



**DIGITAL TRANSFORMATION AND CUSTOMERS' SATISFACTION IN  
BANKING SECTOR**

**"A CASE STUDY OF UNGUKA BANK PLC"**

**THESIS PROJECT SUBMITTED TO UNIVERSITY OF RWANDA IN PARTIAL  
FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER IN BUSINESS  
ADMINISTRATION (MBA).**

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## **DEDICATION**

It will be my pleasure to dedicate this study to my late husband who encouraged me to pursue this program. He did everything to make me believe that I could do it.

## **DECLARATION**

This thesis has never before been recognized by a university or other academic organization and is entirely original.

.....

Signature

.....

Date

## **ACKNOWLEDGMENTS**

First of all, glory be to almighty God who everyday grants us his grace to live, guides us throughout the day and give us the ability to accomplish our everyday tasks.

I would also let my gratitude be expressed to my family: my late husband who in the first place encouraged me to go for Masters' degree, my children who bared with me during the time I couldn't spend enough time with them because of studies. It is also because of their prayers that I was able to make it.

My supervisor, Dr. Isai Kadhafi, whose time, guidance, and comments were very useful in finishing this project, deserves my deepest gratitude and respect.

My classmates whose help and encouragement deserve credits, I thank them. Finally, my thanks go to the management of Unguka bank Plc for the opportunity they gave me to undertake this research in their branches and customers.

May God bless them abundantly

## ABSTRACT

This research entitled, Digital transformation and customers' satisfaction in banking sector of Rwanda, case study of Unguka Bank Plc, showed that the established digital means in Unguka Bank help customers to use different bank services without having to physically be present at bank premises. The problem statement is about the customers still choosing to use bank services physically at bank premises despite a number of banking digital means already established. This study was guided by specific research objectives which are examining the perception of respondents on the use of digital services in Unguka Bank, evaluating the assurance and security of digital services from Unguka Bank and investigating the effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank. Given that descriptive research is used to explain the facts and characteristics of what is being investigated, the researcher conducted a descriptive analysis. About the level of using digital services at Unguka Bank, this study showed that the level of using digital services increase customer satisfaction in UB as perceived by UB employees was enough that the mean values of respondents in these category ranged from 2.51 and 3.25, (Mean 2.63, SD=.519) where the customers perceived that the level of using digital services in UB increase the numbers of customers using e-payment at enough (Mean of 2.61, SD=1.019).

About the contribution of digital transformation on the quality and speed of service delivery at UB, the study showed that the Customer receives quick service is positively a significant predictor of customer satisfaction in UB standardized better ( $\beta$ ) =.312,  $P < 0.05$ . The better value tells that one-unit increase of customer who receives quick service increase customer satisfaction mean by .312. This is to mean that when customer receives quick service from UB she/he will be motivated to be loyal to the services provider as the other factors remain constant.

About the challenges faced by customers while using digital services at UB, the study showed that there is there is correlation between Customers who meet with connection problem and customer satisfaction in UB, Rusizi branch where ( $R = .755$ ,  $p < 0.05$ ). The determination's coefficient is  $R^2 = .570$  indicating that only 57% of customer satisfaction is accounted for by the Customers met with connection problem when using digital transformation. The correlation between Customers of UB can that can make errors in money transfer and customer satisfaction in UB Rusizi branch was found to be ( $R = .537$ ,  $p < 0.05$ ). The determination's coefficient is  $R^2 = .288$  indicating that only

28.8% of customer satisfaction variation was explained by customers who make errors in money transfer.

## **Key words**

**Digital transformation:** It is the process of using digital technologies to create new or modify existing business processes, culture, and customer experiences to meet changing business and market requirements. Digital transformation is the adoption of digital technology by an organization.

**Customer satisfaction:** Customer satisfaction is defined as a measurement that determines how happy customers are with a company's products, services, and capabilities. Customer satisfaction information, including surveys and ratings, can help a company determine how to best improve or changes its products and services.

**Banking sector:** banking sector means a sector composed of credit institutions, financial institutions, and associated companies

## **LIST OF ABBREVIATION**

**ANOVA:** Analysis of Variance

**ATM:** Automated Teller Machine

**B2B:** Business to Business

**MBA:** Masters of Business Administration

**PIN:** Personal Identification Number

**Plc:** Public Limited Company

**SD:** Standard Deviation

**SPSS:** Statistical Package for the Social Sciences

**UB:** Unguka Bank

**UR:** University of Rwanda



## Table of Contents

DEDICATION .....	i
DECLARATION .....	ii
ACKNOWLEDGMENTS .....	iii
ABSTRACT .....	iv
Table of Contents .....	vii
List of tables.....	x
List of figures .....	xi
CHAPTER ONE: GENERAL INTRODUCTION .....	1
1.1. Background of the study .....	1
1.2. Problem statement .....	3
1.3. Research objectives .....	4
3.1.1. General objective .....	4
3.1.2. Specific objectives .....	4
1.4 Scope of the study .....	5
1.5 Significance of the study .....	5
3.1.3. The researcher .....	7
3.1.4. Service delivery .....	7
3.1.5. Future researchers .....	7
1.6 Justification of the study .....	7
1.4. 1.7. Limitations of the study .....	7
1.5. 1.8. Organization of the study .....	8
1.7 Unguka Bank profile .....	9
CHAPTER TWO: LITERATURE REVIEW .....	10

CHAPTER THREE: RESEARCH METHODOLOGY .....	21
3.2. Introduction .....	21
3.3. Research design.....	21
3.4. Population and Sampling Techniques .....	22
3.4.1. Study Population .....	22
3.4.2. Sample Size and Selection .....	23
3.4.3. Sampling Techniques .....	23
3.4.4. Sample size .....	24
3.5. The research instruments.....	25
3.5.1. Questionnaire .....	25
3.5.2. Validity and reliability of research instruments .....	25
3.6. Data Gathering Procedures.....	26
3.7. Ethical procedure.....	27
3.8. Data processing and analysis.....	27
3.8.1. Data processing.....	27
3.8.2. Data analysis .....	28
3.9. Coding .....	28
3.10. Tabulation.....	28
Chapter IV: DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF RESEARCH FINDINGS .....	29
1.6. 4.1. Systematic presentation and Analysis of Data .....	30
1.7. 4.2. Demographic Characteristics of Respondents.....	30
3.10.1. 4.2.1. Gender of Respondents .....	30
3.10.2. 4.2.2. Age of respondents .....	31
3.10.3. 4.2.3. Marital Status of Respondents .....	33

3.10.4. 4.2.4. Education of Respondents.....	34
CHAP V: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....	48
5.1. Summary of findings .....	48
5.2. Recommendations .....	51
References.....	53
ANNEXES .....	i

## List of tables

Table 3.1: Target Population.....	22
Table 3.2:Sample Size .....	24
Table 3.3:The distribution of Cronbach’s alpha coefficients for instrument .....	26
Table 4.1: Gender respondents .....	31
Table 4.2: Age of respondents .....	32
Table 4.3: Marital status of respondents .....	33
Table 4.4: Education level of respondents .....	35
Table 4.5: level of using digital services in Unguka Bank as perceived by customers.....	36
Table 4.6: Digital transformation on the quality and speed of service delivery .....	38
Table 4.7: Challenges faced by the customers while using bank digital services.....	42
Table 4.8: Model summary .....	46

## List of figures

Figure 1: Conceptual framework .....	20
Figure 2: Proportion of gender respondents.....	31
Figure 3: Proportion of respondent by age.....	32
Figure 4: Proportion of respondents by marital status .....	34
Figure 5: Proportion of respondents by education level .....	35

# **CHAPTER ONE: GENERAL INTRODUCTION**

## **1.1. Background of the study**

Customer satisfaction has increased over that last few years. Optimal product pricing and quality are no longer sufficient to ensure long-term success because of the globalization of competition, market saturation, and growth of information technology. Instead, for businesses to succeed, long-term relationships with their clients are essential. It costs six times as much to acquire new clients as it does to keep your present ones, according to prior studies. Profit, according to one industry, might rise by up to 60% with a 5% reduction in potential migration. Consequently, a crucial element in the long-term success of businesses is the growth and retention of loyal clients (Lee, Y. K. Et al, 2004).

Due to growing consumer awareness, there is a greater demand for services of a higher caliber. This recent awareness and emphasis on quality has an impact on service operations globally (Lee, Y. K. Et al, 2004). Therefore, service industries like banks are required to provide their clients with excellent services in order to maintain a competitive edge, especially given the current trend of trade liberalization and globalization. The level of client satisfaction is a crucial element in the high utilization of such services. Customer happiness and sales are intimately correlated; increasing sales demands better service delivery to encourage repeat business.

With the growth of the Internet, devices like laptops and smartphones have been developed and widely used by organizations for their business operations, particularly in banking, where service delivery has greatly changed from in-person interactions to online transactions. As a result, different business companies that want to survive have adapted themselves to be digitalized in

their operations. In fact, embracing technology and digitization has become essential for accelerating the supply of customer services in the banking sector. This has been expedited by the competition between commercial banks, who are compelled to provide customers with digital banking services.

The process of employing digital technology to develop new corporate cultures, practices, and experiences or modify current ones in order to suit the needs of the business and commercial market is known as "digital transformation." This company is now undergoing a digital transition. It extends beyond roles that are often associated with customer service, marketing, and sales. Instead, how you see and interact with the developer will determine how digital transformation begins and ends. Rethinking how business may be done and how customers interact with the digital business side of technology is an opportunity as we move from paper to spreadsheets to smart apps for any business management. Digital transformation entails the switch from outdated working practices to brand-new ones that are based on cutting-edge technology advancements (Matt, C et al, 2015).

The Customer of the Future author Blake Morgan claims that this process has an impact on a number of crucial corporate functions, including customer service, data integration, privacy, logistics, and sales.

The use of contemporary hardware and software is only one aspect of the banking industry's digital transformation; management, communications, and corporate culture also need to be updated. A bank's operational model may need to be changed, new paths may need to be established, and the bank may need to join a partner ecosystem that will elevate the level of service to a completely new level. At the same time, the market for mobile technology started to expand, and the idea of

the Internet was popularized, which sped up the process. That's where the banking industry's digital transformation started to take root (Rashhan, (2021))

## **1.2. Problem statement**

In this information age, customers have higher expectations and demand the best services due to the rapid advancement of technology. They also desire services that are more timely and cost-effective while also being more convenient. It is now more crucial than ever for online service providers to pinpoint the characteristics that customers most frequently use to judge quality. Understanding the factors that influence electronic services is therefore of tremendous importance.

