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Factors Affecting the Adoption of E-Banking on Customer Satisfaction in Developing Countries Based on the E-S-QUAL Model: A Case of Investrust Bank

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Abstract

This study investigates the transformative impact of Information and Communication Technology (ICT) on the banking industry, with a primary focus on enhancing customer satisfaction through the adoption of e-banking services. It employs a modified E-Se-Qual framework model, assessing the influence of five key variables: efficiency, user interface, responsiveness, reliability, and ease of use. The research was conducted through a quantitative approach, utilizing closed-ended questionnaires administered face-to-face to 120 retail customers out of the 164 sample size, at Investrust Lusaka main Branch. The findings highlight that mobile banking is the most widely utilized e-banking platform, followed by ATMs, with agency banking being the least used. Furthermore, the study reveals a significant positive correlation between dependent variables; user interface, responsiveness, ease of use, efficiency, reliability, and independent variable; customer satisfaction. To maintain competitiveness and relevance, the study recommends the provision of informative resources to motivate e-banking adoption, increased customer awareness of electronic banking services, and extended access to cost-effective financial services for Investrust customers. These findings hold significance for banks seeking to thrive in the evolving landscape of e-banking services.

Keywords

E-Banking Services, Adoption, Customer Satisfaction, E-Se-Qual, Investrust

Bank

1. Introduction

The rapid evolution of technology has revolutionized the traditional landscape of banking services, ushering in an era of digital transformation (Jyoti & Subodh, 2020). Electronic banking, commonly referred to as e-banking, has emerged as a powerful tool in the financial sector, offering innovative and convenient solutions for both financial institutions and customers. According to (Lusaya & Kalumba, 2018), the evolution of the banking system has been largely attributed to e-banking, whose use is gradually spreading to almost every nation due to its potential for producing products and services that require fewer internal resources, less expensive, and have greater accessibility to reach a broad client base. As technology continues to reshape the way people interact with financial institutions, it is imperative to explore the implications of e-banking services on customer satisfaction (Geteneh, 2022). This research aims to investigate the multifaceted relationship between e-banking services and customer satisfaction, focusing on a specific case study, Investrust Bank PLC. Investrust Bank PLC, a prominent local bank in the banking industry, has merged the digital era by providing a comprehensive suite of e-banking services to its customers. These services include internet banking, mobile banking applications, electronic funds transfer, and a host of other online financial management tools. As customers increasingly shift towards digital banking, understanding their level of satisfaction with these services becomes crucial for the bank's strategic growth and competitiveness (Nuwagaba & Ngoma, 2014), (Ismail & Alawamlh, 2017). The rationale behind this research lies in the dynamic nature of customer expectations, which have evolved in tandem with technological advancements. Today's customers demand efficient, secure, and user-friendly digital banking experiences (Anas, 2019). Thus, analyzing the impact of e-banking services on customer satisfaction is essential not only for Investrust Bank PLC but also for the broader financial industry. A satisfied customer is more likely to be a loyal customer, and their loyalty is a valuable asset in the competitive banking sector (Joan, 2021), (Amin, 2016), (Simpasa, 2013). This study will employ a quantitative method approach, which is descriptive in nature and will delve into the reasons behind the customers' satisfaction or dissatisfaction. By focusing on Investrust Bank PLC, we aim to provide actionable insights for the bank to enhance its e-banking services and meet the evolving needs and expectations of its clientele. In conclusion, this research endeavors to shed light on the intricate relationship between e-banking services and customer satisfaction, offering practical recommendations to Investrust Bank PLC and serving as a valuable reference for other financial institutions navigating the digital transformation landscape. It is

our hope that the findings of this study will contribute to a deeper understanding of e-banking services' role in shaping customer satisfaction and inform strategic decisions in the ever-evolving banking industry.

1.1. Statement of the Problem

The banking industry has witnessed a surge in technological innovations aimed at providing customers with convenient and cost-effective alternatives to traditional branch-based transactions. However, Investrust Bank faces challenges in the effective implementation of electronic banking (e-banking) services and ensuring customer satisfaction. Despite significant investments in e-banking services, customer adoption has been slower than expected, and not all customers are equally satisfied (Lusaya & Kalumba, 2018), (Appu & Muthamizhan, 2021), (Ismail & Alawamlh, 2017). This issue is further exacerbated by (Nuwagaba & Ngoma, 2014), who observation that many people in Zambia are yet to fully embrace technology as a viable banking option. The implications of failing to address the factors influencing e-banking adoption and its impact on customer satisfaction are significant. These consequences include a loss of competitiveness, customer attrition, underutilized e-banking infrastructure, reputation risks, and potential negative effects on financial performance. In this context, the researcher aims to investigate the variables influencing e-banking adoption and customer satisfaction to provide insights that can help Investrust bank to enhance customer satisfaction, ensure long-term success, and thrive in the world of digital banking.

1.2. Theoretical Frameworks

The theoretical framework is the setting that holds or supports a research study's theory. The theory that explains why the study problem under examination occurs is explained and introduced in the theoretical framework. A theoretical framework is a set of ideas and their descriptions, together with citations to pertinent academic works used in your study. According to (Al Qaisi & Alrosan, 2020); (Raza, et al., 2015), the theoretical framework needs to show that it understands the ideas and concepts that are relevant to the issue of the research study as well as the larger fields of knowledge that are being examined.

