, p < 0.05 \)) and explained 30.1% of the observed variation. The standardized regression coefficient value of the computed scores for firm responses was \( \beta = 0.548 \), and significance level of \( p \)-value = 0.000. This indicates that the influence of firm responses on customer loyalty of mobile telephone subscribers (MTSs) is statistically significant. This implies that firm responses statistically influence customer loyalty of mobile telephone subscribers. The implication of this result is that firm responses in terms of compensation, favorable encounters with MTC employees and appropriate organizational procedures lead to enhancement of customer loyalty. Therefore, hypothesis two (H2), which tests the relationship between firm responses and customer loyalty, is supported.

**H3:** Service Quality has a positive effect on Customer Loyalty

As shown above in Table 4, the correlation results show a high positive significant relationship between service quality and customer loyalty (\( r = 0.653^{**}, p\)-value = 0.000), with service quality directly relating to customer loyalty. The implication of this is that service quality, in terms of the reliability, network quality, responsiveness, empathy, tangibility and assurance of the staff and services of the MTC as they work towards attaining positive WOM and customer

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>( R^2 )</th>
<th>F</th>
<th>Sig. (p)</th>
<th>Constant</th>
<th>B</th>
<th>SE</th>
<th>( \beta ) (Beta)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Responses</td>
<td>0.548</td>
<td>30.1%</td>
<td>137.567</td>
<td>0.000</td>
<td>1.790</td>
<td>0.461</td>
<td>0.039</td>
<td>0.548</td>
<td>11.729</td>
</tr>
</tbody>
</table>

B = unstandardized coefficient; SE = standard error; B = standardized coefficient; Dependent variable: Customer Loyalty; Independent variable: Firm Responses. Source: Primary data.

**Table 4.** Regression of customer loyalty on service recovery.

**Table 5.** Regression of customer loyalty on firm responses.
Table 6. Regression of customer loyalty on service quality.

<table>
<thead>
<tr>
<th>Service Quality (H4)</th>
<th>R</th>
<th>R²</th>
<th>F</th>
<th>Sig. (P)</th>
<th>Constant</th>
<th>B</th>
<th>SE</th>
<th>β (Beta)</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.662</td>
<td>43.8%</td>
<td>251.140</td>
<td>0.000</td>
<td>1.184</td>
<td>0.600</td>
<td>0.038</td>
<td>0.662</td>
<td>15.847</td>
</tr>
</tbody>
</table>

B = unstandardized coefficient; SE = standard error; B = standardized coefficient. Dependent variable: Customer Loyalty; Independent Variable: Service Quality. Source: Primary data.

retention, enhances customer loyalty.

Table 6 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 R² = 43.8%. This means that service quality elements explained 43.8% the variation in customer loyalty. The resulting ANOVA table shows that under the model, the F-statistic = 251.140. The standardized regression coefficient (B) value of the computed scores for service quality was β = 0.662, with a significance level of p-value = 0.000. This implies that service quality influences customer loyalty of mobile phone subscribers. Service quality explained 43.8% of the variation in customer loyalty, meaning that the model provided a relatively good fit.

Finally, the study sought to determine the joint effect of service quality, firm responses and service quality on customer loyalty. Hypothesis four was therefore formulated as follow:

H₄: Service recovery, firm responses and service quality have a joint effect on customer loyalty

The model summary in Table 7(a) shows the three models generated using hierarchical regression analysis. Model 1 (regression of customer loyalty on service quality) resulted in an R² value of 0.441, meaning that 44.1% of the variation in customer loyalty was explained by service quality. Model 2 (regression of customer loyalty on firm responses) had an R² value of 0.483, meaning that 48.3% of the variance was explained by firm responses (with the dimensions of compensation, employee behavior and firm procedures). And Model 3 (regression of customer loyalty on service recovery) had an R² value of 0.490, indicating that 49% of the variation in customer loyalty was explained by service recovery and provided a fairly moderate fit. Relative to the other two models, Model 3 provides the best fit.