Due to the decrease in human interaction brought about by internet banking, online information systems now function consistently. The goal of the most recent study is to better understand how electronic banking service has affected the standard of the banking environment offered to clients based on the discussion above. Since services are challenging to evaluate, five quality dimensions—reliability, promptness, communication, security, and access—will be employed to do so. Here, the research question is put forth.

To have a better understanding of how the banking industry's digital revolution has impacted the dimensions of service quality and customer happiness. The process of going from conventional working methods to wholly new ones that are based on cutting-edge technological advancements is known as digital transformation (Harvey, (2016))

According to (Vieira, 2018), in the past, the safety of cash and the interest on saves drove client demand for banking services. However, the manner banks provide their services now is what customers now want more than merely the safety of their money. The reason is that today's customers need services that are quick, effective, and punctual. Since their founding, several



commercial banks have continued to be preferred by urban and rural residents, the wealthy and the less fortunate, as well as business professionals and students. Although those banks have advanced in terms of digital services like mobile applications, gadgets, and others, they continue to struggle with getting more people to visit their various branches in urban and rural locations in order to access financial services using quick and efficient digital services. This study aimed to evaluate the role that digital transformation played in the delivery of services to Unguka Bank Plc customers and their satisfaction in this setting.

According (Abd-El-Salam, et al, 2013), In Rwanda, recent advancements in information technology have had a significant impact on user-friendly financial services, flexible payment options, and smarter and more effective banking systems. However, using the Internet frequently speeds up and simplifies processes. Banks that have used the product face various obstacles, so it is necessary to understand the challenges facing Internet banking and how they can overcome the increasing dependence on the Internet.

### **1.3. Research objectives**

#### **3.1.1. General objective**

The main objective of the study is to find out the contribution of digital transformation in service delivery and customer's satisfaction in Unguka Bank Plc.

#### **3.1.2. Specific objectives**

This research guided by the following specific objectives:

- To examine the level of using digital services in Unguka Bank as perceived by customers.
- To determine the effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank.

- To identify the challenges faced by the customers while using bank digital services

#### Research Questions

In order to attain the stated objectives, the researcher was guided by the following research questions:

1. What is the level of using digital services in Unguka Bank as perceived by customers?
2. What are the effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank?
3. What are the challenges faced by the customers while using bank digital services?

#### **1.4 Scope of the study**

This research aims at examining the digital transformation in service delivery Rwandan banking sector. The study will be conducted in Unguka Bank Plc in Rusizi branches. The researcher will analyze the digital service delivery in Unguka bank for a period of three years (2018 - 2021).

#### **1.5 Significance of the study**

For service-oriented firms, this study is extremely significant because:

It would be helpful in gaining knowledge about functions of e-commerce, its products, and operations.

Since the whole focus of this research is on quality-related concerns, knowing service dimensions and how to implement them will help to deliver quality services to clients.

It would give a thorough grasp of how e-commerce has enhanced service quality and reduced costs in the banking industry.

It would give clearer insights into how e-banking has aided in redefining and bolstering client connections.

Additionally, it would help to clarify how e-banking has altered the global banking sector.

Knowing how e-commerce has aided the banking industry in coping with the intense and ongoing rivalry would also be helpful.

Knowing how the service quality dimensions assist in assessing the service quality of organizations would also be useful.

New services have emerged as a result of new technology, while the old have been disrupted. Customers are increasingly drawn to digital experiences and goods. Providers in the sector are also revising the playbook at the same time. A more radical shift of the industry was postponed as a consequence, despite the fact that conventional financial service providers have a competitive advantage, financial services have been computerized for decades, and goods like retail brokerage have used digital channels for about 20 years. These included client trust that had already been established, regulatory entry obstacles in banking and insurance, and supervisory techniques that favored internalizing all or most of the value chain.

This study used a survey design to gauge respondents' opinions on how much the digital transformation many Rwandan financial institutions adopted had affected the caliber of services those financial institutions provided to their clients. The study's goal was to evaluate and quantify the quality of services provided with regard to digital banking services.

### **3.1.3. The researcher**

This research will give the researcher an idea of whether the digital transformation is contributing to the service delivery in Rwanda Commercial Banks. The researcher will also be able to fulfill the requirements of Master in Business Administration in Finance.

### **3.1.4. Service delivery**

The act of providing a service to clients is referred to as service delivery. Service delivery is the aspect of a business that gauges how customers and suppliers interact. When suppliers provide a service—be it information or a task—the customer either gains or loses value as a consequence. Good service delivery increases the value for the customers.

### **3.1.5. Future researchers**

It is significant that this study will serve as a resource for academics and scholars. This will serve as the foundation for next scholarly investigations and a source of secondary data in the area of economic growth.

## **1.6 Justification of the study**

To conduct this study, the researcher has been inspired by fact that Rwanda government has put huge effort in promoting digital service delivery in its banking sector. Nevertheless, there is a range of barriers that can hinder the concern including low level of technology that lack sufficient investment. This study was hence conducted to find means of finally putting in place a digital service delivery in Rwandan banking sector.

## **1.4. 1.7. Limitations of the study**

This study was limited to digital transformation and customers 'satisfaction in banking sector, case study of Unguka Bank Plc.

1. The limitation of the study was the allocated time, which is always short in comparison to the researcher's proposed area of coverage.
2. The limitation of the study was also on data collection, distribution and collection of questionnaires that is time consuming because of the location and scatteredness of respondents.
3. The researcher's time and efforts were largely spent locating books, journals, and reports rather than locating pertinent information from them due to the constraint of the library administration and functioning in many areas.
4. In addition, the limitation of the study was the language in which the questionnaires were set in because some of the respondents are illiterates. Thus, if the questionnaire is set in English, respondents would complain of interpretation, others, even though it would be set in Kinyarwanda, they would need the researcher to read and tell them what he/she wants them to do. Hence, time consuming and delays in collecting data from the field.
5. Finally, another limitation is the suspicious of respondents about the study and be reluctant to give the required information. Here, the respondents would refuse to respond completely to some questions thinking of other things contrary to the researcher's objectives.

#### **1.5. 1.8. Organization of the study**

The report of this research project will be subdivided into five chapters:

The study's background, problem description, research aims, research questions, scope, importance, and organizational details are all presented in chapter one.

The second chapter will discuss literature reviews, which will make use of many data sources, including reports, books, and the internet. Theoretical literature and empirical literature are the

most crucial topics to be addressed. Digital transformation of banking sector service delivery. A presentation of relevant literature and gap analysis will follow. The third chapter describes the research strategy, data gathering procedures, and data analysis techniques used in this study. In Chapter 4, the research findings will be analyzed and interpreted in light of the study's research questions. Chapter 5 will include a summary of the research findings, as well as conclusions and relevant suggestions.

### **1.7 Unguka Bank profile**

Unguka Bank, often known as Unguka Bank Plc (UB), is a microfinance institution in Rwanda. It is one of the banks with a license from the National Bank of Rwanda, which oversees banking in the nation.

On January 30, 2005, Unguka Bank was established as a microfinance organization in the Republic of Rwanda. The Bank was a society limited by shares formed as a consequence of a handshake between 214 shareholders. Its initial capital of 321 100 000 Rwf was represented by 3 211 shares, each worth 100 000 Rwf..

***Vision:*** To become the Trusted Bank of choice.

***Values:*** Trust, Accountability, Professionalism, Integrity and Team Work.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Introduction**

Recently, there has been an increase in interest in customer happiness. A scenario where long-term success is no longer attained by optimum product price and attributes has been imposed by customer awareness caused by the globalization of competition, market saturation, and development of information technology. Instead, it is the businesses that rely on enduring client relationships to succeed. According to earlier research, acquiring a new client might cost up to six times as much as keeping an old one. Again, depending on the business, a 5 percent reduction in prospective migration might result in an increase in profit of up to 60 percent. As a result, attracting and keeping consumers who are loyal has become essential to businesses' long-term success (Lee, Y. K. Et al, 2004)

Customers are demanding higher quality services more frequently since customers are getting more and more quality aware globally. This new wave of quality awareness and attention has an impact on service operations everywhere (Lee, Y. K. Et al, 2004). Therefore, in order to maintain a lasting competitive advantage, especially given the present trend of trade liberalization and globalization, service-based businesses like banks are required to offer great services to their clients. Customers' pleasure with a service determines how high the service will be. Customer happiness and sales are intimately correlated, therefore improving service quality is necessary to boost sales and attract repeat business.

With the growth of the Internet, devices like laptops and smartphones have been developed and widely used by organizations for their business operations, particularly in banking, where service delivery has greatly changed from in-person interactions to online transactions. As a result,

different business companies that want to survive have adapted themselves to be digitalized in their operations. In reality, embracing technology and digitization has become essential for accelerating the supply of client services in the banking sector. This has been expedited by the competition between commercial banks, who are compelled to provide clients with digital banking services (Malar, D. A. Et al, 2019).

The process of leveraging digital technology to develop new or adapt current business processes, culture, and customer experiences in order to satisfy shifting business and market requirements is known as digital transformation. Digital transformation refers to this reinvention of company in the digital era. It goes beyond conventional job functions like sales, marketing, and customer service. Instead, how you think about and interact with consumers is where digital transformation starts and ends. There is an opportunity to reimagine how company may be done and how customers are engaged on the side of digital technology businesses as a migration from paper to spreadsheets to smart applications for any business management. The process of going from conventional working techniques to wholly new ones that are based on cutting-edge technological advancements is known as digital transformation (Matt, C et al, 2015).

The Customer of the Future author Blake Morgan claims that this process has an impact on a number of crucial corporate functions, including customer service, data integration, privacy, logistics, and sales.

The use of contemporary hardware and software is just one aspect of the banking industry's digital transformation; management, communications, and corporate culture are also being revised. A bank's operational model must be updated, new paths must be established, and it must join a partner ecosystem that will elevate customer service to whole new heights. It also meant that the market



for mobile technology started to expand and that the idea of the Internet was promoted, which sped up the process. That's where the banking industry's digital revolution started to take root (Shah, 2010).

