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Factors Influencing Customers Adoption of Digital Payment Systems: Evidence from Awash Bank

BY

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Declaration

This thesis is my original work and has not been presented in any other university and college. All sources and materials used are duly acknowledged.

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Approval from the Advisor's

The Undersigned certifies that, He has read and hereby recommends for acceptance by the St Mary's University a thesis entitled: "*Factors Influencing Customers Adoption of Digital Payment Systems: Evidence from Awash Bank)*", in partial fulfillment of the requirements for the MBA of the St Mary's University.

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We, the undersigned certify that we have and here by recommendation to the Saint Mary's university to accept the thesis submitted by Frewioni Kifle Aregaye entitled "*Factors Influencing Customers Adoption of Digital Payment Systems: Evidence from Awash Bank*" for the fulfillment of the requirement for the award of a Master's degree in Business Administration.

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Contents

List of Tables

List of Figures

List of Acronyms

ATM (Automated Teller Machines)

ACH (Automated Clearing House)

CBE (Commercial Bank of Ethiopia)

CEMA (Central Europe Middle East)

EFT (Electronic Funds Transfer)

EATS (Ethiopian Automated Transfer System)

FS (Financial Institution)

GTP (Government's Growth and Transformation Plan)

GTB (Global Transaction banking)

ICT (Information Communication Technology)

POS (Point of Sale Terminal)

NFIS (National Financial Inclusion Strategy)

NBE (National Bank of Ethiopia)

MINT (Ministry of Innovation National Technology)

RTGS (Real Time Gross Settlement)

ABSTRACT

This study aims classification the Factors Influencing Customers Adoption of Digital Payment Systems, in Awash Bank more specifically to Addis Ababa area. Exiting digital payment implementation and expansion has exhibited various adoptability characteristics across customers of Awash Bank for various reasons and look after definite and valid clarity for further to help strategic decision for deployment of resource in the area. The study adopted both descriptive and explanatory research methods to examine the impact of the impact of independent variables framed from theoretical and empirical study of previous studies. The study variables are the relative advantages of digital payments, their complexity while customer usage, compatibility across user apparatuses, perceived risks of using such payment systems compared to exiting payment tools and customer's innovativeness. Accordingly, the impact of these exotic variables is assessed vis-à-vis the dependent variable that is customer adoption of digital payments. Major instrument used in the study is questionnaire data were analyzed using descriptive statistics and data from interview were interpreted qualitatively. Statistical analysis was undertaken on the resulting data through SPSS version 20 model and accordingly major outputs have been found. The followings are the findings from the analysis. All of the study variables i.e. relative advantage, complexity of the payment systems, compatibility of these payment systems with customer's tools, and perceived risks of customers with these tools are statistically significant and impacted customer's adoptions of electronic payment systems positively. In additions, existence of positive and strong correlation among the dependent and independent variables is an evidence for close relation among conceptually framed concepts. Accordingly, the commercial banking industry of the nation shall consider to immensely examine, smooth or enhance the aforementioned factors in addition to other strategic decisions taken by senior management of banks

It should be formed following questioner data's

1. *Purpose*
2. *Study design /methodology/ Approach*
3. *Finding*
4. *Originality /Value/contrition*

Keywords: ***Digital payment system, customer adoptions, bank***

CHAPTER ONE

1. Introduction

This chapter will include the overview of digital payment services and its development throughout local and international level, problem statement, research question, research objectives, significance, scope and limitations of the study.

1.1 Definition of Term

Adoption: - According to Rogers (1995) Adoption process is a perceptual process through which an individual pass from hearing about an innovation to final adoption.

Digital payment system: - can define as the way of payment which is made through digital modes. In digital payments process, payer and payee both use digital modes to send and receive money. It is also called electronic payment

Automatic Teller Machine (ATM): - ATM service in Ethiopia is offered by the Commercial Bank of Ethiopia (CBE) and other private Banks

POS terminals: - Conventionally, POS terminals stated to those that were fixed at all stores where purchases were made by customers using credit/debit cards.

Internet Banking: - Internet banking refers to the process of carrying out banking transactions online

Mobile Banking: -Mobile banking is referred to as the process of carrying out financial transactions/banking transactions through a smartphone.