In Table 7(b), the ANOVA statistics show that Model 1 had an F-value of 252.396 and a p-value of 0.000, Model 2 an F-value of 148.883 and a p-value of 0.000, and Model 3 an F-value of 101.775 and a p-value of 0.000. The results of models 1, 2 and 3 were all statistically significant, with p-values of 0.000, at α = 0.05 level, in explaining multiple relationships between service quality, firm responses, service recovery and customer loyalty. Therefore, there was a significant relationship between service recovery, firm responses, and service quality and...
Table 7. (a) Joint Effect of Service Recovery, Firm Responses, Service Quality on Customer Loyalty; (b) Analysis of Variance of Service Recovery, Firm Responses, Service Quality & Customer Loyalty; (c) Regression Coefficients of the Integrated Model of Service Recovery (SR), Firm Responses (FR), Service Quality (SQ) and Customer Loyalty (CL).

(a)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Squared</th>
<th>Adjusted R Squared</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.664a</td>
<td>0.441</td>
<td>0.439</td>
<td>0.43404</td>
</tr>
<tr>
<td>2</td>
<td>0.695b</td>
<td>0.483</td>
<td>0.480</td>
<td>0.41813</td>
</tr>
<tr>
<td>3</td>
<td>0.700c</td>
<td>0.490</td>
<td>0.485</td>
<td>0.41593</td>
</tr>
</tbody>
</table>

'aPredictors: (Constant), Service Quality; 'bPredictors: (Constant), Service Quality, Firm Responses; 'cPredictors: (Constant), Service Quality, Firm Responses, Service Recovery. Source: Primary data.

(b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>47.549</td>
<td>1</td>
<td>47.549</td>
<td>252.396</td>
<td>0.000a</td>
</tr>
<tr>
<td>1 Regression</td>
<td>52.060</td>
<td>2</td>
<td>26.030</td>
<td>148.883</td>
<td>0.000b</td>
</tr>
<tr>
<td>2 Regression</td>
<td>52.820</td>
<td>3</td>
<td>17.607</td>
<td>101.775</td>
<td>0.000c</td>
</tr>
<tr>
<td>3 Residual</td>
<td>55.013</td>
<td>318</td>
<td>0.173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>107.833</td>
<td>321</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary data.

(c)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. error</td>
<td>β</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>1.325</td>
<td>0.139</td>
<td>0.579</td>
<td>9.536</td>
</tr>
<tr>
<td>SQ</td>
<td>0.558</td>
<td>0.044</td>
<td>0.075</td>
<td>12.768</td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>1.262</td>
<td>0.140</td>
<td>0.513</td>
<td>9.015</td>
</tr>
<tr>
<td>SQ</td>
<td>0.494</td>
<td>0.050</td>
<td>0.131</td>
<td>9.872</td>
</tr>
<tr>
<td>FR</td>
<td>0.095</td>
<td>0.037</td>
<td></td>
<td>2.528</td>
</tr>
<tr>
<td>3 (Constant)</td>
<td>1.025</td>
<td>0.167</td>
<td>0.496</td>
<td>6.120</td>
</tr>
<tr>
<td>SQ</td>
<td>0.478</td>
<td>0.050</td>
<td>0.109</td>
<td>9.526</td>
</tr>
<tr>
<td>FR</td>
<td>0.078</td>
<td>0.038</td>
<td>0.121</td>
<td>2.079</td>
</tr>
<tr>
<td>SR</td>
<td>0.135</td>
<td>0.052</td>
<td></td>
<td>2.599</td>
</tr>
</tbody>
</table>

Source: Primary data.
customer loyalty.

The coefficients of determination in Table 7(c) show that the three independent variables (namely: service quality, firm responses and service recovery) were all positively significant (p-value = 0.000) in the joint effect of these variables on customer loyalty. This implies that all the three outputs (coefficients of determination) were significant at $\alpha = 0.05$ level of significance in explaining variations in customer loyalty. We therefore conclude that there is a significant relationship between service recovery, firm responses, service quality and customer loyalty of MTCs in Uganda.