## **2.2. Digital transformation and customers' experience**

A key business factor that is essential to the digital transition is user experience. Innovation and enhancements to the customer experience are essential building blocks on the road to a company's growth and success. According to Mckinsey, a digital transformation of the customer experience can increase a company's revenue by 20 to 50 percent.

Digital customer experiences offered by best-in-class companies are redefining what customers expect and want. The gold standard of the digital customer experience has been established by businesses like Amazon. Amazon has become a really global company as a result of its focus on its consumers and smart use of technology.

In a manner similar to this, companies like Uber, Starbucks, and Zappos prioritize their customers. The businesses are devoted to giving their customers the best experience possible.

As previously mentioned, technical advancements and positive customer experiences have increased the bar for the digital consumer experience. Innovation that enhances the consumer experience positively impacts business income significantly. The New York Times is one illustration of how the digital revolution is increasing income. About 70% of newspaper advertising revenue has been lost during the past 15 years. On the other hand, New York Times has 3 million subscribers and generates \$500 million in digital income.

According to (Vieira, 2018), Businesses in the B2B sector who have transformed their customer experience processes through digital means have achieved revenue growth of 10 to 15 percent and expense reductions of 10 to 20 percent.

Customer service representatives are not responsible for customer experience-focused digital transformation, and it doesn't stop at the front end. All points of contact, including the back end of the business process, are involved. To enhance and deliver a seamless digital customer experience, the entire business and each of its departments must contribute.

- Customers share their concern or feedback about a product with the customer service believing that their feedback will reach the product teams.
- Clients want you to share information with other departments as well, so you won't have to repeat it every time. Get rid of the silos in the environment.

To fulfill the primary goal of providing exceptional customer service, all departments should collaborate effectively. Conflicts will arise throughout the process if each department acts independently.

### **2.3. Some factors to consider for digital transformation:**

- Prior to developing or redesigning any touchpoint or feature, consider the needs and desires of the consumer.
- Look at the complete picture of the customer journey to understand the customer experience. Never overlook a dimension.
- Pay attention to what top-performing businesses are doing better than you are, and take notes on their tactics.

- Make use of all the data gathered from analytics, customer reviews, and other sources. To deliver top-notch digital client services, collaborate with other departments.

#### **2.4. Digital transformation in banking sector**

The pandemic, according to the Economic Times, has fundamentally changed how individuals go about living their lives, from working and shopping to specifically banking. The future of digital banking is anticipated to undergo numerous evolutionary changes. Due to a lack of time and knowledge, some customers will demand entirely autonomous banking operations, while others will insist on high-level engagement. The banking industry will therefore be highly adaptive in the future.

According to Deloitte, in order for banks to implement these strategies now and be able to smoothly integrate them by the year 2030, the future of digital banking will put customers at the heart of every digital strategy. In a few years, banks will need to develop very detailed profiles of their customers in order to meet regulatory requirements and provide customers with supplemental services. Data-driven solutions are the wave of the future for banking, and they have already attracted attention. Automation, distributed ledger technologies, augmented reality, and AI will all be used to further customize the banking experience. Almost every sector of banking will undergo digital transformation in the future, and the sooner this adaptation is put into practice, the better banks will be able to compete (Munusamy, J. Et al. , 2010).

## **2.5. Theoretical framework**

The framework of this study is based on the theory of digital transformation in banking sector that was developed by (Zouari, G., & Abdelhedi, M. , 2021). This theory explains that customer satisfaction is a dependent variable that depends on how easy, flexible, and convenient it is to utilize digital banking tools as well as how long it takes to perform an action. The independent variable in this study is digital transformation, along with each of its subthemes, which includes technology.

## **2.6. Importance of digital transformation in banking sector**

- Trustworthiness is gained online

People increasingly choose their banks depending on their impressions of the organization. A financial institution's internet presence has an impact on how customers perceive it. Social media platforms, websites, and marketing all have an impact on people. Banks will be able to win over the public's trust if they can effectively market themselves online. There are various methods to build a relationship with a consumer, but one strategy in particular has had great success: online reputation management.

- Acquisition of new customers is cheaper and easier

Customers need banks just as much as banks need customers. As a result, financial institutions can no longer be indifferent to how they draw in customers for their financial services. The good news is that you can draw these clients to you more affordably and easily. The Internet offers excellent opportunities for communicating with these potential customers directly and on their devices. This makes it simpler to influence them, which in turn increases the likelihood that they will approach

you. The new word of mouth is known as content marketing. It increases interaction and fosters trust with both potential clients and customers (Winner, 2001).

- Personalized Offering

Financial organizations can now better understand what customers genuinely desire thanks to digital transformation. Instead of relying solely on speculation, they can tailor their financial services and offers to the needs of their clients. With the help of individualized offers, new creative technical advances enable banks to increase client engagement.

- Enables Innovation & Adaptability

Banking institutions are better equipped thanks to digital transformation to respond to technological and business developments and expand their efforts for incremental gains. An institution can only satisfy the needs of the new generation of clients if it can modernize itself. Modern digital technology have completely changed how banking has traditionally been done. Many new avenues for banks to connect with their consumers have been created with the introduction of shopping portals, social media platforms, and integrated mobile apps.

By starting a digital transformation, banking institutions must embrace this new digital reality. Millennials are more inclined to watch a 3-minute YouTube video than to read a lengthy brochure, according to this surprising statistic. As a result of their clarity and interest, videos are growing in popularity. In addition to videos, firms have begun utilizing a variety of additional Digital Marketing strategies. The following digital marketing trends can be incorporated into your digital transformation strategy (Murugiah, L., & Akgam, H. A., 2015).

**Research gap:** The literature related to the variables of this study has been reviewed. The views from different scholars and various research findings indicated that there is a link between digital transformation and customers' satisfaction in banking sector.

However, most of previous researches done in this field were focused on banking sector stability based on technology and factors affecting technology inclusion in banking sector. Until today, there was still a gap in finding out whether or not digital transformation after being established has impacted the way banking services are provided and mostly importantly the level of customers' satisfaction.

That is the reason why this study emphasized on the impacts of digital transformation on customers' satisfaction by studying the level on which customers use digital services, the effects of banking digital means on the quality of services provided and the challenges faced by the customers.

## **2.7. Conceptual framework**

A predicted link between variables is represented visually or in writing by a conceptual framework. The traits or attributes under study are referred to as variables. The independent and dependent variables make up the two groups of variables. The variables that are altered in a particular model or equation are known as independent variables. The independent variable in this study is digital transformation, along with each of its subthemes, which includes technology. Customer satisfaction is a dependent variable that depends on how easy, flexible, and convenient it is to utilize digital banking tools as well as how long it takes to perform an action ( (Zouari, G., & Abdelhedi, M. , 2021).

The accompanying diagram, which illustrates a visual depiction of digital transformation and customer satisfaction in Unguka Bank Plc, lists the independent, dependent, and sub-variables that will be used in this study.

The conceptual framework is presents the intervening variables to the study namely internet connection, regulation, customer knowledge and skills and the environmental change. This study, the confounding variables was not adopted having a cofounding effect of digital transformation and therefore was not measured.

The concept is to utilize technology to greatly improve a current service rather than just replicating it in a digital format (Zouari, G., & Abdelhedi, M. , 2021).

Although many various technologies may be used in digital transformation, big data, cloud computing, and artificial intelligence are now the most popular.

However, improving business procedures and company culture are just as important to the success of these programs as advancing technology. Large, established companies frequently use digital transformation initiatives to compete with more agile, digital-only competition. These initiatives frequently have ambitious goals and broad scopes, but they are not without hazards (Kitsios F., et al, 2021).

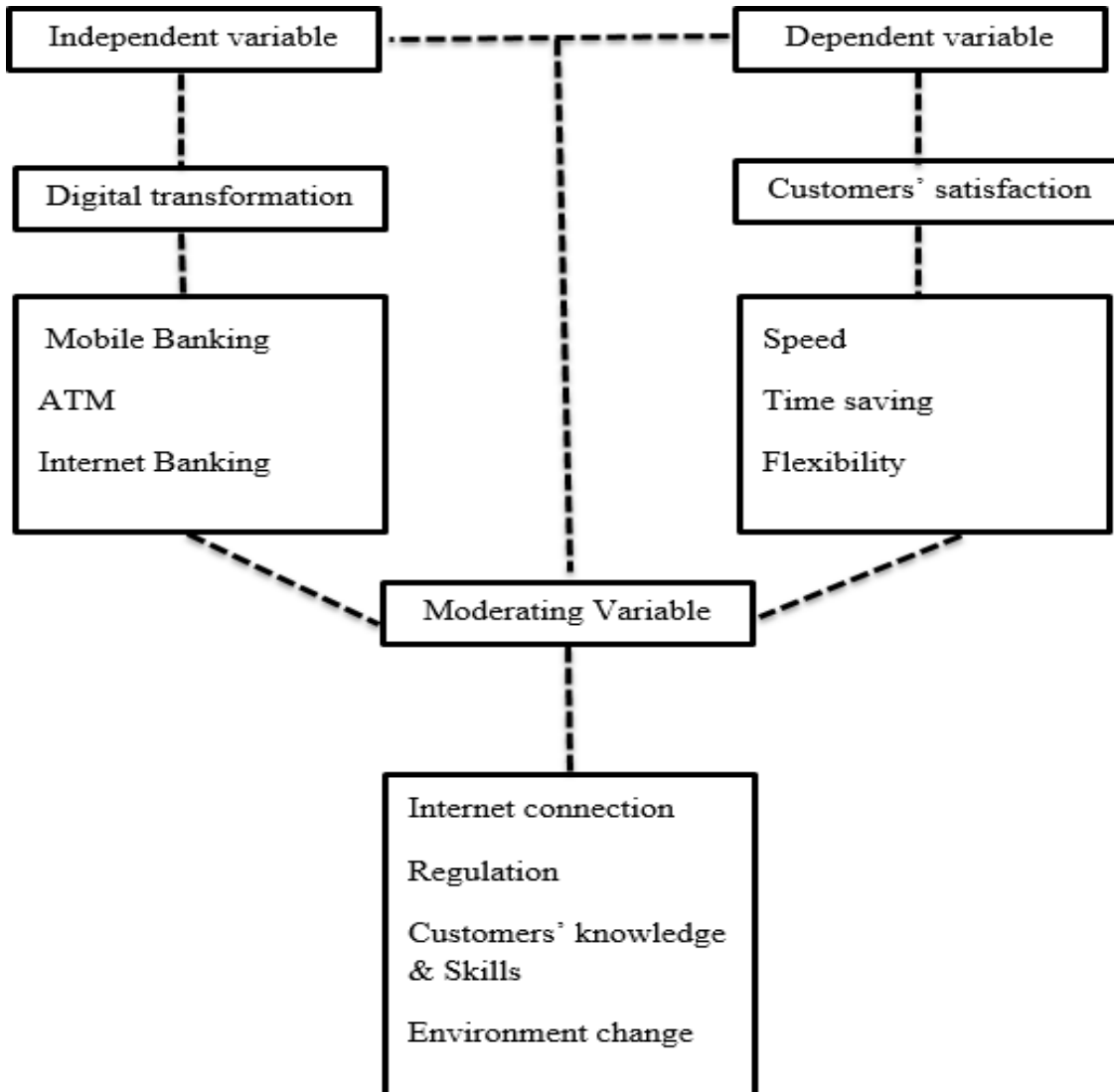
There are several definitions for the phrase "digital transformation," despite it being one of the most frequently used in the banking sector. Everyone may agree that the digital revolution includes some very substantial changes to banking culture despite the hype, the gloss, and the misunderstandings (Matt, C et al, 2015).