SERVQUAL Model

The SERVQUAL model, established by (Parasuraman, et al., 1988), is a pivotal framework for evaluating service quality and customer satisfaction. Comprising five key dimensions, it bridges customer expectations and their specific needs. These dimensions encompass Tangibility, which pertains to the visual and physical aspects of services; Reliability, focusing on consistent and dependable service delivery; Responsiveness, highlighting timely feedback and support; Assurance, concerning the competence of service personnel; and Empathy, signifying care for unique customer needs. As the digital landscape evolves, researchers like (Parasuraman, et al., 2005), (Raza, et al., 2020), (Akram & Sultan, 2014), explore

the application of these dimensions in technology-driven interactions. Adapting SERVQUAL to online platforms, as seen in (Rahi & Ghani, 2018), gains prominence. Furthermore, researchers emphasize the importance of E-service quality, introduced by (Parasuraman, et al., 2005), to enhance online services and optimize customer experiences in the digital age. E-service quality is vital for the success of modern online businesses.

SERVPERF Model

The SERVPERF model, introduced by (Cronin & Taylor, 1992), refines the conventional SERVQUAL model by highlighting service performance as the primary gauge of service quality. In contrast to SERVQUAL, which delves into the expectation perception gap, SERVPERF concentrates on consumers' perceptions of service performance. It retains the same five dimensions as SERVQUAL; re-liability, responsiveness, assurance, tangibles, and empathy. But exclusively evaluates perceived service performance without factoring in customer expectations. Numerous studies, including those by (Cronin & Taylor, 1994), (Dabholkar, 1996), (Brady & Cronin, 2001), (Seth, et al., 2005), have validated SERVPERF's efficacy in diverse service contexts. SERVPERF is particularly valuable in situations where the traditional SERVQUAL model may be less applicable or comprehensive, emerging as a dependable alternative for assessing service quality solely based on perceived service performance.

The Competition Theory

The banking sector is rapidly evolving, leading to intense competition as individuals, organizations, and nations compete for finite re-sources (Hunt, 2000). This concept of competition encompasses both idealized economic definitions and broader real-world interpretations. Key components of competition include the goals of competitors, evaluation criteria, and the competition's scope. According to (Rahim & Gholamali, 2018), (Mihail, 2018), Direct competition occurs when organizations produce identical products for the same consumer group, while indirect competition involves different firms offering products or services that indirectly compete for consumer spending. This competitive environment drives innovation and a wider array of choices, shaping a firm's strategy according to consumer preferences, where consumers typically select a bank based on their perceived value for cost (Beckett & Hewer, 2014).

The Technology Acceptance Model (TAM)

TAM is a well-established framework for comprehending the adoption of new technologies, particularly in the context of e-banking services (Davis, et al., 1989). The foundation lies in the belief that consumers' perceptions are pivotal in their decision to embrace or reject technology. In the e-banking context, two vital components, perceived usefulness and perceived ease of use, play a central role (Lute & Jackson, 2019), (Mahmood, 2014). Perceived usefulness assesses the value users place on e-banking in facilitating their financial activities, while perceived ease of use evaluates the simplicity of navigating e-banking platforms without extensive technical knowledge. These beliefs strongly influence users'

behavioral intentions. External variables like demographics, social influence, and enabling environments can also impact e-banking adoption. By understanding user perceptions and intentions through TAM, financial institutions and governments can tailor e-banking services to meet user preferences and encourage broader adoption (Luyanda & Phiri, 2017), (Mwiya et al., 2017), (Sakala & Phiri, 2019).

The Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA), as proposed by (Fishbein & Ajzen, 1975), probes into the connection between customer attitudes and behavior. TRA operates on the premise that individuals are rational, systematically utilizing available information in their decision-making processes. It asserts that people carefully weigh the consequences of their actions before committing to a specific behavior. According to (Lufwendo & Jackson, 2020), (Albarq & Alsughayir, 2013), TRA revolves around the interplay of beliefs, attitudes, intentions, and behavior, underscoring that behavioral intention is the immediate precursor to actions. This intention is shaped by an individual's attitudes towards the behavior and the subjective norm associated with it. The subjective norm encompasses beliefs about how others perceive the behavior and the influence of social pressure in either encouraging or dissuading individuals from engaging in the behavior (Lusaya & Kalumba, 2018), (Sambaombe & Phiri, 2022). TRA emphasizes that the adoption of e-banking is not solely determined by individual inclination but is significantly influenced by the attitudes and opinions of others. TRA's insights into the impact of customer attitudes and social influences are valuable for understanding e-banking adoption.

2. Literature Review

This section covers a number of empirical studies interrelated to the effect of e-banking on customer satisfaction from the global perspective to those specific to Zambia.

(Appu & Muthamizhan, 2021), this study aims to evaluate electronic banking services and their impact on customer retention. A descriptive approach was employed to analyse client retention concerning commercial banks' online banking services. The study sample included 84 customers, and the E-S-Qual model was utilized to measure service quality. The study's findings highlighted several critical elements that significantly contribute to customer retention. These elements included customer service quality, transactional support, inter-bank payments, ease of customer access, and enhanced privacy. These factors emerged as dominant contributors to the retention of customers who use electronic banking services. The study recommends that customer access to online banking services should be made as user-friendly as possible, and efforts should be dedicated to reinforcing privacy and data security. The identified gap in the literature is the limited number of studies that have specifically examined the importance of retaining customers in the context of electronic banking services.

Further exploration and research in this area are warranted to better understand the dynamics and strategies for customer retention within the electronic banking domain.