7. Discussion

From the research findings, the discussion of the study was presented based on the hypotheses of the study based on the relationship between service recovery and customer loyalty; firm responses and customer loyalty; service quality and customer loyalty and the Joint effect of service recovery, firm responses, service quality on customer loyalty.

The relationship between service recovery and customer loyalty

There was a positive significant relationship between service recovery and customer loyalty. This means that an improvement in service recovery should raise the level of customer loyalty. Service failure is inevitable and, in the case of a poor network or other MTC service failures, may lead to customer dissatisfaction, which may in turn be expressed through negative word-of-mouth. This calls for improvements to recovery processes, in terms of clarifying where complaints are handled and the careful monitoring of both employee- and customer recovery, to achieve the desired results. This is in agreement with Borah et al. (2020), who state that process failures lead to a higher likelihood of customer churn than outcome failures. On the other hand, when adequate service recovery is achieved, this leads to customer retention (Osarenkhoe et al., 2017).

Relationship between firm responses and customer loyalty

There was also a positive significant relationship between firm responses and customer loyalty, meaning that an improvement in firm responses leads to loyal customers. Mobile phone subscribers complain when their MTC is a source of disappointment, seeking an explanation from the company for their dissatisfaction. This has been made easy with the use of internet and social media channels like Twitter, Facebook, etc. When dissatisfied customers are going through recovery, the firm’s procedures should be clear to them in terms of who handles the complaints, and how the customer will be compensated. When customers are well handled in service recovery and the compensation customers receive meets their expectations, it leads to customer loyalty. In addition, courteous, timely responses and adequate recovery and compensation lead to customer retention.

Komunda and Osarenkhoe (2012) and Osarenkhoe et al. (2017) state that many organisations seek to expend as little effort as possible on service recovery, handle customer dissatisfaction without friendliness and courtesy, and may
therefore fail to sustain their relationship with the dissatisfied customers. This poses a challenge for recovery from customer dissatisfaction, which is aimed retaining customers.

**Relationship between service quality and customer loyalty**

Service quality had positive and statistically significant direct effect on customer loyalty. This suggests that any improvements to quality of services have direct but varying impacts on customer loyalty. The results showed that, to sustain the loyalty of telephone subscribers, the management of MTCs should emphasize the different dimensions of service quality, namely: tangibility, service convenience, network quality, assurance, empathy and responsiveness. This enables the MTC to behave in the desired manner (of improving service quality) even when customers have been disappointed by the services.

This is in agreement with surveys that have indicated that mobile network operators continuously improve their service quality (Czarnecki & Dietze, 2017), improve the quality and speed of the devices (ibid.), and improved photo-, video- and video call quality (Kilaba & Manasseh, 2020; Chigwende & Govender, 2021).

Supriyanto et al. (2021) claim that service quality is the most powerful competitive weapon that many leading organizations possess. Service quality and the level of customer satisfaction are thought to determine the likelihood of repurchase decisions. Prentice et al. (2021) and Anabila et al. (2021) add that service quality is very important and organizations that strive to attain and maintain service quality may gain loyal customers.

**Joint effect of service recovery, firm responses, service quality on customer loyalty**

The regression analysis to establish the joint effect of the study variables (service recovery, firm responses and service quality) on customer loyalty was statistically significant. The regression analysis was useful for comparing two variables to see whether controlling for other independent variables would positively affect the model.

Improvements to service recovery lead to improved word-of-mouth and greater retention of Mobile telephone subscribers. According to Osarenkhoe, Komunda and Byarugaba (2017), some people view WOM as a recommendation, while others view it as giving or receiving any comment about a product or service. Komunda & Osarenkhoe (2012) suggest that WOM has its own credibility. This is because WOM usually follows a complaint and a subsequent recovery effort. Michel et al. (2009) and Khoa (2020) 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.

