# The Impact of Value Added Services on Customer Retention when Telecom Companies Offer Bundled Services: Insight from Telecommunication Companies in Tanzania

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#### **ABSTRACT**

This study investigates the impact of Value Added Services (VAS) on customer retention in the context of telecom companies offering bundled services in Tanzania. Value-added services, a popular strategy among telecom companies, aim to retain existing customers while attracting new ones. Despite its widespread use, the effectiveness of value-added services in customer retention remains a subject of debate. This research specifically examined the influence of three value-added service factors, airtime purchase notification, call centre services, and network default notification, on customer retention. Employing a cross-sectional research design with a quantitative approach, data were collected from users of Vodacom (181), Airtel (204), and Tigo (209) in Dar es Salaam using stratified sampling and analysed via multiple regression. Findings indicate that Airtime Purchase Notification and Call Centre Services significantly negatively impact customer retention, while Network Default Notification has an insignificant effect. The results suggest that while these services do not substantially influence customer retention, their provision remains crucial for customer support. Recommendations include continued investment in customer care and adherence to regulatory standards.

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#### 1.0 Introduction

Telecommunications, encompassing the science and technology of long-distance communication and the associated systems and messages (ITU-T, 2019) (Zhao et al., 2021), is a cornerstone of the global economy. It significantly contributes to growth, with notable economic generation in many nations, including Tanzania (Lindsey et al., 2022).Effective customer retention is crucial for sustaining revenue, as customers may shift to competitors if their expectations are unmet (Mosoma & Mfundiri, 2021). For example, by late 2018, Sub-Saharan Africa had over 456 million mobile users, underscoring the sector's extensive reach (GSMA, 2019). In Tanzania, the telecommunications sector contributed approximately \$2.5 billion, or 5.2% of GDP, in 2016 (GSMA, 2019).

Service bundling, a strategy where multiple services are offered in a single package, is increasingly employed to enhance customer retention (Grzybowski et al., 2021). This approach benefits customers and businesses by providing cost savings, simplified payments, and reduced search costs while creating lock-in effects that hinder customer switching and competition (Kim et al., 2019). The Dynamic Capability Theory supports this strategy, emphasising firms' need to adapt and integrate approaches to maintain competitive advantage (TCRA, 2021). Additionally, bundling aligns with the Theory of Planned Behaviour, which posits that perceived benefits and behavioural intentions influence customer decisions (Ajzen, 1991).

As competition intensifies, retaining customer loyalty is critical for telecommunications companies to sustain market position and profitability (Jae-Young et al., 2019). In Tanzania, bundling services like SMS, mobile money, and the internet helps address diverse customer needs and reduce churn ((TCRA, 2021); (TCRA, 2022)). Value-added services, such as free SMS balance checks, enhance satisfaction and loyalty (Manzoor et al., 2020). Despite its growing prevalence, bundling remains a relatively novel phenomenon, warranting further investigation to fully understand its impact on customer retention (Grzybowsk et al., 2021; Ribeiro *et al.,* 2023, 2024). Continuous innovation in value-added services is essential for telecom companies to effectively sustain and expand their customer base (Awuku *et al.,* 2023; Dauda & Jatau, 2023).

#### 2.0 Conceptual Framework

The conceptual framework for this study is designed to elucidate the relationship between the independent variable, value-added services, and the dependent variable, customer retention, incorporating relevant theoretical perspectives. This study integrates the Dynamic Capability Theory and the Theory of Planned Behaviour to analyse how value-added services impact customer retention in the telecommunications industry. Recent research demonstrates that value-added services significantly influence customer retention (Pang & Mohamed, 2020). The core components of these services include Airtime Purchase Notification, Call Centre Services, and Network Default Notification, as depicted in Figure 2.1.

