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Pasape, Liliane

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# Key Elements of Customer Trust towards Retaining Customers of Telecommunication Companies in Tanzania

Liliane Pasape

Department of Business Administration and Management, School of Business Studies and Humanities, Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania  
Email: liliane.pasape@nm-aist.ac.tz

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## Abstract

This study assessed how customer trust affects customer retention in telecommunication companies in Tanzania. Using logistic regression, 120 questionnaires were analysed. Results revealed respondents were not satisfied with sustainability operations (83.3%), keeping promises (90%), best telecom services (84.2), business performance (83.3%), stable authority and management (82.5%). The percentage of correct predictions of variables ranges from 80% to 90%. Besides, values of Nagelkerke's R-square show the ability of independent variables to account for variation in the dependent variable from 0.050 to 0.193. Additionally, results from the chi-square analysis were only statistically significant for the variable age on the sustainability of operations for age (0.01) and time (0.02). The logistic regression coefficient shows that time effects operation sustainability negatively by 0.65. For keeping promises, predictor age affected the model negatively by 0.07. Moreover, for telecom services, predictor variables such as gender and income affected the model positively by 0.19 and 0.07, respectively. Regarding business performance, age and education negatively affect the model by 0.39 and 0.49, respectively. Furthermore, on stability of authority and management, predictor variable gender positively affects the model by 0.23. Thus, telecommunication companies must ensure customers trust their operations, services, business performance, and management framework to enhance customer retention.

## Keywords

Customer Trust, Customer Retention, Telecommunication Companies, Tanzania

## 1. Introduction

The market place connects customers and suppliers directly or through intermediaries. Various methods must be used to ensure that information is transferred among the parties concerned. Previously, market participants communicated verbally, but as technology progresses, new methods such as telephones, text, data, photos, videos, and other related ones are becoming more frequent. This introduces the concept of telecommunication, which refers to electronic information transfer processes and systems via networks. In order to make such a reality, a number of telecommunication businesses have evolved and are now functioning in almost every country across the world in what is known as the telecommunications industry. Statista (2022) emphasized that the telecommunications business includes corporations and regulatory bodies that provide the services and infrastructure needed to transport signals, messages, and data. This mostly covers fixed-line and mobile Internet access, as well as telephony services.

According to Stallings (2004), the telecommunications sector in most economies is characterized by high entry and exit barriers due to high initial investment costs and government rules and regulations; the presence of skilled labor; high capital requirements; new technologies; and new services; and the presence of skilled labor, high capital requirements, new technologies, and new services. While individual telecommunications customers are typically price-sensitive, corporate clients are not, as they are ready to pay a premium for the quality and dependability of voice services and data delivery. Both types of customers, however, demand modern technologies.

According to telecommunication reports, the number of mobile phone users is expanding spontaneously globally, reaching around 83.89 percent of the world's population, as indicated by the African Development Bank study (2011) and Turner (2020). In terms of the African situation, Holst (2022) stated that the African mobile communications market has grown rapidly in recent years. An exclusive phone created for the market, as well as the growing popularity of built-in services such as mobile money, has resulted in greater mobile technology adoption in Africa. While conditions vary across countries and regional economic communities, most indicators point to mobile technologies facilitating an increasingly connected continent.

Tanzania is classified as an emerging nation in terms of telecommunications. According to Tanzania Invest (2022), mobile telephony in the country began in 1997 with only MIC (T) Ltd (also traded as TIGO) and has since evolved to include seven active mobile operators, namely Tigo, Vodacom, Airtel, Zantel, TTCL, Sasatel, and Benson. Since 1997, the number of users has steadily increased, from 275,557 in 2001 to 51.22 million today, according to O'Dea (2021), Tanzania Invest (2022), and Holst (2022). Regarding the market share of the seven existing operators, O'Dea (2022) reported that by June 2020, Vodacom had 31 percent of telecom subscriptions, followed by Airtel (27 percent), Tigo (26 percent), Halotel (13 percent), Zantel (2 percent), TTCL (1 percent), and Smile (0.002 percent).

Despite the fact that the rankings for the first providers remained the same in 2021, with Vodacom first, Airtel second, and Tigo third, Vodacom led by 29.7 percent, a 2.7 percent rise. Ioanna (2002) also reported on this statistical pattern. This statistical trend demonstrates that telecommunications companies are having difficulty retaining customers.

According to Mkono & Kapinga (2014), Tanzanian telecommunications enterprises compete fiercely, yet the entire industry remains open to new entrants from both within and beyond Tanzania. Client retention becomes crucial, as the cost of obtaining a new customer is considered higher than the cost of retaining existing ones. According to MiCU (2012) and Saini, Monika, & Garg (2017), the cost of acquiring new consumers is greater than the cost of keeping current ones. Furthermore, as Hanson & Kalyanam (2007) show, the telecommunications industry is undergoing rapid technological advances, with the potential for volatility due to limitless opportunities for invention, the creation of new businesses, and the growing danger to privacy. As a result, businesses must understand how to use technology to their advantage, such as bringing products and services closer to customers to meet demand while also increasing customers' trust in the organization. This is because previous researchers such as Ranaweera & Prabhu (2003); Venetis & Ghauri (2004); Sarwar, Abbasi, & Pervaiz (2012); Danesh, Nasab, & Ling (2012); and Alkitbi, Alshurideh, Kurdi, & Salloum (2020) reported a link between customer trust, loyalty, and retention and their significant contribution to economic growth.

