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Advancing Technology And Customer Retention In The Telecom Industry Of Uganda: A Case Of Uganda Telecom Limited

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Abstract- This study focused on exploring how advancing technology influences customer retention in Uganda's telecom industry, specifically using UTL as a case study. The research objectives were to assess the impact of advancing electronic mobile services, advancing data services/products, and advances in equipment on customer retention in UTL. A descriptive cross-sectional research design was employed, and data was gathered through questionnaires and interviews with 80 respondents from a population of 115 subjects. The findings of the study indicated that advancing electronic mobile services, advancing data services/products, and advancing equipment services all significantly influenced customer retention. Based on these results, the research concluded that there exists a moderate, statistically significant positive relationship between these advancing technologies and customer retention. In other words, investing in advancing technology is crucial for telecom companies to not only attract customers but also retain them. To enhance customer retention, the study provided recommendations for UTL: (i)UTL should focus on educating customers about their data services/products, (ii) efforts should be made to improve network accessibility, and (iii)UTL should make substantial investments in equipment services while also prioritizing customer understanding and engagement.

Keywords-UTL, data services/ products etc.

I. INTRODUCTION

Customer retention is an essential component of every successful business strategy since it has a direct influence on long-term profitability, brand loyalty, and long-term growth (Namuleme, et al 2020). Organizations across sectors are realising the need of building strong relationships with their current client base in the face of increased competition and the growing importance of customer experience (Wampande & Osunsan, 2020). This is more so in the service sector such as the telecom and with regards to loyalty which can facilitate retention.

Customer loyalty is the ultimate desire of every telecom company. This can be encouraged through customer engagement and retention (Williams, 2015). In Uganda, the technology in mobile telecommunications is rapidly changing in shape, size, portability and usability of electronic mobile services, data services/products, and equipment that is used thus yielding a lot of competition for the market share by the players in the industry. Uganda Telecom Limited being one of the players in the telecom industry of Uganda, has made attempts of deploying these various technologies as they crop up and also taken the initiative of training its customers on how to operate the advanced gadgets and services (utl.co.ug).

However, as the company and its customers work to embrace one kind of technology, more advanced technologies come into play from the industry competitors thus causing a strain on the company's finances, resources and retention team to match customer expectations. Nevertheless, customers expect high quality service, the newest and best services on market as well as a knowledgeable customer service team that will handle all their concerns swiftly regardless of their dynamic interests of the newest or latest technology on market. Failure to satisfy their needs causes them to move on with a competitor company that can serve them better. Having this increased pressure from competition, UTL has gone ahead to set-up retention and customer relationship teams, conduct service review meetings with customers in order to have a personal engagement with the customers aiming to cap customer switching or churn (Holiday, 2014).

Despite this strategy, it is evident that customers are consistently leaving the UTL network thus causing a reduction in the market share and revenue as reflected in the UTL Customer Billing Monthly Report (Billing, 2014). According to the UCC report (EDPost, 2014), the statistics show a decline in market share percentage of 21.9 percent in 2009 to 16.3 percent in 2010 and far below in 2016 (Monitor, 2016). If the current trend is not addressed, it will impact heavily on UTL's customer base which is a major source of revenue. Therefore, there was a

need to examine the influence of advancing technology on customer retention. This study therefore sought to examine the influence of advancing technology on customer retention in the telecom industry using UTL as a case study. The specific objectives of this study include: (1) to examine the influence of advancing electronic mobile services on customer retention in UTL, (2) to analyse the influence of advancing data services/products on customer retention in UTL, and (3) to examine how advances in equipment influence customer retention in UTL. The study is guided by the conceptual framework which was adopted and modified from Technological Determinism Theory (Chandler, 2002):

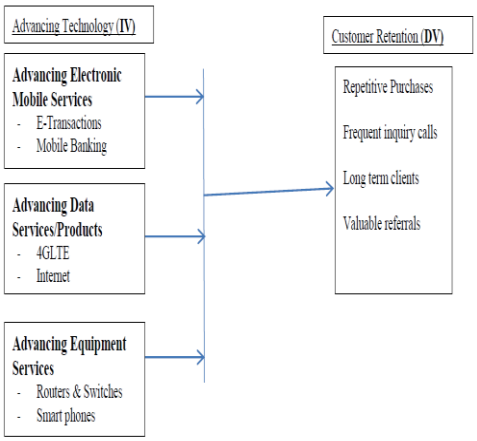

Fig.1 customer retention in UTL.