The term "Bank Records" refers to any book, registrar, account statement, microfilm, copy, or photocopy of an account statement, contract, letter of undertaking, deed, data card, index, spreadsheet, output, document, or extract from a bank's computerized systems. "Bank Records" could refer to other techniques often employed by the bank for the recording or storage of data (Pirouz, M., & Salahi, M., 2013).

Any document or summary of information contained in a document, including electronic documents, which provides specifics about a person's financial actions or status is referred to as a "recording" in the context of finance. Details regarding their assets, balance sheets, budgets, cash flow, earnings, revenue, expenditures, income, investments, losses, liabilities, payroll, profits, retained earnings, or taxes are just a few examples of the information that might be included (Pirouz, M., & Salahi, M., 2013).

The use of technology enables the banking sector to conduct banking operations whenever and wherever they want. Mobile banking, ATMs, online banking, and other methods are used for this. the shortest amount of time necessary to complete the necessary banking activity Customers and workers of banks save time that would otherwise be required in the absence of digital services.





**Figure 1:Conceptual framework**

Source: Researcher 2022

Figure1: Conceptual framework of Digital transformation as independent variable involves using digital technologies in banking industry through automated teller machine, mobile banking and internet banking to become more efficient and effective. The dependent variable is customer satisfaction measured by speed in service delivery, time saving and flexibility in transactions.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.2. Introduction**

A collection of procedures and guidelines known as methodology is applied while learning a particular subject or carrying out a certain kind of activity. It provides a thorough explanation of the sampling processes, data collection methodologies, sample size calculations, instruments to be used and their validity, data processing, analysis, and interpretation techniques, as well as the constraints the researcher faced while conducting the study.

### **3.3. Research design**

According to (Saunders, M. Et al ., 2007), the study design is the overall strategy for addressing the research questions. It is the conceptual framework for which research is carried out. It serves as a guide for the gathering, measuring, and interpretation of data. People are questioned in a survey to gather data, and their answers are recorded (usually in the form of a questionnaire). This study will use a survey research approach to evaluate the association between the implementation of digital transformation and the provision of high-quality services in the banking industry.

The researcher used a descriptive study design that included qualitative and quantitative approaches. The quantitative approach will be used by the researcher to analyze data in the form of numbers acquired from Unguka Bank regarding digital transformation and the efficiency of their service delivery. In order to assess the actions and impacts of the digital transformation on the provision of high-quality services, interviews were used to collect qualitative data.

The study used a case study research design to collect both qualitative and quantitative data. The information used in this research collected from fifty-five (115) customers of Unguka Bank Plc

and five (5) Employees of Rusizi Unguka Bank Plc branche in Rwanda. Unguka bank Plc was targeted as one of the banks in Rwanda that has succeeded in achieving at a certain level digital transformation in their service delivery.

**3.4. Population and Sampling Techniques**

**3.4.1. Study Population**

Population is the study's subject, and it may consist of a person, a group, an organization, an individual, an event, or a condition to which they are exposed, according to (Grinnell, R. M., & Williams, M., 1990). A population is the entire group of people that are relevant to a particular study. Even though not everyone in the population often takes part in research studies, the findings may nevertheless apply to the entire population. Customers of Unguka Bank Plc who have been using the accessible digital banking means for at least a year were the study's target group. In order to understand the bank's perspective on customer satisfaction due to digital transformation, branch managers were also included in the target audience (Grinnell, R. M., & Williams, M., 1990).

**Table 3.1: Target Population**

	Male	Female	Total
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Customers	591	319	910
Branch manager	1	0	1
Credit officier	1	0	1
Tellers	3	0	3
Total	596	319	915

Source: Unguka Bank , Rusizi district 2022

**3.4.2. Sample Size and Selection**

A sample, according to (Ghauri, 2005 ), is a subset of a population that is specifically chosen for an inquiry. In this study, the sample was chosen because it had the necessary resources and time to produce the data required for the investigation. The researcher would address both management and customers of Unguka Bank Plc as the research focused on business development.

Purposive or judgmental sampling is said to exclude certain sorts of persons purposefully in order to obtain the information needed for the study because their inclusion might skew the results. believes that this method has the benefit of being more representative and capable of being applied to a bigger population.

**3.4.3. Sampling Techniques**

Subjects are chosen for the sample from each stratum, which are subpopulations of the population that are each more homogenous than the population as a whole (also known as strata or groups). The stratified sample is actually a composite of several smaller samples since each strata is represented by members of the entire sample.

The strata equal to  $N_1 = n_1 = n * p_1$ , while  $P_i =$  represents the proportion of population included in stratum “I,  $n =$  Represents the total sample size and the number of elements selected from stratum

“i” is  $n \cdot P_i$ . Proportionate stratified sample was used as the method in sampling procedures where the number of respondents in each stratum based on the proportion of the numbers of the population (research methodology note 2021)

#### 3.4.4. Sample size

The total sample size for this study was 120 respondents. In 910 of Unguka bank employees and customers that include 5 employees men and 910 customers with 591 men and 319 women  
 $(N1)=115(591/910)=75$  men and  $(N2)= 115(319/910)=40$  women

**Table 3.2:Sample Size**

Sample size	Men	women	Total
Customers	75	40	115
Branch manager	1	0	1
Credit officer	1	0	1
Tellers	3	0	3
Total	80	40	120

Source: Unguka Bank, Rusizi district 2022

This sample was chosen because it had a large number of resources, a tight timeline, and it was thought that it would produce the necessary amount of data for the research. To choose respondents who would provide information pertinent to our study goals, we utilized purposeful sampling.

Therefore, both Unguka Bank Plc. workers and customers are the study's target demographic. A total sixty (120) respondents were consulted: Five (5) employees and fifty-five (115) customers of Unguka Bank Plc, Rusizi branch

### **3.5. The research instruments**

The process of preparing and gathering data from the field is referred to as data collection. To gather data, information from other people is needed. Data are mostly gathered to present details about a particular issue. Primary data for this study was gathered through questionnaires and unstructured interviews.

#### **3.5.1. Questionnaire**

The purpose of a questionnaire is to gather data from respondents by asking them a series of questions and offering them additional advice. According to Grinnell (1990), although closed-ended questions were used to limit the respondents to particular replies or picking from a list of responses, open-ended questions are designed to promote free responding without the constraint of pre-set categories.

The Likert-type questionnaire was created for this study's investigation. Questionnaires were passed to respondents for answers. Answers were reviewed and analyzed to evaluate whether or not digitalization in banking sector (case study of Unguka Bank Plc) has affected customers' satisfaction.

#### **3.5.2. Validity and reliability of research instruments**

According to (Mohamad, 2015), validity is the appropriateness of an instrument in measuring what is intended to measure. Due to uncertainty and unreliability of some data, the researcher utilized the references which are more reliable and which are acknowledged in full in the bibliography and also the instrument of the study is the Likert-type questionnaire designed for the study. The instrument was constructed and content validated by research experts and senior lecturers in the faculty of business administration and the supervisor from University of Rwanda in order to

determine the validity and reliability of the instruments to use in the present study. During this study, five questionnaires were given to the respondents as a pre-test (pilot test) to measure the reliability of data. They then enabled the researcher to amend, clarify and to improve the questionnaire.

The computation of the Cronbach's coefficient alpha has used the Microsoft excel and get the result in the following table.

**Table 3.3: The distribution of Cronbach's alpha coefficients for instrument**

<b>Types of instruments</b>	<b>Number of item</b>	<b>Cronbach's alpha coefficient</b>
Employees questionnaire on digital transformation	32	0.76
Customers questionnaire on digital transformation	32	0.72

Table 3. Indicates the results of the Cronbach's alpha coefficients competition for the study instruments. The table indicates that for all the instruments the Cronbach's alpha reliability coefficient were above the critical value of 0.70 so is reliable and adopted

### **3.6. Data Gathering Procedures**

The questionnaires were distributed and the records collected for data collection. After collecting the primary data, the researcher proceeded with editing, coding and tabulation for better data analysis which was end up with writing and defending the findings.

### **3.7. Ethical procedure**

The researcher in this study ensured that all information provided by respondents was kept in strict confidence, used only for the research project, and would not be communicated to any person or organization without the permission of Unguka Bank Plc by providing the letter of data collection from master's coordination (To whom it may concern), permission from management of Unguka Bank Plc, and explanation to staff members of what she is up to.

### **3.8. Data processing and analysis**

#### **3.8.1. Data processing**

The raw data gathered from the field was processed using the computer software excel and crosscheck this data to ensure its accuracy. During data processing, only those related to the objectives of the researcher were considered and volumes of data gathered were condensed. Thereafter, the process involved tabulating, editing, analyzing and presentation of the exact information from interpretation of questionnaires as the findings of the research (Campbell-Kelly, 1998).

The required data was collected by a survey with a questionnaire, that asked the participants to provide their details, like (Age, education level, digital service frequency of usage...), then to answer a set of questions, these questions was designed to measure the independent variable (digital transformation) of the banking operation offered to customers and other details related to this topic. As per our conceptual framework, the sub-variables of the costumers' satisfaction based on banking digital means are simplicity, flexibility, timely manner, and convenience. The dependent variable in this research was the customers' satisfaction.