(Sakala & Phiri, 2019), conducted research in Zambia which was aimed at investigating the factors affecting the adoption and use of mobile banking services in Zambia based on TAM.
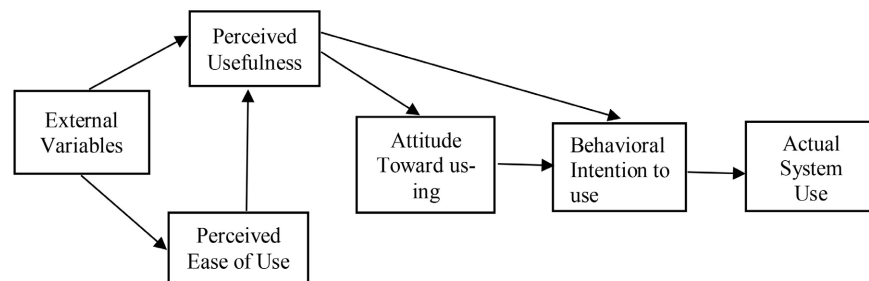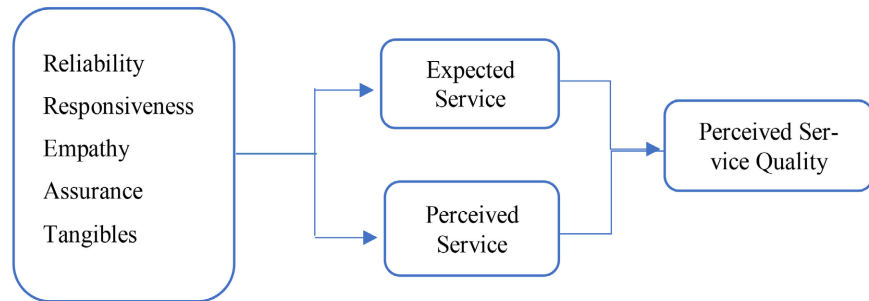

Illustration of the Technology Acceptance Model (TAM)

A quantitative research design was used, with a reference point of 384 respondents from the top three commercial banks. And the study used the chi-square test as a basis of analyzing the relationship between the dependent and independent variables. The findings were that there is a significant relationship between perceived ease of use, perceived usefulness, user attitude, external variables, and user intention. The results further indicated that the independent variables in the TAM model, account for factors that define the use of electronic banking technologies such as mobile banking. The other challenges affecting adoption levels of mobile banking was perceived cost in terms of accessibility to the internet and cell phones.

In examining the effect of customer service strategies on customer retention in a local commercial bank, (Joshi, 2018), adapted the ServQual dimensions of Service Quality for banks. Used a simple correlation analysis using the Microsoft excel and SPSS, on a sample size of 106 respondents of the Industrial branch. Overall, customers displayed a level of satisfaction with the bank's customer service strategies, assessed using the SERVQUAL model's dimensions, namely Tangibility, Reliability, Empathy, Responsiveness, and Assurance. The study's correlation analysis showed that these strategies had moderate to strong positive associations with customer satisfaction, suggesting that, in most cases, the bank's services met or exceeded customer expectations. However, the research also revealed areas of dissatisfaction, primarily related to the Tangibility dimension. Customers expressed concerns about frequent system downtime, issues with internet banking, and ATMs, as well as some reservations about "Reliability" and "Responsiveness." A more comprehensive investigation into addressing the root causes and potential solutions for the areas of dissatisfaction and developing of strategies for improving customer satisfaction at Investrust Bank

An illustration of E-S-Qual by (Parasuraman, et al., 1988)

Illustration of ServQual model

(Mwiya et al., 2017), in the examination of factors influencing E-Banking adoption using the Technology Acceptance Model (TAM), researchers conducted a regression analysis and correlation on a sample of 222 respondents. The study found that all three antecedents from the TAM model; easy to use, trustworthy, and safety, were significant and positively associated with users' attitudes toward adopting e-banking services. This means that individuals' willingness to embrace e-banking can be enhanced by improving their perception of e-banking services as user-friendly, reliable, and secure. The study further emphasized that customers' attitudes toward e-banking may require assistance to boost their intention to adopt e-banking services. The study recommends that streamlining the user experience by making e-banking services even more user-friendly can encourage further adoption and use. These efforts can help promote a seamless transition to e-banking, benefiting both customers and financial institutions. Future research in this area should consider conducting a more comprehensive investigation into the specific challenges or concerns that users may have regarding the ease of use, trustworthiness, and safety of e-banking services.

(Mahmood, 2014), conducted an empirical investigation on the adaptation of the technology acceptance model (TAM) to the use of mobile banking services in Jordan. The study has been modified by introducing two new dimensions, which are the factors of quality and experience to the five dimensions of the TAM model. this study consists of seven dimensions, namely, the quality of information, quality of service, quality of the system, perceived ease of use, perceived usefulness, attitudes, behavioral intention. The survey questionnaire was used with the sample of 238 Jordan Banks customers. The results showed that using mobile banking services had an impact on all the variables, as they showed a positive correlation. Perceived ease of use and experience had the strongest correlation among the seven variables, according to the statistical analysis.

The objective of the study by (Twaambo & Phiri, 2022) was to establish the benefits e-billing system and to identify factors affecting adoption levels of electronic billing by Lusaka Water Supply and Sanitation Company (LWSSC) based on the UTAUT model.
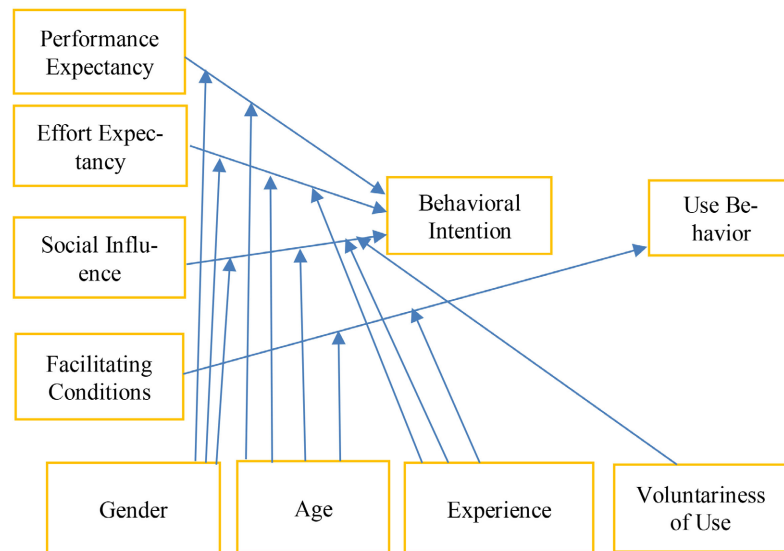
The Unified Theory of Acceptance and Use of Technology (UTAUT) Model