Furthermore, Murray (1991) asserts that, when combined with other factors, accelerated information communication can boost productivity, improve access to services, expand markets, simplify transactions, eliminate the need for physical transportation, reduce crime, improve governance, and open up new socioeconomic opportunities, among other things. Despite the fact that the African telecommunications industry is expected to be one of the primary drivers of economic growth and development in the majority of countries, little is known about Tanzania's status, particularly how companies can increase customer trust and address the customer mobility challenge. According to Sife et al. (2010), there has been a significant amount of consumer mobility, switching from one service provider to another, and an increasing proclivity for individuals to subscribe to services from several providers. As a result, this study investigates the key possible elements that can be used to improve customer retention in Tanzanian telecommunication companies, focusing on how business operations are sustainable, the extent to which business promises are kept, the quality of telecom services offered, the magnitude of business performance, and the stability of the companies' authority and management.

This paper is divided into five sections. The first section covers the research issue in terms of its nature and composition; numerous telecommunication tools employed as essential aspects of the industry; and the statistical status of the industry globally, particularly in Africa and Tanzania. The introduction also em-

phasized the fierce competition in the market among telecommunications companies, as well as the need to build strong customer trust in order to increase customer retention, not only for the benefit of the companies, but also for the benefit of countries' economic growth in general. The second section on literature review discusses the concept of a customer, customer retention, and customer trust in terms of introducing essential ideas, reviewing relevant theories, models, and empirical studies, and identifying the gap that the current study addresses. All components of research design, sampling, data collection, and data analysis were covered in the third section of materials and methods. The fourth section also contains substantial findings and discussions, beginning with demographic data and progressing to the key elements of customer trust influencing retention in the description and inferential outputs from logistics regression. In the final section, the conclusion and recommendations are offered, stressing key messages, generalization of the result, and recommendations for further research.

## 2. Literature Review

### 2.1. Key Concepts of Customer Retention and Customer Trust

Telecommunications firms, like any other business, rely heavily on their customers to achieve their objectives, whether it is gaining market share, productivity, profitability, or shareholder equity. A customer, according to [Parasuraman & Grewal \(2000\)](#), is an individual or a corporate entity who buys and pays for a product. Customers have comparable characteristics regardless of the product or industry in which they work. [Varadarajan \(2020\)](#) presents a customer information resource-based view of competitive advantage and performance and recognizes customers into three categories: internal customers, intermediary customers, and external customers. Regardless of their differences, all customers have the ability to purchase what is available in the market, have decision power over available and future products, and thus require easy access to products or services as well as assurance that they can trust the companies and their respective products, as revealed in [Coldwell \(2001\)](#). Furthermore, [Anderson & Weitz \(1992\)](#) defined customer in terms of two essential components: trust in the relationship partner's benevolence in actions that directly or indirectly affect the relationship in question; and honesty, which means that the trusting party relies on the credibility of the relationship partner. Thus, it is critical to keep clients through creating and sustaining their trust.

Customer retention is seen as a core-marketing construct that represents the continuity of business relationships between the customer and the company. As portrayed in [Gerpott et al. \(2001\)](#), [Bowen & Chen \(2001\)](#), and [Hoyer & MacInnis \(2001\)](#), this is characterized as a strong commitment and practice of trying to satisfy consumers with the purpose of creating long-term connections with them in the process of doing business (2001). Furthermore, [Hoyer & MacInnis \(2001\)](#) define customer retention as the action of attempting to satisfy customers in order to establish long-term relationships with them. Furthermore, [Zineldin \(2000\)](#)

defined customer retention as the activity of attempting to satisfy consumers in order to build long-term connections with them. According to [Hoyer & MacInnis \(2001\)](#), customer retention is the practice of attempting to satisfy consumers in order to develop long-term relationships with them. As per [Hong-kit Yim, Anderson, & Swaminathan \(2004\)](#), customer retention, like most customer relationship management strategies, shows the company's soul as it has an effect on customer loyalty and sales growth. As a result, businesses must think like customers in order to satisfy them. Consequently, it is very important to understand the factors that influence customer retention so as to align them with the marketing environment, business strategies, and company profitability forecast, as evidenced in [Clark \(1997\)](#). Among many suggested factors, the current study evaluated the role of customer trust in customer retention ability based on the assumption that if customers trust your products and services, they will be comfortable purchasing similar or new products from you in the future.

[Mayer et al. \(1995\)](#) define trust as the willingness of one party to be powerless against the undertakings of another party in the expectation that the other party will carry out a certain action necessary to the trustor, regardless of the ability to control the other party. According to [Kim, Yu, & Gupta \(2012\)](#), trust is also defined as someone's belief that a given seller can be relied on. [Moorman, Zaltman, & Despan  \(1992\)](#) and [Ganesan \(1994\)](#) defined customer trust as the customer's belief in the supplier's compassion, honesty, and capacity to act in the best interests of the relationship in question. According to [Ganesan \(1994\)](#), trust includes honesty, which indicates that the trusting party depends on the credibility of the relationship partner. Furthermore, [Anderson & Weitz \(1992\)](#) defined trust as having two essential components: the belief that the relationship partner will be benevolent in his or her actions, which affect the relationship directly or indirectly; and honesty, which means that the trusting party relies on the relationship partner's being credible. According to [Scheer & Stern \(1992\)](#), trust is a critical component in the concept of customer relationship marketing because it indicates one party's willingness to engage in the risk and instils confidence in the other party that they will fulfil future responsibilities.