### **3.8.2. Data analysis**

Data analysis was made with the help of statistical tools among which; Mean, standard deviations, ANOVA, correlation and percentages were used to facilitate the researcher to make a meaningful conclusion from the data collected.

To address the research objectives, Mean real limits (3.26-4.00= More than enough, 2.51-3.25= enough, 1.76-2.50= few and 1.00-1.75 = very few) will be used to arrive at the interpretation of means on the four-point Likert scale scores (Bizimana, D., & Orodho, J. A. , 2014).

To analyses the data collected, analytical features were used to get some results, the rest was analysed using the specialized tools for statistical analysis “IBM SPSS v.20”. The overall outcome of the data analysis reflected the impact of the digital transformation on customers’ satisfaction in Unguka Bank Plc.

### **3.9. Coding**

Referring to Williamson (1982), coding came after the data has been gathered. The groups, in which responses were coded in, were established by examining the respondents’ responses. The researcher categorized the responses to questionnaires based on to respondents’ groups.

### **3.10. Tabulation**

This is the way of putting together the data collected into well-structured formats known as tables. Tabulation of data is made after the processes of coding and editing. It is made to show the frequency distribution of the codes and thereafter the number and percentages of these codes.

**Chapter IV: DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF  
RESEARCH FINDINGS**

Analyzing the data gathered to find the research questions is important to successfully finish this investigation. Data are interpreted in a descriptive manner, as was already mentioned in the chapter before. The analysis, presentation, and interpretation of the study's findings are included in this chapter. The findings are presented and discussed in light of the following research goals:

- To examine the level of using digital services in Unguka Bank as perceived by customers.
- To determine the effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank.
- To identify the challenges faced by the customers while using bank digital services

#### **4.1. Systematic presentation and Analysis of Data**

To deliver the surveys, the researcher traveled to the research site (Unguka Bank Plc). Two groups of questionnaires were created, one for the 5 workers of the bank and another for the 115 clients of Unguka Bank. Either respondent on each side had two days to answer the questions.

The results showed that 99 percent of the respondents participated in the questionnaire gathering process by responding to the questions. This enables the researcher to continue editing, coding, and tabulating data using the Statistical Package for Social Sciences (SPSS) version 20.0 to create statistical tables. The first segment focuses on staff data analysis.

#### **4.2. Demographic Characteristics of Respondents**

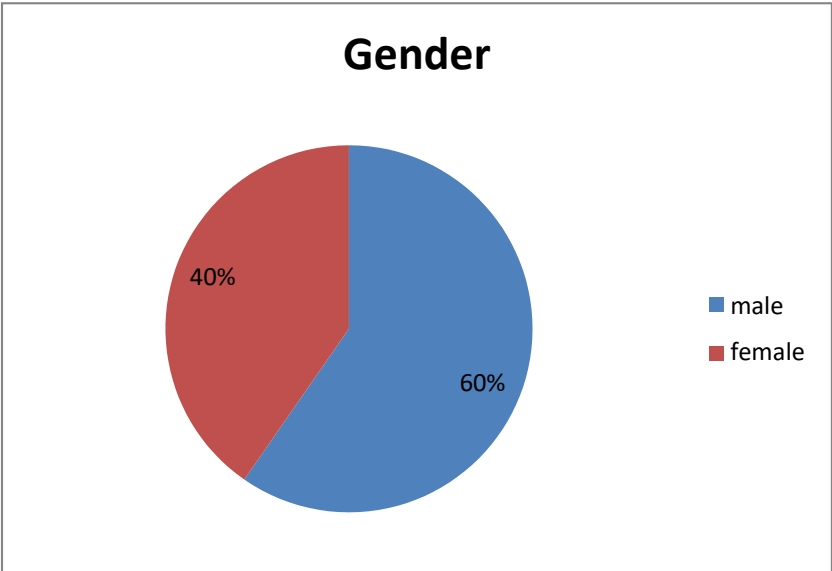
This section lists the gender distribution, age, education level, marital status, and work experience of chosen UB Plc employees who took part in this research.

##### **4.2.1. Gender of Respondents**

The variety of traits relating to and contrasting masculine and femininity is known as gender. Table 4.1's informational contents display the respondents' gender distribution from Unguka Bank.

**Table 4.1: Gender respondents**

	<b>Frequency</b>	<b>Percent</b>
<b>Male</b>	71	60
<b>Female</b>	48	40
<b>Total</b>	119	100



**Figure 2: Proportion of gender respondents**

The table above shows that 71 respondents with 60% of total number of respondents is male, and 48 respondents with 40% of total number of respondents is female.

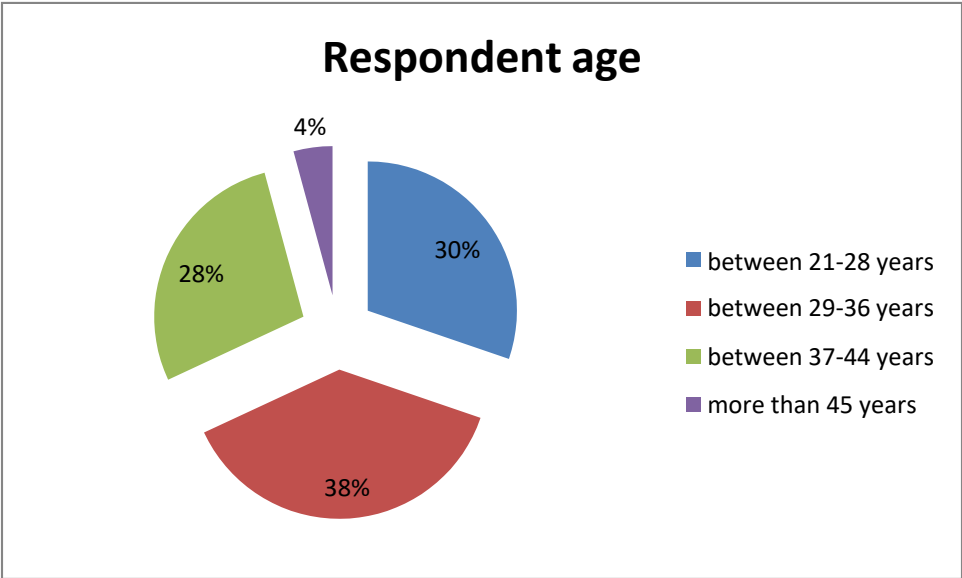
**4.2.2. Age of respondents**

Concerning to the ages of respondents during this study with staff and customers of Unguka Bank Plc, the table 4.2 presents the data as follows:

**Table 4.2: Age of respondents**

<b>Respondent age (Range)</b>	<b>Frequency</b>	<b>Percent</b>
<b>21 to 28 years</b>	36	30
<b>29 to 36 years</b>	45	38
<b>37 to 44 years</b>	33	28
<b>More than 45 years</b>	5	4
<b>Total</b>	119	100

Source: Primary data



**Figure 3: Proportion of respondent by age**

The table above shows that there were 36 respondents, or 30% of the total, between the ages of 21 and 28, 38 respondents, or 45% of the total, between the ages of 29 and 36, 33 respondents, or

28% of the total, between the ages of 37 and 44, and 5 respondents, or 4% of the total, over the age of 45.

This demonstrates that middle-aged people made up the majority of Unguka Bank's clientele. The bank might be able to keep them by providing high-quality services. Age must participate in all services and learn about community needs and activities that serve all ages in order to improve the long-term success of any financial institution.

This Table of respondent by age help me to formulate the sample questions of this research and behaviors during correction of data.

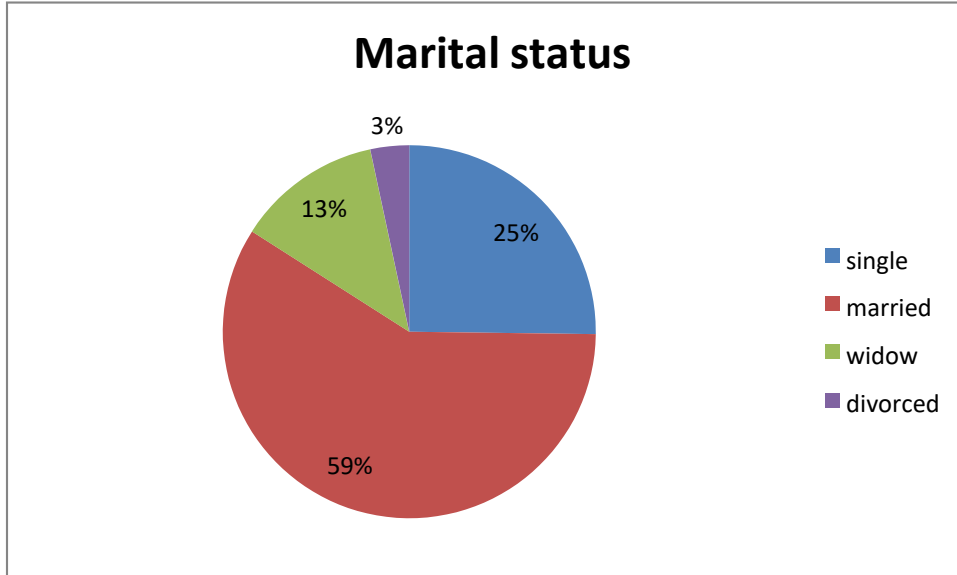
#### **4.2.3. Marital Status of Respondents**

Status of the Respondents' Marriage Marital Status was discovered to be one of several different categories that may be used to characterize a person's relationship with a significant other. Married, single, divorced, and widowed are examples of civil status that are included in this. These have an effect on how digital services are used.

**Table 4.3: Marital status of respondents**

<b>Marital status</b>	<b>Frequency</b>	<b>Percent</b>
<b>Single</b>	30	25
<b>Married</b>	70	59
<b>Widow</b>	15	13
<b>Divorced</b>	4	3
<b>Total</b>	<b>119</b>	<b>100</b>

Source: Primary data



**Figure 4: Proportion of respondents by marital status**

The table above shows that 70 respondents which represent 59% of total number of respondents are married, 30 respondents with 25% of total number of respondents are single, and 15 respondents with 13% of total number of respondents are windows. This shows that people who attend Unguka Bank Plc are married people where they like saving for the welfare of their families.