II.LITERATURE REVIEW

1. Theoretical framework

The study was guided by the 'technological determinism theory,' which suggests that media technology shapes individuals' thoughts, emotions, and actions as society transitions from one technology to another (Mcluhan, 2012). This theory views technology as the central causal element in social change processes (Hoynes, 2003). However, it overlooks the social and cultural contexts in which technology is developed. Technological determinism is often criticized for its limited perspective, with some scholars arguing for a 'social determinism' approach, emphasizing society's role in selecting and deploying technologies (Green, 2002).

Despite the criticism, it is acknowledged that technology can cause social change, particularly through advancements in communication (Danai, 2014). The emergence of the internet as a mass-market and the subsequent growth of technology-oriented industries have demonstrated the impact of technology on society and the market (Christopher, 2013).In the context of customer retention, it is evident that technology has an influence on people's thoughts, emotions, and behaviors. Customers are more likely to stay with or switch to a provider that meets their changing needs and provides satisfaction. Therefore, advanced technology can have a significant impact on customer retention, as it affects customer behaviour and their perceptions of the quality of service.

2. Advancing technology and customer retention

Advancing technology has had a significant impact on the telecommunications industry. It has led to the integration of transmission, switching, processing, and retrieval of information (Hewlett, 2015). This integration has been made possible by dramatic advances in device and material technology, such as integrated circuits and optic fibers (Hewlett, 2015). Advancing technology is evident in convergence of service nodes, microelectronic revolutions, software, devices, and advancements in operator services like Voice over Internet Protocol (VOIP) and Wireless Local Area Networks (WLAN) (Hewlett, 2015).

Customer retention, a key attribute of Relationship Marketing, is vital for sustainable competitive advantage in any industry, including the technology industry (Sabiti, 2013). Retaining customers is five times cheaper than acquiring new ones (Sabiti, 2013). Customer retention encompasses both behavioral and attitudinal aspects (Ranaweera, 2003). Behavioral variables include customer contracts, transactional data, customer response to technology, and complaints, while attitudinal aspects relate to customer satisfaction (Ranaweera, 2003).

Research shows that a 5% increase in customer retention can result in 35% to 95% profits for an organization (Reichheld & Sasser, 2011). It is also emphasized that it is more cost-effective to market to retained customers than to acquire new ones (Reichheld & Sasser, 2011). Customer retention aims to maintain long-term relationships, foster re-buy behavior, and maximize customer lifetime value (Buttle, 2006; Gronroos, 2004). By meeting or exceeding customer needs and expectations in terms of quality, service, price stability, and style, organizations can retain delighted customers (Buttle, 2006).

In summary, advancing technology in the telecom industry has influenced the convergence of services and the introduction of innovative solutions. Customer retention is crucial for organizations to gain a competitive edge, as it is cost-effective and leads to higher profitability. Meeting customer needs and delivering on promises are key factors in achieving customer retention.

3. Advancing electronic mobile services and customer retention

Electronic services refer to modular, agile, and electronic services that perform tasks, work, or complete transactions, with the potential to be delivered through various channels such as web portals, internet service providers (ISPs), and networked devices (Hewlett, 2015). These services encompass a wide range of applications and information resources, and their integration into

various devices and technologies is becoming increasingly prevalent (Hewlett, 2015).

E-transactions involve simple customer actions that can quickly become complex processes, such as stock trades, money transfers, and interactions with ATMs and point-of-sale (POS) terminals (Jorgenson, 2011). The term "transaction" can have different meanings depending on the context, but it generally refers to activities governed by well-defined business processes or contractual agreements (Jorgenson, 2011).

Mobile banking, a popular service provided by banks and financial institutions, allows customers to conduct financial transactions remotely using mobile devices like phones or tablets (Mobile Banking, 2017). It has gained significant traction, with 12% of bank customers now preferring mobile banking as their primary method of accessing banking services (Jeanne, 2016). Mobile banking provides real-time balance information and notifications, influencing consumer decisions, as evidenced by 53% of mobile banking users deciding against a purchase after checking their balance (Jeanne, 2016).

The development of information and communication technology (ICT) has brought fundamental changes and revolutionized various aspects of human life, including the banking industry (Moghly, 2007). Electronic banking, facilitated by the rapid advancement of ICT, has transformed money and funds transfer systems, introducing concepts like electronic money and electronic transmission (Moghly, 2007). The quality and availability of these electronic services, such as electronic banking, play a vital role in customer loyalty and satisfaction (Mirabi, 2008).