## 2.2. Theoretical Framework

Connection marketing and interactive marketing are rapidly developing as businesses and entrepreneurs prioritize techniques for maintaining and improving customer relationships with current customers over acquiring new customers. According to [Denove & Power \(2007\)](#), previous studies on customer retention have been disappointing because most of them have focused on how to recruit new clients rather than maintain existing ones.

The subject's theoretical underpinning was built on the [Center for Food Integrity and Iowa State University's \(2009\)](#) research-based consumer trust model, which asserts that trust is driven by three crucial elements: confidence, competence, and influence. Client trust, in particular, is crucial to satisfaction and, by

extension, retention. To do so, one's confidence must be created through ethics and shared values; skills and abilities must be strengthened for competence building; and favorable word of mouth and influence from family, friends, and credentialed individuals must be achieved.

Furthermore, the study applied Payne & Frow's (2006) five-step process model for customer relationship management to explain essential consumer activities that promote satisfaction, trust, and hence retention. Because it categorizes the customer relationship management process as strategy development, value generation, multichannel integration, performance assessment, and information management, this model is particularly relevant to this study.

Moreover, in order to improve the conceptualization of the current study, the author incorporated the two-level model of customer retention in the United States mobile telecommunications service market proposed by Seo, Ranganathan, & Babad (2008). The model proved effective since it considers customer demographics such as age and gender and how they influence consumers' choice of service plan complexity and handset sophistication, resulting in variances in customer retention behavior. Furthermore, it aided in the knowledge of the factors influencing switching costs and customer satisfaction. Additionally, the current study used a binary logistic regression model as the methodological strategy for data analysis.

### 2.3. Empirical Framework

Several studies on customer retention have been undertaken, as indicated by Rosenberg & Czepiel (1984), DeSouza (1992), Ahmad & Buttle (2002), Alkitbi et al. (2020), and Lamrhari et al. (2022). However, little research has been conducted on the topic of customer trust in the Tanzanian telecommunications business.

Several authors investigate the connections between client trust, loyalty, and retention. For example, Nguyen, Leclerc, & LeBlanc (2013) investigated the mediating function of customer trust on customer trust and discovered that different elements, including perceptions of a firm's social identity, corporate identity, corporate image, and corporate reputation, can influence consumer trust. According to Geyskens, Steenkamp, & Kumar (1998) and Morgan & Hunt (1994), the important importance of trust in building and maintaining connections between people who participate in an exchange process is recognized in marketing.

Rotter (1971) defines trust as one party's guarantee of another's dependability within a specific trading relationship. Consumers who trust a company expect commitments to be kept as stated. They also want the firm to operate in their best interests, as demonstrated by Nguyen, Leclerc, & LeBlanc (2013). According to the research so far, the firm's approach should include, among other things, cultivating a positive image to establish or enhance customer trust with the hope of increasing customer loyalty and retention, as stipulated in Zhou & Tian (2010); Flavian, Guinaliu, & Torres (2005) and Zhou & Tian (2010).

Furthermore, [Leninkumar \(2017\)](#) investigated the impact of customer satisfaction and trust on customer loyalty. The data showed that customers' trust and loyalty, as well as customer satisfaction and loyalty, and customer contentment and trust, all exhibited a significant positive correlation. Client satisfaction has been identified as an important component in determining customer loyalty. Moreover, consumer contentment influenced customer trust, demonstrating that customer satisfaction is a prerequisite for customer trust. Also, an indirect relationship between customer happiness and loyalty was discovered through consumer trust. According to [Ranaweera & Prabhu \(2003\)](#), trust is a stronger emotion than satisfaction and better predicts loyalty. Therefore, resolving customer trust would be extremely beneficial to businesses since it will indirectly address issues of satisfaction and loyalty.

From the reviewed past theoretical and empirical literature, this study recognized the research gap of identifying and ascertaining specific elements that are necessary to be incorporated into business strategies when companies are aiming to increase customer retention. Particularly in Tanzanian telecommunication companies, these are among the research gaps addressed by the current study. Inspired by [Siau & Shen \(2003\)](#), who determined that acquiring client trust in mobile commerce is a difficult process that extends from initial trust formation to on-going trust development, yet it is possible. As a result, this study focused on five major elements: the long-term viability of business operations; the extent to which customers' promises are honored; the quality of telecommunication services; business performance; and the stability of the communications authority and management.

### 3. Material and Methods

The quantitative research method was utilized, with the purpose of getting an actual and contextual, in-depth understanding, knowledge, and explorations of customer trust and its role in customer retention in telecommunication companies. In terms of the sample process, Aitel, a company based in Arusha, was chosen as a case study from a population of seven Tanzanian mobile network companies, namely Vodacom, Airtel, Tigo, Halotel, Zantel, TTCL, and Smile. The study employs a positivist research technique, holding that only factual knowledge is achieved through data collection, analysis, and interpretation based on the study's main purpose.