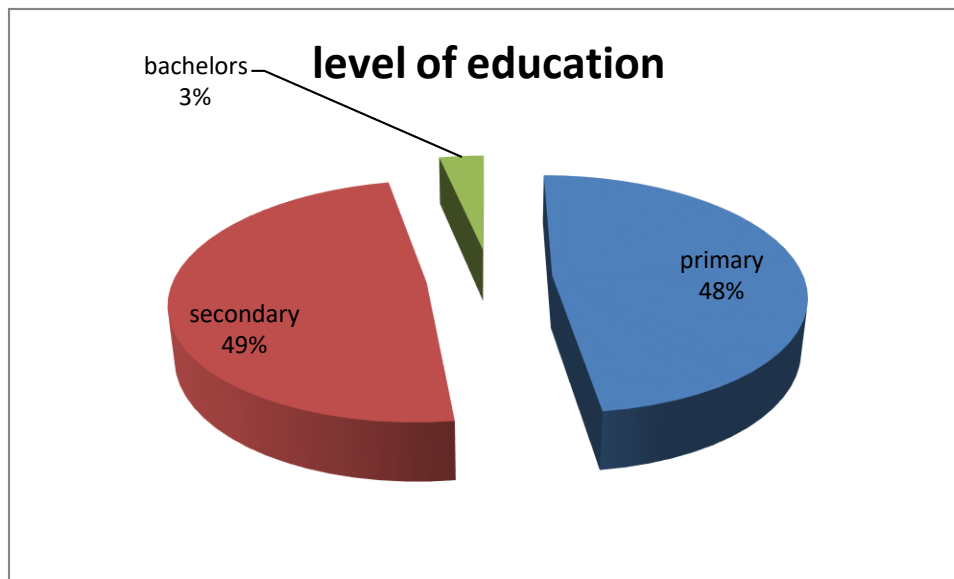
#### **4.2.4. Education of Respondents**

The findings shown in the table 4.2.4 illustrates data on education level of employees worked in Unguka Bank Plc and its customers randomly sampled in our research.

**Table 4.4: Education level of respondents**

<b>Level of education</b>	<b>Frequency</b>	<b>Percent</b>
Primary	57	48
Secondary	58	49
Bachelors	4	3
Total	119	100

Source: Primary data



**Figure 5: Proportion of respondents by education level**

Therefore, the majority of the respondents who provided the data for this research had attended formal schooling of secondary level and above. It is shown from table 4.4 that majority of the



respondents are well educated; the findings on the education level from descriptive statistics shows that 100% of respondents have at least attended primary school.

#### 4.3. Examine the level of using digital services in Unguka Bank as perceived by customers.

The technology in banking industry helping to reduce of queue in bank premises, increase quality and quick service and make easy transactions. This is clearly explained by the table below:

**Table 4.5: level of using digital services in Unguka Bank as perceived by customers.**

Descriptive Statistics					
Level of using digital services	N	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
All customers of UB use ATM	119	1.61	.794	.835	.222
Many customers of UB use mobile banking	119	1.60	.493	.399	.222
Customers of UB use e-banking	119	2.61	1.019	.266	.222
Customers of UB meet with errors in money transfer	119	2.22	.750	.383	.222

All customers of UB accessed to use technology	119	1.82	.759	.324	.222
Technology improve service delivery to the customers	119	1.06	.866	.124	.222
UB technology implementation increase customer satisfaction	119	2.63	.519	.914	.222
UB customers get satisfied after using banking digital means	119	2.50	.801	.941	.222
Customers of UB are satisfied with digital services delivered to them	119	2.18	.892	.374	.222
Valid N (listwise)	119				

**Note: N= number of respondents**

**Missing data were excluded**

**Source primary data**

Table 4.5 Shows mean values for the scores of two categories of respondents and the overall mean values for the measures of the level of using digital services in Unguka Bank as perceived by customers. The mean values show different perception on the level of using digital services in Unguka Bank as perceived by customers. The employees of UB perceived that the level of using digital services increase customer satisfaction in UB was enough that the mean values of respondents in these category ranged from 2.51 and 3.25, (Mean 2.63, SD=.519) where the customers perceived that the level of using digital services in UB increase the numbers of customers using e-payment at enough (Mean of 2.61, SD=1.019).

All respondent perceptions on the level of using digital services, the employees and customers of UB viewed that all customers of UB use ATM, many customers of UB use mobile banking and technology improve service delivery to the customers were rated as very low, with means and standard deviation falling between (1.0- 1.75).

Both UB employees and customers viewed that all customers of UB accessed to use technology, Customers of UB meet with errors in money transfer, Customers of UB are satisfied with digital services delivered to them and UB customers get satisfied after using banking digital means are on few rate with mean and standard deviation falling between (1.76-2.50). Combs (1987) found that the low level of technology in banking industry delay the development of activities, lead to dissatisfaction of customers where the business may become outcompete and increase cost and time consuming.

**4.4.Effect of Digital transformation on the quality and speed of service delivery  
that contributes to customers’ satisfaction in Unguka Bank.**

Digital transformation in banking industry has a positive contribution to customer satisfaction in Unguka bank and the other business transactions especially in banking industry.

**Table 4.6: Digital transformation on the quality and speed of service delivery**

Independent variables		Beta In	T	P- value	Partial Correlation	Collinearity Statistics
						Tolerance
1	Customer receives quick service	.312 <sup>b</sup>	6.222	.000*	.500	.851
	Time waiting on queue reduced	.015 <sup>b</sup>	.269	.788	.025	.962

	Customer use Mobile Banking	.339 <sup>b</sup>	5.053	.000*	.425	.520
	Customer use ATM	.434 <sup>b</sup>	9.783	.000*	.672	.793
	Customer receive quality service	.318 <sup>b</sup>	6.787	.000*	.533	.934
	Customers are being loyal to UB	.532 <sup>b</sup>	16.043	.000*	.830	.806
	UB delivery service efficiently	.372 <sup>b</sup>	8.326	.000*	.612	.894
	UB receive potential customers	.482 <sup>b</sup>	-16.448	.000*	-.837	.997
2	Customer receive quick service	.048 <sup>c</sup>	1.276	.205	.118	.610
	Time waiting on queue reduce	.007 <sup>c</sup>	.239	.812	.022	.962
	Customer use Mobile Banking	.142 <sup>c</sup>	3.481	.001	.309	.468
	Customer use ATM	.094 <sup>c</sup>	2.022	.046	.185	.383
	Customer receive quality service	-.043 <sup>c</sup>	-1.043	.299	-.097	.498
	Customers are being loyal to UB	.281 <sup>c</sup>	5.426	.000	.451	.256
	UB delivery service efficiently	-.066 <sup>c</sup>	-1.330	.186	-.123	.348
3	Customer receive quick service	.023 <sup>d</sup>	.682	.497	.064	.599
	Time waiting on queue reduce	.008 <sup>d</sup>	.294	.769	.028	.962
	Customer use Mobile Banking	.103 <sup>d</sup>	2.694	.008	.245	.447
	Customer use ATM	.119 <sup>d</sup>	2.884	.005	.261	.379
	Customer receive quality service	-.055 <sup>d</sup>	-1.488	.139	-.138	.496
	UB delivery service efficiently	-.034 <sup>d</sup>	-.767	.445	-.072	.342
4	Customer receive quick service	.019 <sup>e</sup>	.575	.567	.054	.597
	Time waiting on queue reduce	.005 <sup>e</sup>	.195	.846	.018	.960
	Customer use Mobile Banking	.078 <sup>e</sup>	1.976	.051	.183	.410
	Customer receive quality service	-.054 <sup>e</sup>	-1.504	.135	-.140	.496

	UB delivery service efficiently	-.030 <sup>e</sup>	-.690	.491	-.065	.342
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**P<0.05**

- a. Dependent Variable: Y
- b. Predictors in the Model: (Constant), Digital services make easy service in Bank
- c. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers
- d. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers, Customers are being loyal to UB
- e. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers, Customers are being loyal to UB, Customer use ATM

The results showed that in table 4.6 the Customer receives quick service is positively a significant predictor of customer satisfaction in UB standardized better ( $\beta$ ) =.312,  $P<0.05$ . The better value tells that one-unit increase of customer who receives quick service increase customer satisfaction mean by .312. This is to mean that when customer receives quick service from UB she/he will be motivated to be loyal to the services provider as the other factors remain constant.

While the time waiting on queue reduced is not a significant predictor of customer satisfaction in UB as standardized better value  $\beta$ =.015,  $P>0.05$  which was not statistically significant. This means that the time waiting on queue is not an influencer of customer satisfaction in UB.

Another look at the same table above allows to observe that Customer use Mobile Banking is another predictor of customer satisfaction in UB, Rusizi district ( $\beta$ ) =.339,  $P<0.05$ . The better value tells that one-unit increase of customer who use mobile banking increase customer satisfaction

mean by .339. This is to mean that when customer use mobile banking help him/her to satisfy the need service from UB.

Also the table indicates that Customer use ATM is predictor to customer satisfaction in UB, Rusizi branch. This shown by the standardized  $\beta$  value=.434,  $P<0.05$  which tell us that there is a statistically significant difference of customer satisfaction from the banks which use ATM and their counterparts.

Likewise, Customer receive quality service is another predictor of customer satisfaction in UB Rusizi branch. This is shown by the standardized  $\beta$  value=.318,  $P<0.05$ . The better value tells that one-unit increase of customer who receives quality service increase customer satisfaction mean by .318.

Another look at table 4.6 reveals that Customers are being loyal to UB is a predictor to customer satisfaction in UB, Rusizi branch. This is shown by the standardized  $\beta$  value=.532,  $P<0.05$ . The better value tells that one-unit increase of customer who are being loyal to UB increase customer satisfaction mean by .532.

Also the table indicates that UB delivery service efficiently to the customer is predictor to customer satisfaction, Rusizi branch. This shown by the standardized  $\beta$  value=.372,  $P<0.05$  which tell us that there is a statistically significant difference of customer satisfaction from the banks which provide service efficiently to the customers and their counterparts

A final look at table 4.31 indicates that UB receives potential customers is a significant predictor of customer satisfaction in UB, Rusizi branch as shown by the standardized beta coefficient which was statistically significant ( $\beta=-.482$ ,  $p<.05$ ). This means that UB receives potential customers due to the technology implementation than their counterparts.