Different categories of services exist based on the technology used and the intended users, such as individual employees or clients (Qadikolaiy, 2011). These services can be provided through various channels, including personal computers, ATMs, customer calls, and indirect services like telephone banking or electronic transactions (Qadikolaiy, 2011). Electronic services can be visible, provided through specialized websites, or part of a larger website where customer service is offered (Dennis & Tino, 2004).

Customer retention is a challenge in a competitive landscape, but online mobile services can have a significant impact on retaining customers (Bristol, 2014). Strategies like encouraging customers to visit company websites, activating reward cards to gather customer information, and conducting follow-ups can help improve customer retention (Angleton, 2014). The research question that arises from these discussions is the extent to which advanced electronic mobile services influence customer retention (Bristol, 2014). On the basis of the discussion, the following hypothesis is stated:

H_1: Advancing electronic mobile services have a significant influence on customer retention in the telecom industry of Uganda.

3. Advancing data services/products and customer retention

Data services refer to facilities that enable the transmission of information signals between network interfaces, providing subscribers with the necessary capacity to transmit signals between access points (Telecommunications Bearer service, 2015).

Customer loyalty and retention are built on the level of service or product perceived by the customer. Companies that focus on everyday low prices (EDLP) as their main strategy are more vulnerable to competition, as customers loyal solely due to price may defect when lower-priced alternatives are available (Clark, 2007). Data services can also be considered as software services that capture operations on important data entities through various channels, serving the enterprise's needs and enabling the purchase of digital information (McKinsey Global Institute, Data, 2011).

4G LTE (Fourth Generation-Long Term Evolution) is the fastest 4G service available, providing download speeds that are four to five times faster than 3G networks, comparable to some home broadband connections (Pica, 2012). The Internet is a global system of computer networks, accessible to millions of people worldwide, that uses protocols like TCP/IP and continues to evolve and expand (Rouse, 2014). For companies to operate their daily tasks, internet connectivity is a necessity.

Building fierce customer loyalty is achieved by offering a solid, dependable core product or service that consistently meets customer expectations (Clark, 2007). Dependability and consistent quality are crucial drivers of long-term customer retention, outweighing the impact of speed in customer acquisition (Kumar, 2011). With regards to the literature, the following hypothesis is stated:

H_2: Advancing data services/products influence customer retention in the telecom industry of Uganda.

4. Advancing Equipment services and customer retention

Telecommunications equipment encompasses hardware used for telecommunications, including transmission lines, multiplexers, base transceiver stations, switches, routers, telephones, radios, and computers. With the growth of the Internet, the line between telecommunications and IT equipment has blurred, as telecommunications infrastructure plays a crucial role in data transfer (Techopedia).

Understanding the history and progression of equipment helps grasp its complexity and innovation. The personal computer, for example, had contributions from multiple inventors, highlighting the collaborative nature of its development (Fernando, 2014). Advanced technology equipment simplifies life and is defined differently by different individuals, ranging from complicated electronic devices to a science applied to practical purposes (Use of Technology, 2016). Routers and switches are devices used for switching and routing core functions in networks. They have evolved from connecting network segments to providing intelligent functions and security features (Bigelow, 2009). Routers initially supported 50kbps links between nodes, and over time, advanced to multiprotocol routers and then high-end workhorses, with integration and reduction to chip size. Layer 3 switches also emerged, performing IP routing and being modified for portable devices (Bigelow, 2009).

Smartphones are handheld devices with operating systems that function as computers to varying extents. They offer features like phone communication, entertainment, email, and document work. Examples include the BlackBerry, iPhone, and Android phones, which gained popularity beyond business executives, primarily due to clever marketing (Nickson, 2017).

Providing employees with respect, necessary tools, and appreciation leads to a workforce that goes the extra mile for customers. Proper training and equipment empower employees to meet customer expectations and improve customer retention (Nelson, 2014). While negative and positive strategies have been explored for customer retention, the influence of advancing technology on customer retention requires further examination (Alamaro, 2011; Buttle, 2006; Huber, 2008). With regards to the above they following hypothesis can be stated:

H_3: There is a significant influence of advancing equipment services on customer retention in the telecom industry of Uganda.