Therefore, guided by [Crowe et al. \(2011\)](#), [Shanks & Parr \(2003\)](#), and [Yin \(1999\)](#), the study defined five variables on consumer trust in advance, namely stable operations, keeping promises, stable authority and management, business performance, and stable authority and management. Furthermore, the study evaluates whether those variables contribute to testing and refining the theory under study, as well as clearly defining the selected case and data collection tools in order to ensure the validity and replicability of the research findings globally, as recommended by [Crowe et al. \(2011\)](#). The study also used basic random selec-



tion to acquire samples and verify that each of the 120 respondents had an equal probability of being selected, as shown in Equation (1).

$$\text{Sample size} = \frac{z_{\alpha/2}^2 \cdot p(1-p)}{e^2} \quad (1)$$

where:  $z$  = is the value from the standard normal distribution reflecting the confidence level that will be used (eg.  $z = 1.96$  for a 95% CI)

$\alpha$  = is the significance level (5%).

$p$  = percentage picking a choice (50%).

$e$  = margin of error (5%).

The first component of a structured questionnaire gathered information on demographic factors utilizing variables such as gender, age, economic situation, and education level. The second component addresses customer trust issues through five variables: sustainable operations; upholding promises; the finest telecom services; company success; and solid authority and management. According to [Bashir et al. \(2008\)](#) and [Carmines & Zeller \(1979\)](#), the study considers data validity and reliability further by pre-testing the questionnaire and retesting research methods and procedures.

The Statistical Package for Social Science (SPSS) was utilized for data analysis, and binary logistic regression (given herein as Equation (2)) was employed to quantify the trust elements influencing customer retention.

$$p(\text{AGREE}_i = j) = \frac{e^{\left(\beta_0 + \sum_{i=1}^n x_i \beta_i\right)}}{1 + e^{\left(\beta_0 + \sum_{i=1}^n x_i \beta_i\right)}} \quad (2)$$

where;  $j = 1$  (agree) or  $j = 0$  for disagree

Whereby  $\beta_0 + \sum_{i=1}^n x_i \beta_i = \beta_0$  + sustainability operations  $\beta_1$  + keeping promises  $\beta_2$  + best telecom services  $\beta_3$  + business performance  $\beta_4$  + stable authority and management  $\beta_5 + \varepsilon_i$

Therefore the  $\text{AGREE}_i$  denotes the  $i^{\text{th}}$  individual agree ( $\text{AGREE}_i = 1$ ) or not agree ( $\text{AGREE}_i = 0$ ) with the factors,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  and  $\beta_5$  denotes the regression coefficients

Before proceeding with further analysis of the binary logistics regression, this study performed the Wald chi squared test to confirm whether a set of independent variables is collectively significant for a model. This test was also meant to measure the significance of each independent variable in a model. The binary logistic regression was also utilized to examine whether the relationship between the response and each aspect of the model's customer trust term is statistically significant. The p-values for the five trust factors were compared to the study's significance level ( $\alpha = 0.05$ ).

Moreover, the study determined the regression coefficients to identify whether a change in a predictor variable makes the event more likely or less likely, as well as explain how predictor factors predict customer retention values with and

without customer trust elements. Furthermore, the study examined the statistics in the model summary table using deviance  $R^2$  to determine how well the model under consideration fit the data. Similarly, chi-square analysis was used to measure the goodness of fit between expected and observed results for categorical variables from a random sample.

In addition, the study calculates the exponential value of B ( $\text{Exp}(B)$ ) or the odds ratio in order to calculate the expected change in odds for a unit increase in the predictor. When  $\text{Exp}(B)$  is less than 1, rising values of the variable correspond to decreasing odds of the event occurring, and when  $\text{Exp}(B)$  is more than 1, increasing values of the variable correspond to increasing odds of the event occurring. Oladapo et al. (2018) and Mo, Li, & Fan (2015) provided motivation for adopting logistics regression for data analysis. Oladapo et al. (2018) also reported that logistic binary regression models could predict client retention in a telecommunications firm with 95.5 percent accuracy.

## 4. Results

### 4.1. Respondents' Demographic Characteristics

The demographic statistics were presented in the form of respondents' gender, whether male or female, age range, degree of education gained, range of monthly money earned, and time spent as a telecommunications business client.

Males outnumber females by 60 to 40 percent, according to the gender breakdown (Figure 1).

In terms of age range, the findings (Figure 2) reveal that the majority of respondents (53.3 percent) were between the ages of 26 and 35 years, and between the ages of 36 and 45 years (24.2 percent). Customers in this age range include both young and old people.

Besides, on the level of education, findings (Figure 3) demonstrated that the majority of respondents (36.7%) attained university qualification, while those with an advanced level of secondary school covered 45%.