Figure 1

Conceptual Framework



Source: Researchers (2024)

The framework illustrated in Figure 1 reveals a direct relationship between value-added services (independent variable) and customer retention (dependent variable). This alignment is supported by Dynamic Capability Theory, which posits that a firm's competitive advantage is contingent upon its ability to continually adapt its resources and capabilities in response to evolving market conditions (Torough et al., 2023). In this study, the theory supports how telecommunications companies use their dynamic capabilities to innovate and enhance value-added services such as airtime purchase notifications, call centre services, and network default notifications. Effective management and refinement of these services demonstrate the companies' adaptability

and strategic responsiveness to customer needs, which is crucial for sustaining competitive advantage and retaining customers. For instance, the efficiency in notifying customers about airtime purchases or addressing issues via a responsive call centre reflects the company's capacity to enhance customer satisfaction and maintain revenue stability.

The Theory of Planned Behaviour (Ajzen, 1991)

provides further insights into how customer perceptions and attitudes toward value-added services influence their retention decisions. According to this theory, customer behaviour is shaped by attitudes, subjective norms, and perceived behavioural control. In the context of this study, the conceptual framework denotes that customers' perceptions of services such as Network Default Notifications and Call Centre Services impact their likelihood of remaining with a telecom provider. As the theory shows, positive perceptions of value-added services, such as the perceived utility of Airtime **Purchase** Notifications, can enhance customer satisfaction and increase retention rates. The study explores how these perceptions align with customer expectations and influence their decision-making, offering a comprehensive view of how perceived service benefits contribute to customer loyalty. Overall, the conceptual framework illustrates how telecom companies would leverage their dynamic capabilities to enhance and innovate value-added services, thereby improving customer retention. In the context of this study, the integration of dynamic capability theory and the theory of planned behaviour provides a robust analytical foundation for understanding the effectiveness of these services in fostering customer loyalty and retention telecommunications sector.

#### 3.0 Materials and Methods

#### 3.1 Research Design

Research design outlines the strategy for conducting research, encompassing the arrangement of conditions for data collection and analysis. This design aims to align with the research objectives and ensure procedural efficiency (Alan, 2021; Creswell & Creswell, 2019). In this context, a cross-sectional survey research design was employed because the data

collected provides a snapshot of the variables simultaneously rather than over an extended period (Babbie, 2013).

# 3.2 Area of the Study

The research was conducted in six selected areas within the Dar es Salaam region of Tanzania: Kimara Temboni, Kimara Suka, Mbezi kwa Msuguli, Ukonga Mombasa, Malamba Mawili, and the Mbezi Lois Market. These areas were chosen based on their high population density and active consumer interactions, which are conducive to examining the impact of value-added services. Specifically, these regions' motorcycle- and tricycle-driving communities were identified due to their frequent interactions telecommunication services, potentially enhancing their exposure to and dependence on value-added services (Zhao & Zhang, 2021). This selection provides a diverse and representative sample for analysing how these services affect customer retention.

#### 3.3 Sampling Design

The study focused on the Dar es Salaam region, recognised as Tanzania's commercial hub with the highest number of telecommunications subscribers. A sample size of 594 respondents was determined using stratified sampling to ensure a representative distribution across different demographic groups. The sample included customers from three major telecommunication companies: Vodacom, Airtel, and Tigo, which hold significant market shares of 30.5%, 27%, and 25.4%, respectively (TCRA, 2022b). This approach allows comprehensive analysis of how value-added services from these leading companies affect customer retention.

#### 3.4 Data Collection

Data was collected through a structured survey involving 594 randomly selected participants from each telecommunication company. The researcher approached participants at their workplaces, provided an overview of the study, and sought their consent to participate. To ensure high response rates, the survey used a well-administered questionnaire designed to capture relevant data efficiently (Dillman *et al.*, 2014). A pilot study was conducted to pre-test

the questionnaire, leading to necessary adjustments for clarity and relevance. This preliminary step ensured that the final instrument accurately measured the intended constructs (Chhetri & Khanal, 2024).