MTC employees should be empowered to enable customers to recover from their dissatisfaction, and the organizational procedures regarding who handles complaints and how customers are to be compensated for the service failure should be clear to customers. This premise is supported by previous research.
that found that it is primarily the behaviors and attitudes of customer contact employees that determine the customer’s perception of service quality and service recovery (Liat et al., 2017; Ali et al., 2021). According to Alam and Noor (2020), front line MTC employees in particular play a crucial role in the recovery from service failures and are also critical in dealing with complaints as well.

Alternatively, a positive approach by company employees when dealing with service recovery helps to maintain customer relationships and generate positive communication about the company. Customers feel that they are in good hands and expect fair treatment (“justice”) from the company. Having invested time and effort in bringing a problem (or problems) to the attention of the MTC, mobile telephone subscribers who complain expect appropriate responses from the MTC managers and staff. The respondents expect MTC staff to be friendly, courteous and respectful. Sweeney et al. (2012) further confirm the importance of firm responses. For companies to be able to handle customer complaints effectively, they have to understand the critical contact employee behaviors from the customer’s point of view.

In addition, dissatisfied customers must be compensated for service failures of MTCs and this can take the form of refunds, exchanges, or even an apology. Customers work through service recovery to get from dissatisfaction to satisfaction with the service, and some customers are comfortable with just an apology. Ibrahim et al. (2018) & Osarenkhoe et al. (2017) 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 other hand, Menidjel and Bilgihan (2021) note that MTSs who are treated unpleasantly may discontinue their relationship with the service operator and engage in negative WOM, even in the case of a total refund.

8. Concluding Remarks and Implications

This research established relationships between service recovery, firm responses, service quality and customer loyalty, relationships that were positive and statistically significant. Service quality had positive and significant direct relationship with the variables of service recovery and customer loyalty. MTC managers therefore need to pay attention to service quality, in terms of the dimensions of service tangibility, network quality, responsiveness, assurance, empathy, convenience, and reliability, in their attempts to improve the loyalty of mobile telephone subscribers. Firm responses and organizational procedures are also important for MTCs because 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 to the attention of an MTC, complaining MTSs expect the company’s management and staff to respond appropriately. When handling their complaints, customers expect MTC staff to be friendly, courteous, and respectful.
9. Managerial and Theoretical Implications and Direction for Future Studies

Mobile telephone companies should establish clear organizational procedures that enable dissatisfied customers to complain to the company. MTCs should, in addition, routinely engage in service recovery to keep track of how mobile telephone subscribers respond to service failure and ensure that complaints are handled in a timely manner to impact the loyalty to the customers. MTCs should communicate information to customers about their help lines and guide customers on how to recover from failure, explaining how and where to complain.

Firm responses must be clearly communicated by MTC management to subscribers, about what the company is doing/planning to do about their complaint; handle their complaints quickly, and have clear procedures to help subscribers regarding what to do when they are dissatisfied—where they should turn to initiate service recovery, and how to follow-up and get feedback. Policy-makers of the Uganda Communications Commission and the Ministry of Information and Communications Technology should work together with MTCs to ensure successful service recoveries and deliver quality services.

Some of the limitations of this study are that this study used a cross-sectional design with the data collected at a single point in time. As the findings from such studies are limited to the specific period only, future studies could add to knowledge in the field by adopting a longitudinal research design. Moreover, the study was also limited by its quantitative approach, so adding qualitative elements would be a way for future studies to expand on what we have learned here.

Future studies should explore the following: Service recovery, customer satisfaction and sales performance in the health sector in Uganda; the cross-sectional research design is a cost-effective and time-saving method, but can also limit deeper investigation of other possible causal relationships in the phenomena under study. Consequently, a longitudinal study would provide more insight into the direct and indirect effects of firm responses on the customer loyalty of mobile telephone subscribers. Longitudinal study on service recovery and sales performance of service firms; and service quality, employee behavior and organizational performance of service firms.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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