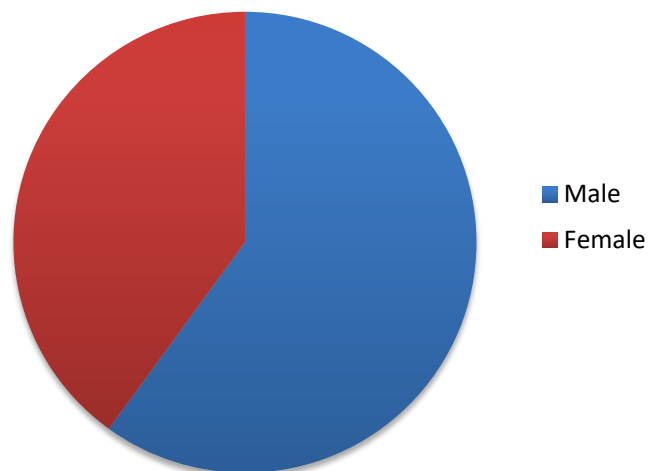
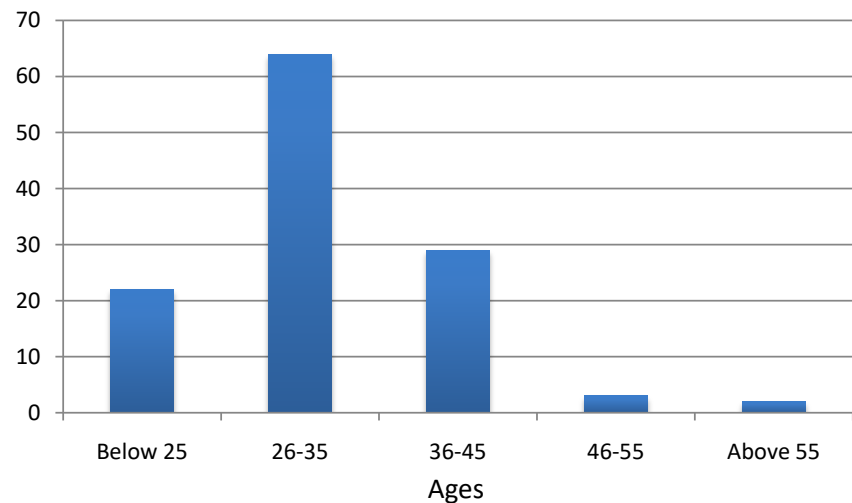
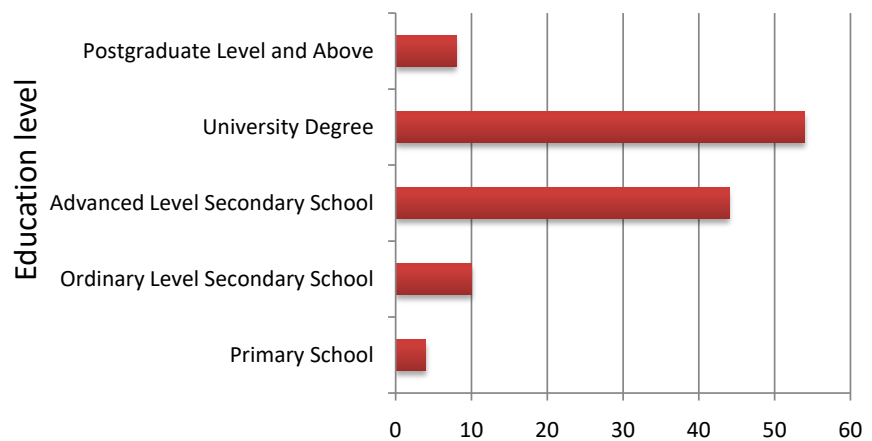


Figure 1. Gender of respondents (Analysis of field data, 2018).



**Figure 2.** Age of respondents in years (field data, 2018).



**Figure 3.** Education level of respondents (field data, 2018).

The results (**Table 1**) revealed that the majority of respondents (50 percent) earned between Tshs 100,000/ = and Tshs 600,000/ = per month.

Furthermore, statistics (**Table 2**) demonstrate that 44.2 percent of respondents have been telecommunications firms' clients for more than five years.

#### **4.2. The Degree of Agreement of Impact of Customer Trust on Customer Retention**

**Table 3** summarizes the findings on the impact of customer trust variables on telecommunications business customer retention. The frequency and percentages of agreement and disagreement for the five variables, namely sustainable operations, keeping promises, stable authority and management, business performance, stable authority and management, were recorded.

#### **4.3. The Contributing Elements of Customer Trust in Customer Retention**

The binary logistic regression results describe the distinct factors of consumer

**Table 1.** Monthly income of the respondents.

Variables	Range	Percent
Income	Below 100,000	10.0
	100,000 - 600,000	50.0
	600,000 - 900,000	21.7
	900,000 - 1,300,000	11.7
	1,300,000 - 1,500,000	3.3
	Above 1,500,000	3.3

Source: Field data (2018).

**Table 2.** Duration with telecommunication company as a customer.

Variables	Range	Percent
Duration with telecommunication company	Less than 1 year	15.8
	1 - 3	25.0
	3 - 5	15.0
	More than five	44.2

Source: Field data (2018).

**Table 3.** Descriptive summary for customer trust.

Sub variables	Degree of Agreement		Degree of Disagreement	
	Frequency	Percentage	Frequency	Percentage
a) Sustainability of operation	20	16.7	100	83.3
b) Keeping promises	12	10	108	90.0
c) Best telecom services	19	15.8	101	84.2
d) Business Performance	20	16.7	100	83.3
e) Stable authority and management	21	17.5	99	82.5

Source: Field data (2018).

trust in customer retention. The results are presented in five subsections: 4.3.1, 4.3.2, and 4.3.3; 4.3.4, 4.3.5, and 4.3.6 on determining whether each independent variable adds some incremental value to the model; determining the association between response and trust elements; determining coefficient values; understanding the effects of the predictors; determining how well the model fits the research data; and determining the exponential value of B (Exp(B)) or the odds ratio; and determining the exponentiation of the odds ratio.