(Joan, 2021) investigated the impact of e-banking on customer retention in commercial banks in Uganda. She employed the Technology Acceptance Model (TAM) as the theoretical framework to guide her research. Data was collected using questionnaires from a sample of 60 respondents, and the analysis focused on descriptive statistics in the form of percentages and frequencies. The study's results demonstrated a notable increase in the adoption of e-banking services, with a significant number of customers transitioning from traditional offline banking methods to electronic channels. This shift was attributed to the effective implementation of customer retention antecedents, encompassing factors such as utility, reliability, empathy, and responsiveness. Joan's research indicates that the positive impact on customer retention in the context of e-banking can be attributed to the successful integration of these antecedents and the adoption of electronic banking services.

(Hussam, 2022) The goal of this study is to identify the major barriers to E-Banking adoption at Libyan commercial (public and private) banks. According to the results, there are significant barriers to E-Banking adoption: (Electronic Barriers, Regulatory Barriers and Cultural Barriers). The study also found that there were no differences between the respondents' answers in the presence of these Barriers due to the Ownership of the Bank, where, almost all participants, whether from publicly or privately banks, seemed to agree on the Barriers to E-Banking Adoption. This research recommends that the successful implementation of electronic banking in Libyan commercial banks requires the following steps: raising awareness of contemporary banking technologies among bank employees. An atmosphere that is conducive to this enterprise should be created with the help of the government. Banks should also develop their own E-Banking strategy plans that offer sufficient technology assistance and training.

(Edward & Jackson, 2021), this study set out to evaluate the factors leading to

adoption of FinTech financial services and how this affects traditional banking in Zambia. The study aimed to assess the variables that impact the uptake of FinTech financial services and devise strategies that aid banks in staying relevant and competitive. With 267 respondents, the study used a quantitative research design to gather data via self-administered questionnaires, utilizing the diffusion of innovation theory model. The SPSS programme and Pearson Correlation were used to analyse the gathered data. The dependent variable's adoption and the independent variables' relative advantage and compatibility showed a significant positive correlation, according to the results. The study suggests an updated model that displays variables affecting adoption of an innovation that might help banks.

The adoption of e-banking services plays a vital role in shaping customer satisfaction in the modern banking landscape. As highlighted in (Lee et al., 2021) Overcoming barriers to e-banking adoption: A study on trust, digital literacy. Decisions to adopt e-banking are influenced by a variety of factors, including customer demographics, technology literacy, and perceptions of risk and security. Additionally, consumer satisfaction is directly impacted by the quality of service, which includes transaction speed and accuracy, customer assistance, and user-friendly interfaces. The study recommends financial institutions to address these characteristics to improve e-banking adoption and, in turn, improve customer satisfaction.

Further studies on the adoption of e-banking in Zambia were done by (Lusaya & Kalumba, 2018), who investigated the challenges in the adoption of e-banking. Using a descriptive study with a sample size of 50 drawn randomly from banking customers in Kasama. Their results lead to a conclusion that availability of information is of great importance in the adoption of e-banking service. This is because in line with the theory of reasoned action, customer can only adopt a service or product if he has full information regarding its use. They further concluded that the only challenges to the use of e-banking are availability of information, education level and the cost of the service.

This study by (Abubakar, 2017) looked into how government regulations, transaction costs, bank perceptions of risk, and e-banking investment all affected the uptake of e-banking services in Somalia. This study used self-administered, closed-ended questionnaires to acquire quantitative data. Version 20 of SPSS was used to analyse the data that were gathered. According to the study, independent variables significantly and favorably influence Somalia's use of e-banking services. The report suggests that a sufficient legal framework and security measures could promote e-banking in Somalia. Additionally, providing consumers with high-quality services at a lower cost will be a potential competitive advantage of electronic banking's sustainability and future expansion.

3. Research Methodology

Philosophical Approach

The positivist paradigm is a philosophical approach that prioritizes empirical observation and scientific methods for acquiring knowledge. It advocates for objectivity, emphasizing the need to minimize personal biases and emotions in research. This paradigm is characterized by the use of the scientific method, quantification, and a focus on quantitative data in analysis (Walsham, 1995), (Mayers, 1997). In the social sciences, positivism extends its principles to the study of human behaviour, seeking general laws and patterns. Positivists stress the importance of verifying and falsifying hypotheses and tend to be sceptical of metaphysical or unobservable concepts. In order to accomplish this expectation, researchers use scientific approaches where the focus is on examining relationships between variables analytically and statistically (Deetz, 1996).

Research Design

This research adopts a quantitative approach due to the nature of the available data. It is a descriptive study that employs a survey method to identify the factors impacting customer satisfaction in the context of e-banking adoption. The research follows a descriptive case study research methodology with a primary focus on addressing questions related to the "how," "who," and "what" aspects of e-banking adoption, as recommended by (Yin, 2003). This design is suitable for investigating the factors that influence e-banking. Additionally, the research employs a cross-sectional approach to study a specific phenomenon, which is consumers' choices in retail banking services in Zambia. Cross-sectional research, in this case, involves seeking insights from individuals with the most knowledge about the subject, namely, consumers or users of these banks' services.