III.METHODOLOGY

The study was conducted using a descriptive cross-sectional design, incorporating both quantitative and qualitative approaches. Data was collected periodically from sampled customers of Uganda Telecom Limited (UTL). The quantitative approach involved using questionnaires to generate numerical data, while the qualitative approach involved interviews to generate data analyzed through words. By combining these approaches, the study aimed to enhance the reliability of findings by reinforcing each other for consistency (Barifaijo, 2010).

The target population for the study was employees in Uganda's telecom industry, and the accessible population consisted of employees of UTL at the Head office Speke Road from departments including Customer Operations, Information Technology (IT), Customer Care, and Retention Team. The sample size for the study was determined based on the population size using different sampling techniques. The sample size for each category of employees was determined through purposive sampling for top management, simple random sampling for middle management, and simple random sampling for lower-level staff. The total sample size was 80 out of a population of 115 employees in UTL (Uganda Telecom Limited Staff List, 2017).

Data was collected through a combination of questionnaire surveys and interviews. The questionnaire survey involved collecting quantitative data using self-administered questionnaires with closed-ended and Likert scale questions. The advantages of using questionnaires were their popularity, ease of administration, and the ability to obtain coded and quantifiable data. The interviews were conducted to collect qualitative data through face-to-face engagements with the management team of UTL. Interviews allowed for in-depth information and follow-up on leads. The data collection instruments included questionnaires and interview guides. The questionnaires consisted of structured closed-ended items with a Likert scale, while the interview guides contained open-ended questions. The instruments were validated through expert judgment and pilot testing to ensure clarity and relevance to the study objectives.

Validity of the instruments was assessed using the content validity index (CVI), which involved experts evaluating the relevance of each item. The average CVI score was 81%, indicating good validity. Reliability of the instruments was tested using Cronbach's alpha coefficient, with values above 0.7 considered reliable.Data analysis involved both quantitative and qualitative techniques. Quantitative data was analyzed using descriptive statistics, including frequencies, percentages, and correlations. Qualitative data was analyzed using thematic analysis, involving identifying themes, eliminating redundant information, and classifying categories and sub-categories.

IV. RESULTS

1. Response Rate

According to the study, a total of 80 respondents participated, and all questionnaires were returned and interviews conducted, resulting in a response rate of 100%. Though Anderson (2006) suggests that a response rate above 70% indicates a well-executed study where all questions were well understood by the respondents.

2. Characteristics of the respondents

The age groups of the staff, with 3.8% between 18-25 years, 61.3% between 26-33 years (the majority), 25% between 34-41 years, 8.8% between 42-49 years, and 1.3% above 50 years. The highest education qualification

of the Uganda Telecom staff. It shows that 70% of the total sample had obtained a bachelor's degree, 11.3% had a certificate, 11.3% had a master's degree, and 7.5% had other qualifications. The distribution of respondents by department. It indicates that 12.5% were in the Information Technology department, 33.8% in Technical, 12.5% in Commercial, 35% in Customer Care, and 6.3% in Finance. The gender distribution, with 47 males (58.8%) and 33 females (41.3%) participating in the study.

Research objective one: Examining the influence of advancing electronic mobile services on customer retention at UTL

1. Level of advancing electronic mobile services

Table 1 Staff views on advancing electronic mobile services

Items	Standard Deviation	Mean
Have been introduced by UTL	1.312	3.73
Mobile banking has attracted customers	1.240	3.21
Customers are conversant with mobile services	1.061	3.39
Easily accessible by customers	1.118	2.94
Adv Tech has greatly attracted customers to the network	1.224	3.09
Electronic services meet the current needs of the customer	1.180	3.28
Electronic mobile services user friendly	1.030	3.66
Electronic mobile services are reliable	1.147	3.23
Means	1.164	3.32

Table 1 show that overall, the staff's views on advancing electronic mobile services were generally positive. The mean scores for most items range from 3.09 to 3.73, indicating a moderate to high level of agreement among the staff members.

Specifically, the staff highly rated items such as "Have been introduced by UTL" (mean: 3.73) and "Electronic mobile services user-friendly" (mean: 3.66). These items received relatively lower standard deviations, suggesting a higher level of consensus among the staff regarding their positive views. However, some items received slightly lower mean scores, such as "Easily accessible by customers" (mean: 2.94) and "Adv Tech has greatly attracted customers to the network" (mean: 3.09). These items also have slightly higher standard deviations, indicating a slightly more diverse range of opinions among the staff.