#### 4.3.1. Association between Dependent and Independent Variables

This part seeks to determine whether each independent variable (predictor) influences the dependent variables (criterion variables) and contributes incremental value to the model. **Table 4** displays the Wald chi-squared test findings, which were used to determine if each independent variable in a model was significant or not.

**Table 4.** Wald Test results to confirm whether a set of independent variables are collectively significant for a model.

Customer Trust Variables	Demographics Variables	Wald $\chi^2$
1. Sustainability of operation	Gender	1.69
	Age	5.58
	Education	1.57
	Income	0.18
	Time	5.94
2. Keeping promises	Gender	0.04
	Age	0.04
	Education	0.76
	Income	0.29
	Time	1.99
3. Best telecom services	Gender	0.12
	Age	0.19
	Education	2.38
	Income	0.09
	Time	0.03
4. Business performance	Gender	0.01
	Age	1.45
	Education	2.13
	Income	1.07
	Time	0.54
5. Company authority and management	Gender	0.19
	Age	0.12
	Education	0.01
	Income	0.01
	Time	2.78

Source: Field data (2018).

#### 4.3.2. Determination of Whether the Association between the Response and the Model's Term Is Statistically Significant

The study evaluated the  $p$ -value for the five trust aspects to the study's significance level ( $\alpha = 0.05$ ) to examine the null hypothesis and establish whether the link between the response and each term in the model is statistically significant. The assumption is that the term's coefficient is equal to zero, suggesting that there is no relationship between the term and the response. The findings are summarized in **Table 5**.

#### 4.3.3. Determination of Regression Coefficients

The proportion of variance in the dependent variable that can be explained by

**Table 5.** The association between the response and customer trust element ( $\alpha = 0.05$ ).

Customer Trust Variables	Demographics Variables	P-Value
1. Sustainability of operation	Gender	0.19
	Age	*0.01
	Education	0.21
	Income	0.67
	Time	*0.02
2. Keeping promises	Gender	0.851
	Age	0.852
	Education	0.383
	Income	0.588
	Time	0.159
3. Best telecom services	Gender	0.73
	Age	0.66
	Education	0.12
	Income	0.77
	Time	0.87
4. Business performance	Gender	0.99
	Age	0.23
	Education	0.14
	Income	0.30
	Time	0.46
5. Company authority and management	Gender	0.66
	Age	0.74
	Education	0.97
	Income	0.35
	Time	*0.09

Source: Field data (2018).

the independent variable is frequently determined using a regression coefficient. The regression coefficient results sought to discover whether a change in a predictor customer, namely customer trust, made customer retention more or less likely. According to the data in **Table 6**, positive coefficients suggest that as the predictor increases, client retention becomes more likely. While negative coefficients suggest that as the predictor increases, the occurrence becomes less likely.

#### 4.3.4. Understanding the Effects of the Predictors

The researchers employed chi-square values as an omnibus test to understand the influence of the predictor components. The findings (**Table 7**) show that in logistic regression, the maximum likelihood function provides a chi-square value

**Table 6.** Summary of Inferential analysis showing regression coefficients.

Customer Trust Variables	Demographics Variables	Regression Coefficient ( $\beta$ )
1. Sustainability of operation	Gender	0.83
	Age	1.02
	Education	0.41
	Income	0.11
	Time	-0.65
2. Keeping promises	Gender	0.13
	Age	-0.07
	Education	0.33
	Income	0.17
	Time	0.37
3. Best telecom services	Gender	0.19
	Age	-0.15
	Education	-0.54
	Income	0.07
	Time	-0.04
4. Business performance	Gender	0.00
	Age	-0.39
	Education	-0.49
	Income	0.27
	Time	0.16
5. Company authority and management	Gender	-0.23
	Age	0.11
	Education	0.01
	Income	0.24
	Time	0.35

Source: Field data (2018).

**Table 7.** Effect of predictor variables.

S/N	Customer Trust Variable	Chi-square ( $\chi^2$ )	Degree of Freedom	P-value
1.	Sustainability of operations	14.59	5	0.01
2.	Keeping promises	3.58	5	0.61
3.	Best Telecom Services	3.52	5	0.62
4.	Business Performance	4.48	5	0.48
5.	Company Authority and Management	4.48	5	0.44

Source: Field data (2018).

based on the ability to estimate customer retention values with and without customer trust components.

#### 4.3.5. Determination of How Well the Model Fits the Data

The study also examined the Cox & Snell R Square and the Nagelkerke R Square values to see how well the model under study fit the data, because these values indicate how much variation in the dependent variable explains. **Table 8** displays the results for five of the customers' trust variables.

#### 4.3.6. Determination of the Odds Ratios

**Table 9** shows the expected change in probabilities for a unit increase in the predictor based on the findings on the exponential value of B or the odds ratio.

**Table 8.** How the model fits it the data.

S/N	Customer Trust Variable	Cox & Snell R Square	Nagelkerke R Square
1	Sustainability of operations	0.11	0.19
2	Keeping promises	0.29	0.06
3	Best Telecom Services	0.29	0.05
4	Business Performance	0.37	0.06
5	Company Authority and Management	0.04	0.07

Source: Field data (2018).