Research instruments

Research instruments, as noted by (Easterby et al., 2015), (Locke, 2001) serve as tools that allow the researcher to gain valuable insights from organizational members. In this study, a self-developed questionnaire was employed to collect data from the respondents, who were bank customers. The questionnaire featured closed-ended questions designed to systematically prompt quantitative information. The structured format of the questionnaire facilitated the collection of specific data points, aiding in the analysis of the research objectives

Sample Size Determination and Sampling Techniques

The study will use (Yamane, 1967) formula $n = N/(1 + (N * (e)^2)$ to calculate a representative sample size from a population of **1200** (i.e., the total customer base of Investrust bank). The sample size for the study will use the statistical formula at a significance level of 0.05. According to Yamane, an acceptable error level traditionally is up to ±0.05 or ±0.10 (i.e., 5 or 10 percentage point). Whereby n = Sample Size, N = Total Population, e = Precision Level (taken as 1.96 at 95% confidence level)

$$n = (Z/e)^2 = (1.96/0.05)^2 = 196$$

$$n = N * n/(n + N - 1)$$

$$n = 1200 * 196/(196 + 1200 - 1) = \mathbf{164}$$

(**population adjustment**)

The study will employ convenience sampling to recruit 164 participants. This method involves selecting willing walk-in customers from the main branch of Investrust Bank to participate in the study. However, only 120 questionnaires were collected from this sample of 164 participants.

Research Model

This research examines the influence of e-banking service adoption on customer retention within a local bank, with an emphasis on the key role of service quality in shaping the study's theoretical foundation. Acknowledging SERVQUAL as a well-regarded model for assessing service quality in the banking industry (Parasuraman et al., 1988), this framework serves as the cornerstone for evaluating service quality dimensions, encompassing service expectations, performance, satisfaction, and, subsequently, satisfaction. SERVQUAL stands as a reliable tool for appraising service quality in the realm of retail banking. Additionally, this study incorporates the modified E-S-QUAL model proposed by of (Parasuraman et al., 2005), (Herington & Weaven, 2009), comprising User-interface, Efficiency, Ease-to-use, along with two SERVQUAL components, Responsiveness, and Reliability. The following conceptual framework, depicted below, guides the investigation (Figure 1).

H1: User interface factors have a significant relationship with customer satisfaction.

H0: There is no significant relationship between user interface and customer satisfaction.

H2: Responsiveness factors have a significant relationship with customer satisfaction.

H0: There is no significant relationship between Responsiveness and customer satisfaction.

H3: Reliability factors have a significant relationship with customer satisfaction.

H0: There is no significant relationship between Reliability and customer satisfaction.

H4: Ease-to-use factors have a significant relationship with customer satisfaction.

H0: There is no significant relationship between Ease-to-use and customer satisfaction.

H5: Efficiency factors have a significant relationship with customer satisfaction.

H0: There is no significant relationship between Efficiency and customer satisfaction.

The hypotheses above were generated based on E-Sev-Qual Model (Parasuraman et al., 2005), taking User interface, Responsiveness, Reliability, Ease-to-Use and Efficiency as independent variables and the adoption and Customer satisfaction as the dependent variable.
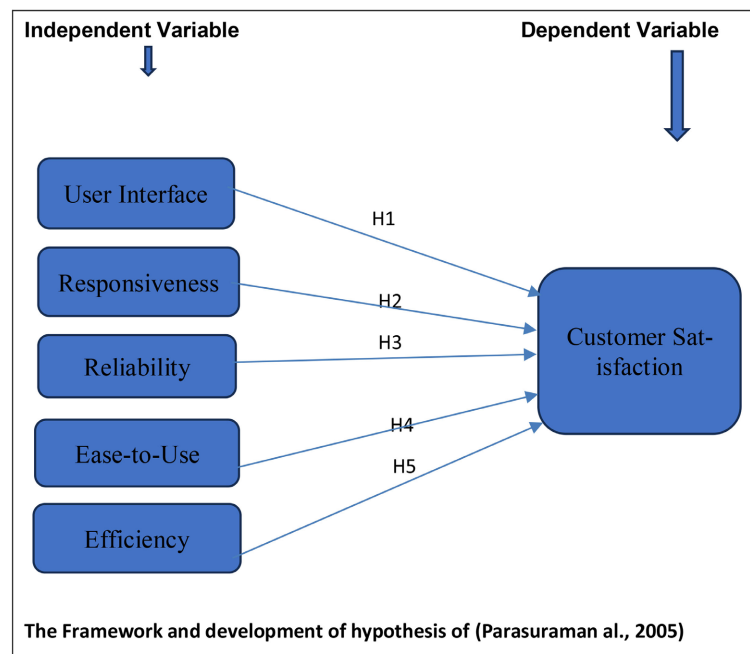
The Framework and development of hypothesis of (Parasuraman al., 2005)

Figure 1. Conceptual framework.

4. Results and Discussion

Demographic Information Analysis

The presentation of the data from the questionnaire administered to respondents began with the identification of the respondents in terms of their Gender, Marital status, Age, and Education.

The study findings in Figure 2 indicates that 62% of the respondents were male while (38%) of the respondents were female. Therefore, results of the study reveal that majority of the respondents were male. The study findings show that the information collected to examine the effect of e-banking services on customer satisfaction. A case study of Investrust bank reflected perspectives from both genders

The respondents' questionnaire also elicited information on their marital status because these variables could influence their ability to supply credible information about the variables that were involved in the study. The findings in Figure 3 reveal that 28% of the participants were single, 63 % of them were married, and 9% of them were divorced. These findings indicate majority of the respondents who participated in this study were married.