Matt et al., (2015) technology affected the service quality dimensions and customers' satisfaction in the banking sector. Digital transformation involves the transition from traditional methods of working to completely new ones, built on the basis of modern technological solutions.

#### 4.5.Challenges faced by the customers while using bank digital services

Challenges faced by the customers of UB, Rusizi branch are related to the internet connection, power off, money transfer and errors made services delivery as shown in the table 4.7 below.

**Table 4.75: Challenges faced by the customers while using bank digital services**

Challenges	R	R2	P-value
Customers met with connection problem	0.755	0.570	.000*
Customers of UB can make errors money transfer	.537	0.288	.000*
ATM can make error in executing transactions	.689	0.474	.000*
Time waiting when customers make an error in technology implementation	.423	0.178	.000*
UB customers face issues related to banking digital mean	.528	0.278	.000*
Customers of UB are often troubled and delayed by using digital services	.076	0.005	.000*
PIN of one customers can be used by another one as robbery	.737	0.543	0.411

The account holder can forget or confuse the pin	.770	0.592	.000*
Money can be transferred to unwanted customers/account	.367	0.134	.000*

a. Dependent variable: Customer satisfaction

b. \*p<.05

The results showed that in table 4.7 reveal that there is there is correlation between Customers who meet with connection problem and customer satisfaction in UB, Rusizi branch where (R=.755, p<0.05). The coefficient of determination is  $R^2=.570$  indicating that only 57% of customer satisfaction is accounted for by the Customers met with connection problem when using digital transformation.

On the other hand, the table 4.7 reveal that there is there is correlation between Customers of UB can that can make errors in money transfer and customer satisfaction in UB Rusizi branch where (R=.537, p<0.05). The coefficient of determination is  $R^2=.288$  indicating that only 28.8% of customer satisfaction variation was explained by customers who make errors in money transfer.

The table 4.7 revealed that there is there is correlation between ATM that make error in executing transactions and customer satisfaction in UB, Rusizi branch where (R=.689, p<0.05). The coefficient of determination is  $R^2=.474$  indicating that only 47.4% of customer satisfaction is accounted for by the ATM that make error in the execution transactions due to the digital transformation in UB.

The results presented in table 4.7 further shows that the time waiting when customers make an error in technology implementation correlates with customer satisfaction in UB, Rusizi branch



with ( $R = .423$ ,  $P < .05$ ). The coefficient of determination is  $R^2 = .178$  indicating that the 17.8% of customer satisfaction variation was explained by that the time waiting when customers make an error in technology implementation.

On the other hand, the table 4.7 reveal that there is there is correlation between UB customers face issues related to banking digital mean and customer satisfaction in UB Rusizi branch where ( $R = .528$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .278$  indicating that only 27.8% of customer satisfaction variation was explained by UB customers face issues related to banking digital mean.

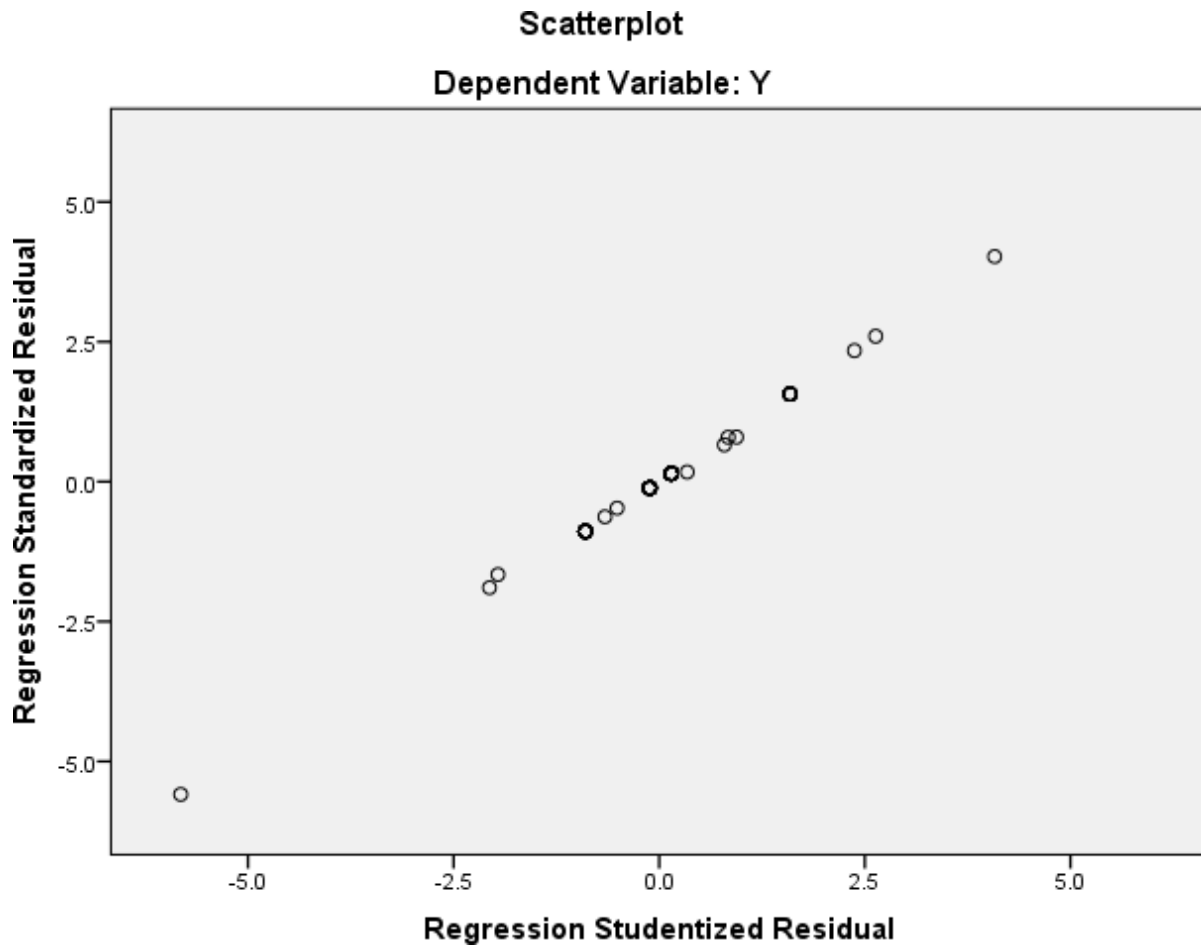
The table 4.7 revealed that there is there is correlation between Customers of UB that often troubled and delayed by using digital services and customer satisfaction in UB, Rusizi branch where ( $R = .078$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .005$  indicating that only .5% of customer satisfaction is accounted for by Customers of UB that often troubled and delayed by using digital services due to the digital transformation in UB.

The same table indicated that there is no significant correlation between PIN of one customers that can be used by another one as robbery and customer satisfaction in UB, Rusizi branch where ( $R = .737$ ,  $p > 0.05$ ). The coefficient of determination is  $R^2 = .543$  indicating that only 54.3% of customer satisfaction is accounted for by the PIN of one customers that can be used by another one as robber due to the digitalization.

The same table indicated that there is significant correlation between the account holder that can forget or confuse the pin and customer satisfaction in UB, Rusizi branch where ( $R = .770$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .592$  indicating that only 59.2% of customer satisfaction is

accounted for by the account holder that can forget or confuse the pin due to the digitalization implementation in UB.

On the other hand, the table 4.7 reveal that there is there is correlation between the money that can be transferred to unwanted customers/account and customer satisfaction in UB Rusizi branch where ( $R=.357$ ,  $p<0.05$ ). The coefficient of determination is  $R^2=.134$  indicating that only 13.4% of customer satisfaction variation was explained by money that can be transferred to unwanted customers/account due to the digital transformation of Unguka Bank.



**Table 4.8: Model summary**

**Model Summary<sup>h</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.974 <sup>a</sup>	.948	.944	.69680	.948	222.427	9	109	.000	
2	.974 <sup>b</sup>	.948	.945	.69374	.000	.038	1	109	.847	
3	.974 <sup>c</sup>	.948	.945	.69076	.000	.048	1	110	.827	
4	.974 <sup>d</sup>	.948	.945	.68866	.000	.319	1	111	.574	
5	.974 <sup>e</sup>	.948	.946	.68744	.000	.601	1	112	.440	
6	.973 <sup>f</sup>	.947	.946	.68736	.000	.972	1	113	.326	
7	.973 <sup>g</sup>	.947	.945	.68831	-.001	1.320	1	114	.253	1.976

**P<0.05**

a. Dependent Variable: Y

b. Predictors in the Model: (Constant), Digital services make easy service in Bank

c. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers

d. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers, Customers are being loyal to UB

e. Predictors in the Model: (Constant), Digital services make easy service in Bank, UB receive potential customers, Customers are being loyal to UB, Customer use ATM.

The results showed that in table 4.6 the Customer receives quick service is positively a significant predictor of customer satisfaction in UB standardized better ( $\beta$ ) =.312,  $P < 0.05$ . The better value tells that one-unit increase of customer who receives quick service increase customer satisfaction mean by .312. This is to mean that when customer receives quick service from UB she/he will be motivated to be loyal to the services provider as the other factors remain constant.

While the time waiting on queue reduced is not a significant predictor of customer satisfaction in UB as standardized better value  $\beta = .015$ ,  $P > 0.05$  which was not statistically significant. This means that the time waiting on queue is not an influencer of customer satisfaction in UB.

Another look at the same table above allows to observe that Customer use Mobile Banking is another predictor of customer satisfaction in UB, Rusizi district ( $\beta$ ) =.339,  $P < 0.05$ . The better value tells that one-unit increase of customer who use mobile banking increase customer satisfaction mean by .339. This is to mean that when customer use mobile banking help him/her to satisfy the need service from UB.

The banking industry encountered with the increasing levels of deregulation and the increasing levels of competition, the adverse consequences of malfunction of the Banking system are more severe than in the past period. In the operating with stable environment, the banking system is exposed to them.

## **CHAP V: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

This chapter presents the significant findings of the research's important findings in accordance with the study's objectives. Conclusions are derived from the data, and suggestions are made to help improve the impact that digital transformation has on customers' satisfaction at Unguka Bank Plc. In a recommendation report, solutions to problems or needs are suggested or recommended. The report's objectives are to analyze choices, make a recommendation, and provide evidence for that conclusion (Brown, P. et al, 2006).