**Table 9.** Exponential value of B (Exp(B)) or the odds ratio.

Customer Trust Variables	Demographics Variables	Exp(B) or Odd Ratio
1. Sustainability of operation	Gender	2.296
	Age	2.779
	Education	1.507
	Income	1.114
	Time	*0.521
2. Keeping promises	Gender	1.137
	Age	*0.933
	Education	1.384
	Income	1.188
	Time	1.453
3. Best telecom services	Gender	1.214
	Age	0.859
	Education	*0.583
	Income	1.074
	Time	*0.963



**Continued**

	Gender	1.007
	Age	*0.678
4. Business performance	Education	0.613
	Income	1.310
	Time	1.176
	Gender	*0.793
5. Company authority and management	Age	1.116
	Education	1.012
	Income	1.272
	Time	1.419

Source: Field data (2018).

## 5. Discussion

The research findings, as shown in **Figures 1-3**, as well as **Table 1** and **Table 2**, demonstrate that customers' purchasing power is influenced by their demographic characteristics. Therefore, the assessment of the above demographic characteristics was crucial. According to **Hitka et al. (2019)**, there are currently changes in the approaches of customers in researched areas in terms of gender and age as a result of customer relationship management implementation. Therefore, in order to meet the new and constantly evolving needs of a growing number of customers concerned about social and environmental issues, businesses must constantly monitor their market performance and incorporate customer feedback as input for evaluating internal processes as well as consider demographic differences during market segmentation and targeting

With regard to the degree of agreement on the impact of customer trust on customer retention, the findings in **Table 3** show that the impact of customer trust on customer retention was measured through the following items: sustainability of telecommunication company's operations; how they keep their promises; confidence if the company provides the best telecom service; performance; and the nature of company authority and management. The result indicates that 83.3% of respondents do not agree that the company has a sustainable operation and only 16.7% agree. So, respondents see the telecommunication company as the operator that cannot be relied upon for service pledges. Sustaining business operations is linked to the activities that ensure the operations are available now and in the future at a desirable quality. In order to make that happen, companies must focus on reducing business-related costs, come up with more innovative strategies, increase their market share, and improve their reputation.

About 90% of respondents disagree that the company lives up to its promises. Results suggest that the company did not make it clear in the minds of subscribers what was promised and what was delivered at the end of the pledge period. Keeping business commitments is critical because organizations that succeed in

keeping customer promises frequently earn a reputation for being reliable and trustworthy. This improves a company's image and reach because existing consumers tend to share their positive experiences with others. Keeping promises entails a variety of challenges, including ensuring that all promises are formally publicized, either through advertisement campaigns or contracts, so that they can be included in the resource implementation plan. Furthermore, businesses must build processes, methods, and tools to track commitments and their status of implementation within the agreed-upon timeframe. In doing so, they can have an impact on client trust and, thus, customer retention.

According to the findings, 15.8 percent of respondents believe the company is the finest telecom provider, while 84.2 percent believe the company is not the best telecom service operator. According to the data, 16.7 percent of respondents believe that the company's business performance lives up to its claims, while 83.3 percent view the company's business performance as unsatisfactory. Besides, 17.5 percent of respondents respect the firm's authority and management; thus, they think that the company has strong management, whereas 82.5 percent perceive it as an operator who lacks effective management. These findings indicate that the company's authority and management have eroded as the difference between those who agree and those who disagree has become wider. As a result, customers are easily influenced since they lack trust in the company's decision-making processes and the people who make decisions. Such kinds of customers' responses may cause a bad relationship with the companies, which may lead to low customer trust. At the same time, [Coyne \(1989\)](#) argued that customer satisfaction has a measurable impact on customer trust in that when satisfaction reaches a certain level, trust increases dramatically; at the same time, when satisfaction falls to a certain point, trust reduces equally dramatically. Additionally, [Yi \(1990\)](#) revealed that customer satisfaction influences purchase intentions as well as post-purchase attitude. Thus, satisfaction is related to behavioral trust, which includes repeat purchases from the same company, word-of-mouth referrals, and increased relationship scope.

Throughout the inferential analysis, the Wald chi-squared test was employed to determine whether each independent variable added any incremental value to the model. According to the results ([Table 4](#)), all parameters for some explanatory variables are greater than zero, indicating that they cannot be removed from the model. Instead, they should be incorporated into the model. These findings imply that all variables are significant and hence contribute to the incremental value of the model. As a result, when studying the relationship between customer trust and customer retention, it is statistically acceptable to include the five elements in the equation. Hence, all efforts to retain customers must include strategies for sustaining business operations; keeping customer promises; ensuring that the quality of services and products adheres to value for money; ensuring that business performance is high; and ensuring that the company's authority and management are dependable and stable regardless of market forces.

Furthermore, when it comes to the relationship between the response and the

customer trust element ( $\alpha = 0.05$ ), **Table 5** reveals that the model is only statistically significant for the demographic variables age (0.01) and time on the sustainability of business operations (0.02). Similarly, results from the logistic regression coefficient (**Table 6**) demonstrate that time has a negative effect on operation sustainability by 0.65. Predictor age had a negative effect on the model for keeping promises by 0.07. Moreover, for telecom services, predictor variables such as gender and income had a favorable effect on the model by 0.19 and 0.07, respectively. In terms of company performance, age and education have a negative impact on the model by 0.39 and 0.49, respectively. Also, predictor variable gender has a 0.23 positive effect on the model stability of authority and management. Thus, for customer retention, businesses must ensure that customers trust their operations, offerings, business performance, and management framework. This can be associated with spending less time dealing with their complaints or demands, always striving to keep the business promises communicated to the general public, whether direct or indirect, and being more attentive to the mature and grown-up customers because they usually know what they want and expect in terms of value for money. Furthermore, according to the findings, as money increases so will customers' opinions and reactions to products and services. As a result, businesses may open extra counters for customer service and may even consider different client segments in their decision-making process.