The findings in Figure 4 reveal that 5% of them were aged between 21 and 30 years, 55% of them were aged between 31 and 40 years, and 23% of them were aged between 41 and 50, 11% of them were aged between 51 and 60, and 7% of them were more than 61 years of age. These findings indicate that the majority of respondents who participated in this study were between 31 and 40 years and are therefore knowledgeable enough to provide information relevant to the study.
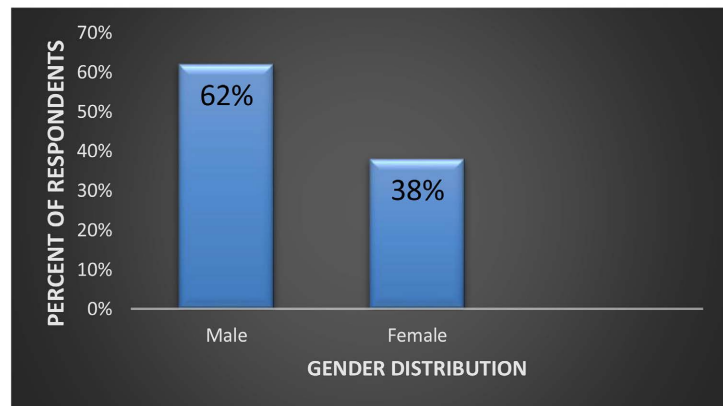
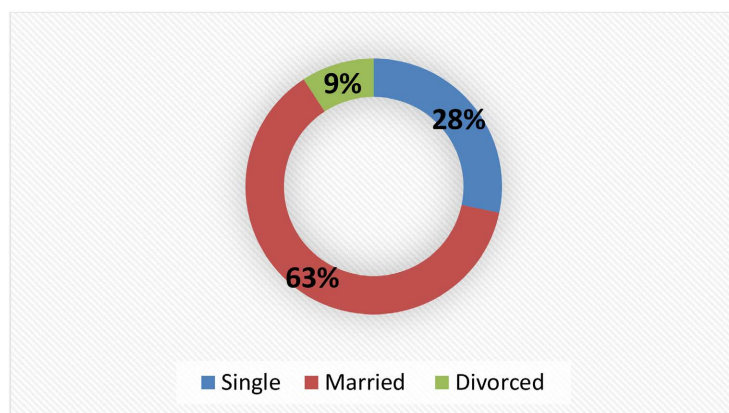Figure 2. Gender distribution. Source: Field Data.
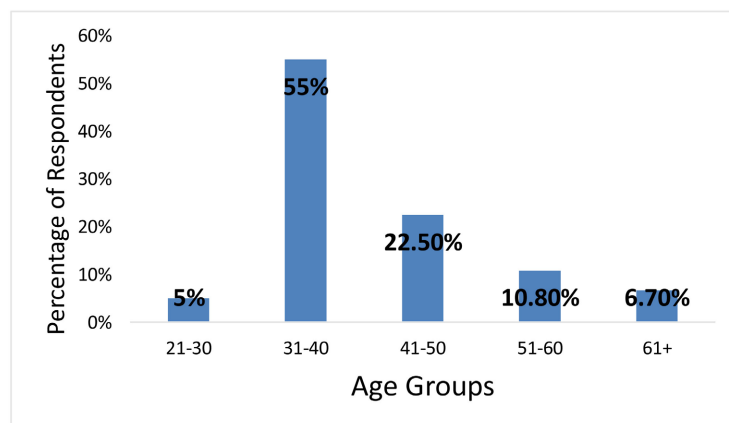

Figure 3. Marital status. Source: Field Data.

Figure 4. Age group. Source: Field Data.