The findings are supported by interview results where most interviewee was in agreement some of their responses included:"Yes the electronic mobile services have been introduced but this is a rapidly developing industry which requires UTL to up its game" (Key informant B, 28th Aug, 2017)

"It's true the advancing mobile services have an influence on customer retention and this is a key space Uganda Telecom needs to explore and compete with the big boys in the market. If it does not …… " (Key informant D, 29th Aug, 2017)

"It's true that UTL's electronic mobile services are not easily accessible by its customers and this is a key space Uganda Telecom needs to explore and compete with the big boys in the market via availability as they seem to have captured this space away from UTL" (Key informant D, 29th Aug, 2017) "To some extent UTL is meeting the current needs however on the other side of the bargain this is an area Uganda Telecom needs to address as it hampers its customers experience with its services" (Key informant E, 29th Aug, 2017)

2. Effect of advancing electronic mobile services on customer retention

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.533[a]	.284	.274	.71848	.284	30.890	1	078	.000

3.Predictors: (Constant), Advancing electronic mobile services

Table 2 shows that the coefficient of determination (Adjusted R Square) is 0.274. This implies that advancing electronic mobile services accounts for 27.4% of the variance in customer retention. There are therefore other factors outside advancing electronic mobile services that contribute to the greater percentage of customer retention. To assess the overall significance of the model, Analysis of Variance (ANOVA) was generated and the results are presented in the table 3.

Table 3: ANOVA of advancing electronic mobile services on customer retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.946	1	15.946	30.890	.000[b]
	Residual	40.264	78	.516		
	Total	56.210	79			

a. Dependent Variable: Customer retention

b. Predictors: (Constant), Advancing electronic mobile services

In determining whether a regression model is significant, the decision rule is that the calculated p-value (level of significance) must be less than or equal to 0.05. Since the calculated p-value of 0.000 is less than 0.05, the regression

model was found to be statistically significant (F=30.890, df = 1, p<0.05 (=0.000)). This means that advancing electronic mobile services have a significant effect on customer retention. Therefore, improved advancing electronic mobile services shall have a significant positive effect in customer retention. On the basis of this finding the hypothesis, advancing electronic mobile services have a significant influence on customer retention in the telecom industry of Uganda is accepted. These quantitative findings are in line with a key informant when he responded to the question of whether advancing electronic mobile services influence customer retention. He said: "The more electronic mobile services are improved in UTL, it will benefit us to attract and retain the customers because of giving them services beyond their expectations." (Key informant F, 30th Aug, 2017)

4. Analysing the influence of advancing data services/products on customer retention in UTL.

4.4.1Level of advancing data services/products

Table 4: Staff views on advancing data services/products

Items	Mean	Std dev.
New data services have been introduced by UTL	3.34	1.252
Data services meet changing needs of customers	3.56	1.352
Data services are satis factory to you	2.98	1.34
Customers aware of data products and services	2.64	1.046
Products and services are readily available to customers	3.16	1.13
Data products and services are User friendly	3.58	1.123
Data products and services have attracted new customers to the network	3.28	1.273
Means	3.22	1.22

Table 4 confirms that the staff's views on advancing data services/products were somewhat positive. The mean scores for most items range from 2.98 to 3.58, indicating a moderate level of agreement among the staff members.Specifically, the staff rated items such as "Data services meet changing needs of customers" (mean: 3.56) and "Data products and services are user-friendly" (mean: 3.58) relatively higher, suggesting a more positive perception in these areas. These items also have relatively lower standard deviations, indicating a higher level of consensus among the staff regarding their views.However, some items received slightly lower mean scores, such as "Customers aware of data products and services" (mean: 2.64) and "Data services are satisfactory to you" (mean: 2.98). These items also have slightly higher standard deviations, suggesting a slightly more diverse range of opinions among the staff.