It is argued that in doing business, customer trust is viewed as one of the most relevant antecedents of stable and collaborative relationships between buyers and sellers. Researchers have established that trust is essential for building and maintaining long-term relationships (Rousseau, Sitkin, Burt, & Camerer, 1998; Singh & Sirdeshmukh, 2000). In another study, Morgan & Hunt (1994) stated that trust exists only when one party has confidence in an exchange partner's reliability and integrity, and in most cases, those customers will be willing to rely on an exchange partner in whom one has confidence, as evidenced in Moorman, Deshpande, & Zaltman (1993), which will eventually engender positive behavioral intentions towards the second party, as recorded in Lau & Lee (1999). Thus, customers' trust must always be the companies' priority in the telecommunication industry.

Furthermore, the chi-square analysis (**Table 7**) determined the effect of predictor factors. The chi-square statistic measures the difference between the observed and predicted frequencies of the outcomes of a set of events or variables. This was consistent with the fact that the maximum likelihood function in logistic regression provides us with a form of chi-square value based on the capacity to forecast customer retention values with and without customer trust factors. The results of a computed chi-square statistic comparing observed frequencies to those predicted by the linear model show a significant chi-square significant value of 0.01 at a chi-square score value of 14.59, df of 5 for variable sustainability of business operations only.

Moreover, the Cox and Snell R Square and Nagelkerke R Square values repre-

sent how much variation in the dependent variable the model explains (from a minimum value of 0 to a maximum of approximately 1). The research regarding the aspects that contribute to customer trust in customers **Table 8** shows that values of Nagelkerke's R-square range from 0.050 to 0.193, indicating the ability of independent factors to account for variance in the dependent variable. Thus, according to the findings of the Nagelkerke R Square firm authority and management, maintaining promises, business performance, and providing the best telecom services have a moderate effect, as indicated in **Moore, Notz, & Fligner (2015)**. Furthermore, assuming that pseudo R<sup>2</sup> values between 0.2 and 0.4 indicate excellent model fit, all variables in the equation fall within that range, indicating excellent model fit.

The analysis focused on the exponential B value, sometimes known as the odd value ratio. According to **Table 9**, five variables had an exponential value of less than one. The top picks were time for long-term operations (0.521), age for keeping company commitments (0.933), education for the best telecom services (0.583), age for business performance (0.678), and gender for firm authority and management (0.793). This means that as the value of the variable increases, the likelihood of the event occurring lowers. In contrast, all of the remaining independent variables for the five consumer trust components under consideration have an Exp(B) value greater than 1. As a consequence, as the customer trust variable's value increases, so does the likelihood of the customer retention occurring.

## 6. Conclusion

This paper recognizes the importance of customer trust in the retention of customers in telecommunication companies in Tanzania. The findings also affirm that trust is a central determinant of customer retention, as also revealed in **Gerpott et al. (2001)**; customer trust is positively related to customer retention and the effect varies by customer size and the customer's current level of satisfaction, as also evidenced in **Jaiswal et al. (2018)**. It is imperative for telecommunication companies to improve performance on each of the constructs that lead to customer retention to improve their competitiveness in the telecommunication industry. Customer satisfaction does not necessarily lead to customer loyalty. It is assumed that when the customer is satisfied, then loyalty towards the telecom company is strengthened.

The results further show that the respondents in this study have a negative impression of their telecom company's ability to meet their changing needs. This demonstrates that the respondents would not likely stay with their telecom companies as long as they are not able to satisfy their changing needs. The telecommunication industry in Tanzania is not diversified, and retaining customers is one important strategy available to telecom companies in order to remain competitive. Though the industry is currently growing in terms of coverage and customer base, retaining customers should be an attractive option rather than at-

tracting new customers since it is less expensive.

Therefore, telecommunications companies must work to improve customer trust by focusing on five study variables: business operations sustainability; companies working hard to keep their promises; high-quality telecom services offered; promising business performance; and sound and stable authority and management systems. These factors will have a significant impact on customer retention in Tanzania's highly competitive telecommunications market.

Despite the fact that the research findings are sound and that the findings can be used to generalize and replicate future research in various service-related contexts and similar business environments, this study was limited to the individual customer communication market, with no consideration given to the corporate market. Because there may be disparities in customer decision-making processes between individual and corporate customers, more study is highly advised to examine the situation from the perspective of corporate customers. Furthermore, the researcher is aware of the broader context of customer relationship management in terms of customer retention. However, for the sake of this study, customer retention has been assessed from the consumer's perspective rather than the service providers' perspectives. Therefore, further extension of the study is recommended to assess the retention factors from a telecommunications standpoint, and similarly, researching and conducting similar topics in other African countries with relatively more advanced communication services and products could then be compared to the Tanzania situation.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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