The findings in **Figure 5** reveal that 10% of the participants have gone up to SHS level and below, 28% of them have gone up to Diploma level, 45 % of them have gone up to Bachelor's degree level, 13% of them have gone up to Masters level, and 4% of them have gone up to PhD level. These findings indicate that the majority of the respondents who participated in this study were at Bachelor's degree level (**Figure 6**).
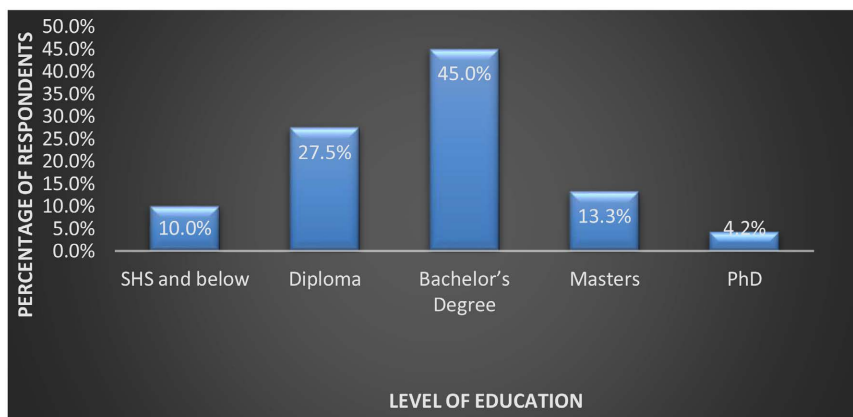
Figure 5. Education level. Source: Field Data.
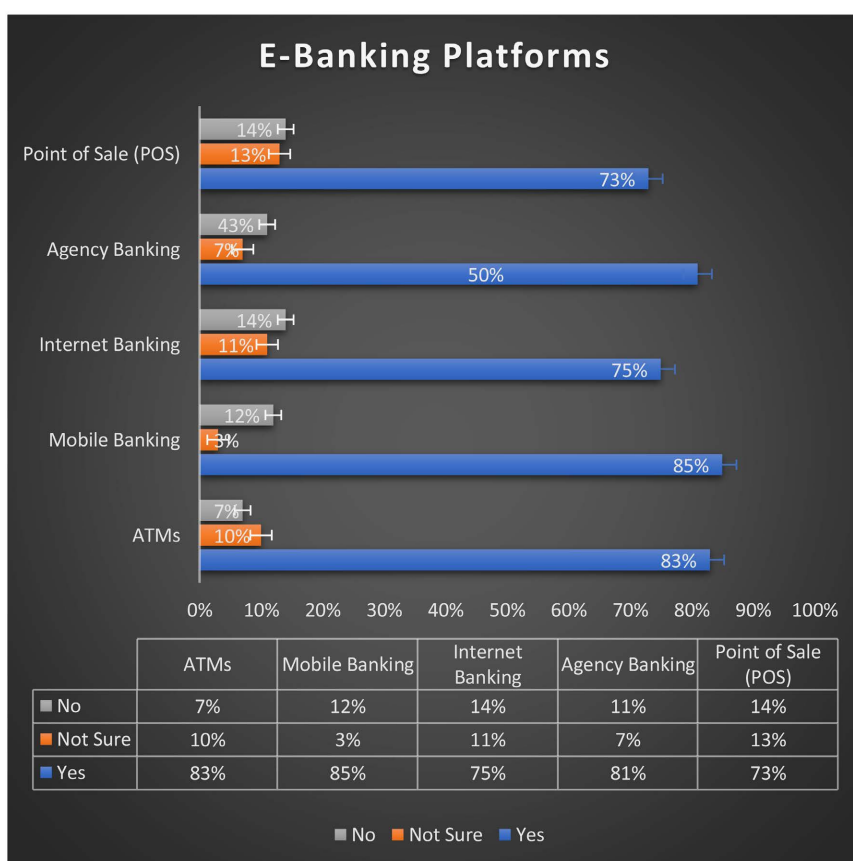
Figure 6. E-Banking Services influencing customer satisfaction. Source: Field Data.

What e-banking platforms influences customer's adoption and satisfaction. The results from the study demonstrate that Investrust Bank employs various e-banking platforms to influence the adoption and customer satisfaction. Notably, a significant percentage of respondents, roughly about 83%, highlighted the use of ATMs, while a mere 7% indicated otherwise, with 10% remaining uncertain. Similarly, a substantial 85% of respondents indicated the utilization of mobile banking, with only 12% expressing the opposite view and 3% unsure. Fur-

thermore, about 75% of respondents noted the use of internet banking, contrasting with 14% who believed otherwise, and 11% uncertain. In addition, agency banking was reported to be employed for customer satisfaction by 81% of respondents, while 11% disagreed, and 7% were unsure. Finally, 73% of respondents acknowledged the use of point-of-sale systems in influencing customer satisfaction, compared to 14% who disagreed, and 13% who were uncertain. These findings collectively suggest that Investrust Bank utilizes a diverse array of e-banking platforms to bolster customer satisfaction. And In summary, the study underscores that mobile banking is the most widely used e-banking platform, closely followed by ATMs and internet banking.

Hypothesis Results: Factors affecting the adoption of e-banking on customer satisfaction

The hypothesis is derived from a correlation analysis between the dependent variable (Customer satisfaction) and the independent variables (E-service quality), User interface, responsiveness, reliability, ease of use, and efficiency. The correlation and regression analysis made use of Pearson's correlation coefficient.

Pearson correlation test was performed to establish if there is a statistically significant relationship between User-interface and customer satisfaction. The results are shown in Table 1.

Results in Table 1 show that there is a statistically significant relationship between website design and customer satisfaction (p-value = 0.000 < 0.05). Results further indicate that there is a strong positive relationship between website design and customer satisfaction (r = 0.640). Therefore, the relationship between website design and customer satisfaction is positive.

Pearson correlation test was performed to establish if there is a statistically significant relationship between responsiveness and customer satisfaction. The results shown in Table 2 show that there is a significant relationship between responsiveness and customer satisfaction (p-value = 0.000 < 0.05). Results further indicate that there is a strong positive correlation between responsiveness and customer satisfaction (r = 0.669). Therefore, the relationship between responsiveness and customer satisfaction is positive.

Pearson correlation test was performed to establish if there is a statistically significant relationship between Reliability and customer satisfaction. The results are shown in Table 3.

Results in Table 3 show that there is a statistically significant relationship between personal needs and customer satisfaction (p-value = 0.000 < 0.05). Results further indicate that there is a strong positive correlation between personal needs and customer satisfaction (r = 0.577). Therefore, the relationship between personal needs and customer satisfaction is positive.

Pearson correlation test was performed to establish if there is a statistically significant relationship between Ease-to-use and customer satisfaction. The results are shown in Table 4.

Results in Table 4 show that there is a statistically significant relationship be-

tween ease-to-use and customer satisfaction (p-value = 0.000 < 0.05). Results further indicate that there is a strong positive correlation between ease-to-use and customer satisfaction (r = 0.794). Therefore, the relationship between ease-to-use and customer satisfaction is positive.

Pearson correlation test was performed to establish if there is a statistically significant relationship between efficiency and customer satisfaction. The results are shown in Table 5.

Table 1. Relationship between User-interface and customer satisfaction.