#### 3.5 Data Analysis

This study employed multiple regression analysis to assess the impact of various independent variables on customer retention. Specifically, the analysis aimed to determine how Airtime Purchase Notification, Call Centre Services, and Network Default Notification influence customer retention in the Tanzanian telecommunication industry (Banik & Sinha, 2022). A standard multiple regression model was used to evaluate the combined effects of these variables on customer retention. In this model, customer retention is the dependent variable, while the independent variables include Airtime Purchase Notification, Call Centre Services, and Network Default Notification. The model was designed to predict customer retention based on these predictors, entering all variables simultaneously to assess their collective impact (Sephetsolo, 2023). The regression model is represented as follows:

$$y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + \varepsilon$$

#### Whereby;

- y represents a customer retention variable,ais the y-intercept, where the regression line crosses the Y axis
- $b_1$  is the partial slope for  $x_1$  on y
- $b_2$  is the partial slope for  $x_2$  on y and
- $x_1$  is the Airtime Purchase Notification variable
- $x_2$  is the Call Centre Services variable

- $x_3$  is the Network Default Notification variable
- $\varepsilon$  is the stochastic error term

Based on the abovementioned regression model, this model assumes that customer retention is influenced by the three components: airtime purchase notification, call centre services, and network default notification.

# 3.5.1 Measurement of Dependent Variable

Customer retention, the dependent variable, was assessed based on the quality of value-added services provided bv telecommunications companies. The measurement was operationalised by aggregating three kev components: Airtime Purchase Notification, Call Centre Services, and Network Default Notification. According to Udom (2024).customer retention is evaluated by examining the effectiveness of these services in maintaining customer loyalty. The formula used to calculate customer retention is:

CR represents customer retention, APN stands for Airtime Purchase Notification, CCS stands for Call Centre Services, and NDN stands for Network Default Notification. This approach allows for a quantitative assessment of how well these services contribute to customer retention.

3.5.2 Measurement of the Independent Variables The study examined three independent variables: Airtime Purchase Notification (APN), Call Centre Services (CCS), and Network Default Notification (NDN). These variables were measured as continuous, with an expected positive impact on customer retention.

Table 1
Independent Variables Influencing Customer Retention and Their Anticipated Effects on Customer Retention

Variable Code	Variable Description	Nature of Variable	Expected Sign
APN	Airtime Purchase Notification,	Continuous	+
CCS	Call Centre Services	Continuous	+
NDN	Network Default Notification	Continuous	+

Source: Researcher (2024)

#### 4.0 Results and Discussion

This study investigated the impact of value-added services on customer retention within telecommunications companies. The empirical evidence underscores that effective value-added services, particularly airtime purchase notification, call centre services, and network default notification, are crucial for customer retention, especially when bundled services are offered (Govind, 2021; Soomro & Al-Sehli, 2020;

Patharia & Pandey, 2021; Dhakshayini & Neerajakshi, 2024; TCRA, 2022). Before employing multiple regression analysis to explore

these factors, the study reviewed the socioeconomic characteristics of the respondents, as detailed in Table 2 below.

*4.1 Demographic Characteristics of Respondents* Table 2

Demographic Characteristics of Respondents (n = 594)

Characteristics	Category	Frequency	Percentage (%)
Gender of Respondents	Male	430	72.4
	Female	164	27.6
Age of respondents	Below 20	22	3.7
	21-30	251	42.3
	31-40	180	30.3
	41-50	94	15.8
	51-60	41	6.9
	Above 60	6	1.0
Education Levels of respondents	Primary	311	52.4
	Secondary	229	38.6
	Diploma	22	3.7
	1st Degree	28	4.7
	2nd Degree	4	0.7
Occupation of respondents	<b>Government Sector</b>	12	2.0
	Self-employed	559	94.1
	Student	8	1.3
	Unemployed	15	2.6
Network Service Provider	Tigo	209	35.2
	Airtel	204	34.3
	Vodacom	181	30.5

Source: Field Data (2024)

#### 4.1.1 Gender of Respondent

Table 2 above revealed that 72.4% of the respondents were male, while 27.6% were female. This gender disparity reflects the demographic of tricycle and motorbike drivers, who are predominantly male, as noted in previous research (Aydinan, 2020). The findings align with literature suggesting male dominance in the transportation sector, supporting the higher representation of men in this study.