The findings are supported by interview results where some of the interviewee's remarks include:
"Uganda Telecom is a Total Service Provider. This means it provides total solutions to its customers. That said, new data services/products are key because we have seen the need and we provide them adequately to our customers" (Key informant F 30th Aug, 2017)

"Uganda Telecom needs to work on the awareness concern as it develops and innovates new services. This is an aspect UTL should work on as its competitors are working on it aggressively" (Key informant G 30th Aug, 2017) "Am in agreement with the user friendliness of UTL's data services/ products. UTL has done its work, they comprehensively elaborate how the products function and we should keep it up" (Key informant F 30th Aug, 2017)

5. Advancing data services/products influence customer retention

Table 5 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.520[a]	.271	.261	.72492	.271	28.962	1	78	.000

a. Predictors: (Constant), advancing data services / product

Table 5 shows that the coefficient of determination (Adjusted R Square) is 0.261. This implies that advancing electronic mobile services accounts for 26.1% of the variance in customer retention. There are therefore other factors outside advancing data services / products that contribute to the greater percentage of customer retention. To assess the overall significance of the model, Analysis of Variance (ANOVA) was generated and the results are presented in the table 6.

Table 6: ANOVA of advancing data services / products on customer retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.220	1	15.220	28.962	.000[b]
	Residual	40.990	78	.526		
	Total	56.210	79			

[1] Dependent Variable: Customer retention
[2] Predictors: (Constant), Advancing data services/products

In determining whether a regression model is significant, the decision rule is that the calculated p-value (level of significance) must be less than or equal to 0.05. Since the calculated p-value of 0.000 is less than 0.05, the regression model was found to be statistically significant (F=28.962, df = 1, p<0.05 (=0.000)). This means that advancing data services/products have a significant effect on customer retention. Therefore, improved advancing data services/products shall have a significant positive effect in customer retention. This suggests that the hypothesisAdvancing data services/products influence

customer retention in the telecom industry of Uganda is accepted.

These quantitative findings are in line with a key informant when she responded to the question of whether advancing data services/products influence customer retention. She said:
"Since customers' desires change on a daily and the industry is also highly competitive, advancing data services/ products make the customers' lives better and interesting therefore they are only willing to stay on a developing network."(Key informant H 31st Aug, 2017)

4.5 Analyzing the influence of advancing equipment services on customer retention in UTL.

4.5.1 Level of advancing equipment

Table 7 Staff views on advancing equipment

Items	Mean	Std. Dev.
Equipment meets current international standards	3.03	1.368
Equipment is readily available to customers	2.75	1.108
Customers knowledgeable of equipment provided	2.53	1.055
Equipment is portable	3.14	1.24
Equipment is multi-purpose	3.09	1.255
Advancing equipment has attracted customers to network	2.95	1.157
Means	2.92	1.197

According to table 7 the staff's views on advancing equipment were moderately positive, but with some variations. The mean scores for most items range from 2.53 to 3.14, indicating a moderate level of agreement among the staff members. The item with the highest mean score is "Equipment is portable" (mean: 3.14), suggesting that staff members generally perceive the equipment to be easily movable. This item also has a relatively lower standard deviation, indicating a higher level of consensus among the staff regarding this aspect.

However, some items received slightly lower mean scores, such as "Customers knowledgeable of equipment provided" (mean: 2.53) and "equipment is readily available to customers" (mean: 2.75). These items also have slightly higher standard deviations, suggesting a slightly more diverse range of opinions among the staff. The findings are supported by interview results where some interviewees stated: "To an extent the equipment provided by UTL meets the current international standards though there is need for improvement" (Key informant G 30th Aug, 2017)

"Some new equipment provided is portable while others are not though this is work in progress as management is doing all it can to make all equipment portable" (Key informant J 30th Aug, 2017)

6.Influence of advancing equipment services on customer retention

Table 8: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.559[a]	.312	.303	.70400	.312	35.414	1	78	.000

a. Predictors: (Constant), advancing equipment services

Table 8 shows that the coefficient of determination (Adjusted R Square) is 0.303. This implies that advancing equipment services accounts for 30.3% of the variance in customer retention. There are therefore other factors outside advancing equipment services that contribute to the greater percentage of customer retention. To assess the overall significance of the model, Analysis of Variance (ANOVA) was generated and the results are presented in the table 9.