Correlations			
		Customer Satisfaction	User-Interface
Customer Satisfaction	Pearson Correlation	1	0.640**
	Sig. (2-tailed)		0.000
	N	120	120
User-Interface	Pearson Correlation	0.640**	1
	Sig. (2-tailed)	0.000	
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed). Source: Field Data.

Table 2. Relationship between responsiveness and customer satisfaction.

Correlations			
		Customer satisfaction	Responsiveness
Customer satisfaction	Pearson Correlation	1	0.669**
	Sig. (2-tailed)		0.000
	N	120	120
Responsiveness	Pearson Correlation	0.669**	1
	Sig. (2-tailed)	0.000	
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed). Source: Field Data.

Table 3. Relationship between reliability and customer satisfaction.

Correlations			
		Customer satisfaction	Reliability
Customer satisfaction	Pearson Correlation	1	0.577**
	Sig. (2-tailed)		0.000
	N	120	120
Reliability	Pearson Correlation	0.577**	1
	Sig. (2-tailed)	0.000	
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed). Source: Field Data.

Table 4. Relationship between ease-to-use and customer satisfaction.

Correlations			
		Customer satisfaction	Ease-to-use
Customer satisfaction	Pearson Correlation	1	0.794**
	Sig. (2-tailed)		0.000
	N	120	120
Ease-to-use	Pearson Correlation	0.794**	1
	Sig. (2-tailed)	0.000	
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed). Source: Field Data.

Table 5. Relationship between efficiency and customer satisfaction.

Correlations			
		Customer satisfaction	efficiency
Customer satisfaction	Pearson Correlation	1	0.611**
	Sig. (2-tailed)		0.000
	N	120	120
efficiency	Pearson Correlation	0.611**	1
	Sig. (2-tailed)	0.000	
	N	120	120

**. Correlation is significant at the 0.05 level (2-tailed). Source: Field Data.

Results in Table 5 show that there is a statistically significant relationship between efficiency and customer satisfaction (p-value = 0.000 < 0.05). Results further indicate that there is a strong positive correlation between efficiency and customer satisfaction ($r = 0.661$). Therefore, the relationship between efficiency and customer satisfaction is positive.

Chapter summary

It has been revealed that local Investrust bank use the following products; ATMs, mobile banking, internet banking, agency banking, and point of sale (POS) as e-banking platforms to influence adoption on customer satisfaction in today's modern banking. The study has revealed that customers' have a negative perception of service delivery offered by Investrust bank. Furthermore, the customers' level of e-service expectancy, e-service performance and satisfaction of e-services offered by bank is low. Also Results of the study indicates that User-interface, responsiveness, Reliability, Ease-to-use and efficiency have a positive and statistically significant relationship with customer satisfaction.

5. Conclusion

In summary, the primary aim of this study was to assess the impact of e-banking

adoption on customer satisfaction within Investrust Bank, a Zambian-owned financial institution. It was found that the Bank effectively utilizes e-banking platforms to enhance customer satisfaction, providing a diverse range of services through channels like ATMs, mobile banking, internet banking, agency banking, and POS. Notably, mobile banking emerged as the most preferred platform among customers. Despite some negative feedback regarding issues with user interface, responsiveness, and reliability, positive perceptions were evident concerning service efficiency and ease of use.

Furthermore, the study identified significant positive linear relationships between customer satisfaction and key factors such as user interface, responsiveness, reliability, ease-of-use, and efficiency. These findings underscore the importance of these factors in influencing overall customer satisfaction levels. Prioritizing customer satisfaction is crucial for fostering loyalty and, ultimately, driving increased business and profits for the Bank. Therefore, focusing on improving the identified areas of concern while maintaining and enhancing the positive aspects of e-banking services is essential for the bank's continued success and competitiveness in the market.

6. Recommendations

1) Investrust Bank should continue to improve its website design, ensuring that it is visually appealing, easy to navigate, and user-friendly. Regularly updating and optimizing the website can enhance customer satisfaction.

2) Customer Relationship Management: Customer relationship management (CRM) has emerged as a critical strategy for financial institutions to thrive. With rapidly evolving customer expectations and technological advancements, banks must invest in robust CRM strategies to retain existing customers and attract new ones. This entails more than just providing quality products and services; it requires a concerted effort to build strong and lasting relationships with customers. In this context, Investrust Bank is urged to prioritize CRM initiatives aimed at fostering deeper connections with its clientele. This recommendation encompasses various aspects, including personalized communication, the implementation of loyalty programs, and actively addressing customer feedback. By adopting these measures, Investrust Bank can enhance customer satisfaction, loyalty, and ultimately, its competitiveness in the market.

3) Personalized Service: To meet customers' personal needs, the bank should gather customer data and use it to tailor services and recommendations to individual preferences and requirements.

4) Investrust Bank should continue to ensure the reliability of its services, maintaining a secure and consistent banking environment. This includes providing secure and timely transactions and access to services.

5) The bank should prioritize responsive customer service, promptly addressing customer queries and issues. This can be achieved by training and empowering customer service representatives to provide efficient and effective sup-

port.

6) Continuous Monitoring and Improvement: Investrust Bank should regularly monitor customer satisfaction levels, gather feedback, and make necessary improvements to all aspects of e-banking services based on customer input.

7) Improving e-banking services in these areas will likely result in higher customer satisfaction and better adoption of e-banking services, giving the bank a competitive edge in the modern banking industry.

7. Future Works

The future of accessibility to services for every citizen, whether in formal or informal sectors, is undeniably online. To ensure inclusivity and widespread adoption of e-banking services, there is a pressing need for ongoing research and adaptation in organizational systems. In this rapidly evolving landscape, several key directions from researchers for future work become apparent:

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Conflicts of Interest

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

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