#### 4.1.2 Age of Respondents

According to Table 2 above, age distribution showed that 42.3% of respondents were between 21 and 30 years old, with only 1.0% over 60. This distribution suggests a predominantly younger demographic, consistent with previous research indicating higher productivity and engagement among younger individuals (Galasso, 2020). This aligns with the trend of younger individuals being more active in service sectors.

# 4.1.3 Education Levels of Respondents

Table 2 depicts that educational attainment varied significantly, with most respondents having completed primary education (52.4%) and only a small percentage holding higher degrees. This distribution supports findings that individuals with lower educational levels are more likely to engage in self-employment or informal sectors (Aydinan, 2020). The limited higher education among respondents reflects national trends indicating that primary education is more prevalent; this may be attributed to the Tanzanian education policy, which mandates that every parent must ensure their children complete primary education, as confirmed by Maliti (2019).

#### 4.1.4 Occupation of the Respondents

As Table 2 shows, most respondents (94.1%) were self-employed. This reflects the challenges individuals with lower formal education levels face in securing traditional employment (Dawson *et al.,* 2021). This trend underscores the role of self-employment as a viable alternative for those with limited qualifications.

#### 4.1.5 Network Service Provider

In terms of network service providers, the preference for network providers showed that Tigo was the most popular (35.2%), followed closely by Airtel (34.3%) and Vodacom (30.5%). This preference may be attributed to perceived voice quality and service reliability, aligning with literature that highlights these factors as critical to customer satisfaction (Hossain *et al.*, 2020). These findings provide valuable insights

into the demographic factors affecting customer retention in the telecommunications sector, emphasising the importance of targeted valueadded services in enhancing customer loyalty.

# 4.2 Results of Regression Analysis

In this section, the study analysed the impact of various Value-Added Services (VAS) on customer retention using multiple regression analysis as presented below:

4.2.1 Regression Model Summary

Table 3

Model Summary for Customer Retention

Model	R	R²	Adjusted R <sup>2</sup>	Sig. F Change
1	0.453	0.206	0.202	0.000

Source: Field Data (2024)

The multiple regression analysis, as detailed in Table 3, revealed an  $R^2$  value of 0.206. This indicated that the independent variables (APN, CCS, and NDN) account for 20.6% of the variance in customer retention, with the

remaining 79.4% unexplained. According to Ozil (2023), an R<sup>2</sup> value between 0.10 and 0.50 is considered adequate in social science research, provided the model's variables are statistically significant (Sig. F Change = 0.000).

*4.2.2 Regression Coefficients of Determinants*Table 4

Regression Coefficients for Customer Retention

•					
Variable	Unstandardized Coefficients	Std. Error	Sig.		
Airtime Purchase Notification (APN)	-0.058	0.009	0.000		
Call Centre Services (CCS)	-0.026	0.014	0.000		
Network Default Notification (NDN)	-0.089	0.014	0.123		
Constant	1.959	0.082	0.000		

Source: Field Data (2024)

# 4.2.2.1 Influence of Airtime Purchase Notification (APN) on Customer Retention

The analysis showed a significant negative effect of APN on customer retention ( $\beta$  = -0.058, p < 0.05). This indicates that while APN has a statistically significant impact, its contribution to customer retention is minimal (5.8%). This finding underscores that APN is less influential than other factors, such as network quality and pricing structure, corroborating the insights from Flick (2022).

The Dynamic Capability Theory supports this interpretation, emphasising the importance of organisations' abilities to adapt and reconfigure their resources in response to changing environments (Samsudin & Ismail, 2019). Effective notifications are important, but they

might only significantly affect retention if integrated with other strategic capabilities, such as service quality and competitive pricing.