The most important step in the analysis phase is probably the suggestions phase, where specific interventions or solutions to deal with the issues and limitations identified in the assessment are suggested. In this research, according to the findings that were obtained, recommendations were addressed to three parties which are Unguka Bank Plc, Unguka Bank customers and telecommunication companies which can be directly or indirectly connected to banking digital means.

### **5.1. Summary of findings**

First and foremost, the specific objectives of this study were:

- To examine the level of using digital services in Unguka Bank as perceived by customers.
- To determine the effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank.
- To identify the challenges faced by the customers while using bank digital services

Research Questions

The following are the important findings of this study entitled: digital transformation and customers' satisfaction in banking sector, case study of Unguka Bank Plc.

- About the level of using digital services at Unguka Bank, this study showed that the level of using digital services increase customer satisfaction in UB as perceived by UB employees was enough that the mean values of respondents in these category ranged from 2.51 and 3.25, (Mean 2.63, SD=.519) where the customers perceived that the level of using digital services in UB increase the numbers of customers using e-payment at enough (Mean of 2.61, SD=1.019).
- All respondent perceptions on the level of using digital services, the employees and customers of UB viewed that all customers of UB use ATM, many customers of UB use mobile banking and technology improve service delivery to the customers were rated as very low, with means and standard deviation falling between (1.0- 1.75).
- Both UB employees and customers viewed that all customers of UB accessed to use technology, Customers of UB meet with errors in money transfer, Customers of UB are satisfied with digital services delivered to them and UB customers get satisfied after using banking digital means are on few rate with mean and standard deviation falling between (1.76-2.50). Combs (1987) found that the low level of technology in banking industry delay the development of activities, lead to dissatisfaction of customers where the business may become outcompete and increase cost and time consuming.
- About the contribution of digital transformation on the quality and speed of service delivery at UB, the study showed that the Customer receives quick service is positively a significant predictor of customer satisfaction in UB standardized better ( $\beta$ ) =.312,  $P < 0.05$ . The better value tells that one-unit increase of customer who receives quick service increase customer

satisfaction mean by .312. This is to mean that when customer receives quick service from UB she/he will be motivated to be loyal to the services provider as the other factors remain constant.

- Customer use Mobile Banking is another predictor of customer satisfaction in UB, Rusizi district ( $\beta$ ) =.339,  $P < 0.05$ . The better value tells that one unit increase of customer who use mobile banking increase customer satisfaction mean by .339. This is to mean that when customer use mobile banking help him/her to satisfy the need service from UB.
- About the challenges faced by customers while using digital services at UB, the study showed that there is there is correlation between Customers who meet with connection problem and customer satisfaction in UB, Rusizi branch where ( $R = .755$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .570$  indicating that only 57% of customer satisfaction is accounted for by the Customers met with connection problem when using digital transformation. The correlation between Customers of UB can that can make errors in money transfer and customer satisfaction in UB Rusizi branch was found o be ( $R = .537$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .288$  indicating that only 28.8% of customer satisfaction variation was explained by customers who make errors in money transfer.
- There is correlation between ATM that make error in executing transactions and customer satisfaction in UB, Rusizi branch where ( $R = .689$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .474$  indicating that only 47.4% of customer satisfaction is accounted for by the ATM that make error in the execution transactions due to the digital transformation in UB.

- The time waiting when customers make an error in technology implementation correlates with customer satisfaction in UB, Rusizi branch with ( $R = .423$ ,  $P < .05$ ). The coefficient of determination is  $R^2 = .178$  indicating that the 17.8% of customer satisfaction variation was explained by that the time waiting when customers make an error in technology implementation.
- There is correlation between Customers of UB that often troubled and delayed by using digital services and customer satisfaction in UB, Rusizi branch where ( $R = .078$ ,  $p < 0.05$ ). The coefficient of determination is  $R^2 = .005$  indicating that only .5% of customer satisfaction is accounted for by Customers of UB that often troubled and delayed by using digital services due to the digital transformation in UB.

## **5.2. Recommendations**

Based on the findings of this study and the development of digital transformation in various sectors, the researcher presents the following recommendations to be implemented by three departments such as Unguka Bank, customers and telecommunication companies in using digital services.

- **For Unguka Bank Plc:**

Customers should be taught how to use digital banking tools by the operators in order to maintain their loyalty and lower the cost of the services provided.

Through the consumer-accessible communication channels including social media, SMS, infographics, advertising the new products, and offering usage instructions that are simpler for the client to grasp, Unguka Bank Plc needs to raise security awareness among its customers. After



examining the causes and difficulties that consumers encounter that hinder or restrict the usage of digital banking systems, this was found.

Technology has become a necessity for all clients once it was discovered that there was no association between usage rates and age, income, education, and industry of employment. It is suggested that Unguka Bank Plc increase its investment in these technologies as doing so will have a number of positive effects, including enhancing the bank's performance and competitive value and reducing operating and administrative costs.

- **For Customers:**

That bank customers who frequently use banking digital means are advised to be more cautious. This includes reading terms and conditions, manual help notes and/or ask the bank supporting staff about what they want to do and how it is correctly done. This is because any wrong click in digital banking world may lead to loss of money in way or another. By doing so, security of their assets will be guaranteed. Customers should also consult the bank as early as possible when there is any issue regarding the use of banking digital means for the potential best solution possible.

- **For Telecommunication companies:**

In order to further support effective and seamless service delivery via mobile technology, telecommunications businesses (which are directly or indirectly connected to banking digital means) should keep up their innovation efforts in mobile technology and invest heavily in information technology. In order to protect the safety and assurance of the mobile banking service users and seekers, security measures should be ensured by the current government, the commercial sector, and by everyone.

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## **ANNEXES**

### **Questionnaires**

I'm Jacqueline MUKAYIRANGA, and I'm researching how Digital transformation services affect customer satisfaction in Rwanda's banking sector using the case study of Unguka Bank. I kindly request that all responders fill out the entire questionnaire to make sure that they are all accurate.

I really appreciate you helping me.

**Primary data**

**Part one:**

**1. Respondents' personal information**

• **Age**

21 – 28 years

29 – 36 years

37 – 44 years

45 years and above

• **Marital status**

Single

Married

Widow(er)

Divorced

- **Level of education**

Primary

Secondary

Bachelor's degree

Above

**Part two: UB Customers**

**A. Examine the level of using digital services in Unguka Bank as perceived by customers.**

<b>ITEMS</b>	<b>Strongly agree 4</b>	<b>Agree 3</b>	<b>Disagree 2</b>	<b>Strongly disagree 1</b>
All customers of UB use ATM				
Many customers of UB use mobile banking				
Customers of UB use e-banking				

Customers of UB meet with errors in money transfer				
All customers of UB accessed to use technology				
Technology improve service delivery to the customers				
UB technology implementation increase customer satisfaction				
UB customers get satisfied after using banking digital means				
Customers of UB are satisfied with digital services delivered to them				

The effect of Digital transformation on the quality and speed of service delivery that contributes to customers' satisfaction in Unguka Bank.

Items	Strongly agree	Agree	disagree	Strongly disagree
Customer receive quick service				
Time waiting on queue reduce				
Customer use Mobile Banking				

Customer use ATM				
Customer receive quality service				
Customers are being loyal to UB				
UB delivery service efficiently				
UB receive potential customers				
Digital services make easy service in Bank				

- The challenges faced by the customers while using bank digital services**

Items	Strongly agree	Agree	disagree	Strongly disagree
Customers meet with connection problem				
Customers of UB can make error money transfer				
ATM can make error in executing transaction				
Time waiting when customers make an error in technology implementation				
UB customers face issues related to banking digital mean				



Customers of UB are often troubled and delayed by using digital services				
PIN of one customer can be used by another one as robbery				
Money can be transferred to unregistered customers/account				

**Customers' Satisfaction in banking sector**

Items	Strongly agree	Agree	disagree	Strongly disagree
UB digital transformation means time saving				
UB technology means flexible service				
Due to the technology customers received quick and prompt service				
UB employees are supportive toward customers in using digital transformation on means				

In case of errors or others issues, UB responds quickly promptly				
All customers are loyal to UB due to digital transformation				

THANK YOU

NUMBER OF CUSTOMERS (USING) REGISTERED IN DIGITAL SERVICES IN  
 UNGUKA BANK, RUSIZI BRANCH, FOR THE PERIOD 2018-2021

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UNGUKABANK PLC, RUSIZI BRANCH

MONTH	2018				2019				2020				2021					
	ACTIVE	MOBILE	ATM	Digital means Non-	ACTIVE	MOBILE	ATM	Digital means Non-	ACTIVE	MOBILE	ATM	Digital means Non-	ACTIVE	MOBILE	ATM	Digital means Non-		
JANUARY	0	0	0	0	100	84	9	7	58	52	7	34	19	697	57	8	66	53
FEBRUARY	0	0	0	0	118	97	10	11	62	53	9	38	44	712	59	4	67	51

MARCH	0	0	0	0	152	13	9	10	3	61	53			61		
APRIL	0	0	0	0	189	16	4	11	14	62	53			64		
MAY	0	0	0	0	210	18	6	14	10	63	55			66		
JUNE	0	0	0	0	280	25	5	14	11	64	56			68		
JULY	0	0	0	0	348	32	1	15	12	64	55			68		
AUGUST	0	0	0	0	381	35	6	17	8	64	56			71		
SEPTEMBER	0	0	0	0	420	39	5	20	5	64	55			73		
OCTOBER	22	14	1	7	451	42	4	20	6	65	55			74		
NOVEMBER	30	21	2	7	492	45	8	22	12	65	55			74		
DECEMBER	42	28	7	7	560	51	9	29	12	66	56			75		
TOTAL	42	28	7	7	560	51	9	29	12	66	56			75		

Unguka Bank, RUSIZI Branch

secondary data 2018-2021

Unguka Bank Plc Rusizi Branch

started in October 2018

## checks

### ORIGINALITY REPORT

<b>17</b> %	<b>11</b> %	<b>3</b> %	<b>11</b> %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

### PRIMARY SOURCES

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<b>2</b>	Firas Abuhasan, Mohammed Moreb. "The Impact of the Digital Transformation on Customer Experience in Palestine Banks", 2021 International Conference on Information Technology (ICIT), 2021 Publication	<b>1</b> %
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