Table 9: ANOVA of advancing equipment services on customer retention

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.552	1	17.552	35.414	.000[b]
	Residual	38.658	78	.496		
	Total	56.210	79			

a. Dependent Variable: Customer retention
b. Predictors: (Constant), advancing equipment services

In determining whether a regression model is significant, the decision rule is that the calculated p-value (level of significance) must be less than or equal to 0.05. Since the calculated p-value of 0.000 is less than 0.05, the regression model was found to be statistically significant ($F=35.414$, $df = 1$, $p<0.05$ ($=0.000$)). This means that advancing equipment services have a significant effect on customer retention. This therefore suggests accepting the hypothesis: there is a significant influence of advancing equipment services on customer retention in the telecom industry of Uganda. Improved advancing equipment services shall have a significant positive effect in customer retention. These quantitative findings are in line with a key informant when she responded to the question of whether advancing data services/products influence customer retention. She said:S"Customers admire the newest gadgets on market and the only way to pull them towards the network is by having gadgets that deeply attract them not by appearance only but also functionality and ease of use." (Key informant K 30th Aug, 2017)

V. DISCUSSION AND CONCLUSION

The findings of the study focused on the influence of advancing electronic mobile services, advancing data services/products, and advancing equipment services on customer retention. Regarding advancing electronic

mobile services, it was found that they have a positive influence on customer retention. Implementing new services, bringing them closer to customers, and educating customers on how to use them contribute to customer retention. This aligns with Kheng's (2010) argument that customer behavior handling and redress, as well as customer education, impact retention. Komunda (2013) also emphasized the importance of educating customers to strengthen loyalty and retention. In the case of advancing data services/products, the study revealed a positive influence on customer retention. Investing in improving data services/products to meet customer needs and satisfaction is crucial for retention. This is consistent with Sharma and Patterson's (1999) assertion that providers need to make significant efforts for customers to evaluate the benefits of their services.

Wathne (2001) further emphasized the impact of a diverse range of services and products on customer repurchasing power and retention. Regarding advancing equipment services, the study found a significant positive influence on customer retention. Improving equipment services, including smartphones and portable gadgets, can impact retention. Nickson (2017) highlighted the importance of smartphones in the current era and their role in customer retention. The findings align with Kheng's (2010) argument that high-quality and reliable equipment services lead to customer satisfaction and retention.

The conclusions can be drawn with respect to advancing electronic mobile services, the findings indicated a moderate statistically significant positive relationship with customer retention. The study emphasized the importance of ensuring that customers are familiar with the introduced electronic mobile services and that they find them user-friendly. Investing in advancing electronic mobile services is crucial for customer retention. In terms of advancing data services/products, the findings revealed a moderate statistically significant positive relationship with customer retention. It was recommended to continue introducing new data services, ensure that they meet the changing needs of customers, and make them user-friendly. Investing in advancing data services/products contributes to customer retention. Concerning advancing equipment services, the findings showed a moderate statistically significant positive relationship with customer retention. It was emphasized that readily availing equipment to customers and enhancing their knowledge of the provided equipment are essential. Investing in advancing equipment services is vital for customer retention. Therefore, based on the study's conclusions, it is evident that investing in advancing electronic mobile services, data services/products, and equipment services is beneficial for customer retention.

This study has attempted to make a contribution to the existing knowledge on the influence of advancing technology on customer retention. Previous studies primarily focused on customer satisfaction and service (Namuleme, et al 2020), while this study specifically examined the impact of advancing electronic mobile services, data services/products, and equipment services on customer retention in Uganda's telecom industry. The findings confirmed that advancing technology positively influences customer retention in each of these areas. Additionally, this study was guided by the technological determinism theory, which suggests that technology drives social development and shapes individuals' thoughts and behaviors. The findings of the study supported this theory, as customers showed a preference for the newest technology, indicating that advancing technology indeed shapes individuals' way of living and thinking.

The implications of the study for theory highlight the support for the technological determinism theory. This implies that policy makers should consider the positive influence of advancing technology on customer retention when formulating laws and regulations for the telecom industry. Policies should be favorable to customers and should account for the rapid advancement of technology, ensuring that companies in the industry remain competitive while considering customers' ability to adapt to new technologies.

Based on the study's conclusions, several recommendations were provided for each objective.

1. For advancing electronic mobile services, the recommendations included improving accessibility, meeting customer needs, enhancing reliability, and engaging customers through training and daily interactions.
2. Regarding advancing data services/products, the recommendations emphasized innovating better services/products, ensuring customer satisfaction, increasing awareness, and improving network access and coverage.
3. For advancing equipment services, the recommendations suggested investing in reliable and easy-to-use equipment, focusing on portable and multi-purpose options, and providing advanced equipment to customers on the network.

The study had limitations, including inadequate cooperation from some respondents who were concerned about the confidentiality of their information and potential job security issues. The study was also limited in its scope to only a few telecom operators due to financial and time constraints, which limited the comprehensive understanding of advancing technology in the industry.

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