# 4.2.2.2 Influence of Call Centre Services (CCS) on Customer Retention

A limited impact of 2.6%, as suggested by Table 4 above, showed a significant but negative effect of CCS on customer retention ( $\beta$  = -0.026, p < 0.05). This outcome is in line with Khalik *et al.*'s (2023) findings, which emphasise the importance of call centre services (CCS) as value-added services (VAS), which are a component of personalised services, in enhancing marketing outcomes in the telecom sector.

The ability of the call centre services to retain customers leads to an improvement in marketing outcomes. Although CCS is significant, its role in enhancing retention appears minimal in the context of bundled services, as the findings of Ribeiro *et al.* (2024) confirmed that interactions with the contact centre and mobile service issues follow in order of declining impact. Furthermore, these results are similar to those reported by Ribeiro *et al.* (2023) in their study of the customer experience and the switching intention in bundled telecommunications customers.

The Theory of Planned Behaviour (Ajzen, 1991) offers insight into these findings. This theory posits that attitudes, subjective norms, and perceived behavioural control influence individuals' intentions and behaviours. While CCS may be important, it might not align with customer priorities or significantly influence their retention intentions if perceived control or service quality is lacking.

# 4.2.2.3 Influence of Network Default Notification (NDN) on Customer Retention

The effect of NDN on customer retention is not statistically significant ( $\beta = -0.089$ , p > 0.05). The insignificance of NDN, reflecting an 8.9% impact, might be due to varying customer expectations and attitudes towards this service, as noted by Sze Chee Md Husin (2020). This finding contrasts with studies by Govind (2021) and Rahman & Fardous (2020), which report positive impacts of value-added services on customer retention. This result can be interpreted through the Theory of Planned Behaviour lens, which suggests that the perceived relevance and control notifications might affect their impact on retention. If customers do not view network default notifications as critical or actionable, their effects on retention will be minimal.

#### 5.0 Conclusion and Policy Recommendations

#### 5.1 Conclusion

This study surveyed the impact of Value Added Services (VAS) on customer retention among telecommunications companies offering bundled services in Dar es Salaam, Tanzania, concentrating on three Value Added Services (VAS): Airtime Purchase Notification (APN), Call Centre Services (CCS), and Network Default Notification (NDN). The findings show that while APN and CCS affect customer retention, their effect is modest compared to network quality and pricing features.APN has a negative but

statistically significant effect on retention, signifying that while customers are worth airtime purchase notifications, it does not significantly influence their loyalty. Similarly, CCS illustrates a negative but significant effect on retention, signifying that although customers appreciate upright call centre support, its impact is imperfect compared to more essential factors like network quality and pricing.

#### 5.2 Policy Recommendations

To improve the effectiveness of VAS in enhancing customer retention, the following policy recommendations are made:

- i. Integrate VAS with Core Services: Telecom companies should integrate VAS with core services, concentrating on how it improves key features like network quality and pricing. This will align services with customer priorities and increase retention.
- ii. A Customer-Centric Approach: Mobile Network Operators (MNOs) should ensure that VASs like APN and CCS are considered valuable add-ons. Personalising communication and using VAS to meet customer needs will restore their perceived value and improve retention.
- iii. Enhance Call Centre Efficiency: Though call centres have a partial direct impact on retention, capitalising on quicker inquiry handling, staff training, and advanced technology can increase service quality, indirectly enhancing retention.
- iv. Reassess Network Default Notification: Telecom companies should review the value of the Network Default Notification service, altering resources to extra impactful VAS or discovering better means to engage customers.
- v. Regulatory Oversight by TCRA: TCRA should impose regulations ensuring telecom companies follow the best practices in conveying VAS, monitoring service integration, and inspiring collaboration with third-party organisations to improve VAS quality.

Applying these recommendations will help telecom companies in Tanzania align their VAS offerings with customer expectations and refine retention and satisfaction.

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