Innovation Adoption Model: - can be described is an idea, repetition or object that is perceived as new by an individual or other unit of adoption. Innovation adoption in the literature, different theoretical models has been used to explain consumer innovation adoption.

Diffusion of Innovations Model: - Diffusion can be considered a process where all the variables involved have a high level of complexity and the context where innovation are developed and used play an important role in the rate of adoption.

1.1 Background of the study

Digital or electronic payment terms have not a standard definition, but both are generally used to mean the same device transfers of value which are initiated and/or received using electronic devices and channels to transmit the instructions. Hence in this manual, they are used compatible. Note that digitalizing is often applied to processes other than payments: hence a government could be digitalizing its accounting system, but still, make payments by paper (check or cash) and both terms were used in this study (NBE, 2021)

Commercial bank describes as a type of bank that offer services such as accepting deposit, making business loan, offering investment product that operated as business and revenue. The history of modern banking in Ethiopia goes back in 1900 when the settlement was reached in 1905 among emperor Minilik II and Mr.MA Gilivary representative of British owned National bank of Egypt. Currently as per National Bank end of March 31,2020 report, the figure of banks functioning in Ethiopia increased to 25 of which 13 are private. Technologies continue rising and banks in their chase to bargain valuable and better-quality services to their customers has transform into using of electronic innovations.

NBE (2021) discloses the total number of customer touch points reached 31,870 comprising of traditional i.e. POS and ATM and non-traditional access points including agents and M-POS. Amongst, the number of branches ins about 7,800 and the proportion of ATM and POS increased at larger figure compared to its initiative period back in 2005. Banks are competing through expansion of digital availability by installing both traditional and non-traditional touch points across the nation. from branch expansion prospective, at the end of 2021 financial year.

Following the State pioneer bank, Dashen and Wegagen Banks have started to offer E-banking services through card payments in 2006 and 2010 respectively (Kindie, 2016; Worku, 2010; Zeleke, 2016). Currently, almost all commercial banks in Ethiopia provide E-banking services in one or more ways a few from among are Internet banking, mobile banking, ATM (Automated Teller Machine) and POS (Point of Sale Terminal) channel.

Financial additional actors such as Ethio-Pay (Ethio-Switch) for (Switching, clearing, settlement) serving the incorporation of Automated Teller Machines (ATMs) and Point of Sale (POS) machines, was publicly launched on May 12, 2016 company established by banks in Ethiopia and national bank of Ethiopia, has been active since July 2016. The NBE (National Bank of Ethiopia) is the administrator of the national switch and is also responsible

for regulating, licensing and overseeing ET Switch all 27 banks are required to be links and embrace equivalent shares, nonetheless of whether they have an ATM network and its size, creating the possibility to issue ATM cards without investing in a registered ATM network and paving the way for full-scale operational interoperability in the future.

Similarly, Ethiopian automated transfer system (EATS) was launched by the National Bank of Ethiopia (NBE) in May 2011. EATS is comprised of two systems like Real Time Gross Settlement (RTGS), for low volume high-value transactions and the Automated Clearing House (ACH), for high volume low-value transactions .it is a strong emphasis on financial inclusion and digitization with the support of the World Bank, NBE is in the process of developing a National Financial Inclusion Strategy (NFIS) which holds Real Time Gross Settlement (RTGS) or automated clearing house (ACH), a switch, which has all been applied, and a security depository, which is still outstanding. Digitization is a key element of the NFIS. The government financial initiatives are in favor of cash less financial environment prohibiting legally cash note carrying limits for individuals and businesses. Directive of mobile and Agent Banking Services No FIS/01/2012, came into force on Jan 1, 2013 and applies to both Banks and MFIs (Micro Finance institutions), who are treated equally. MINT (Ministry of Innovation National Technology) mission is to develop, deploy and use ICT (Information communication technology) to improve the livelihood of every Ethiopian and optimize its impact to development of the country .The National ICT Policy and Strategy acknowledges Only FIs banks and licensed by the NBE are permitted to provide mobile banking require the approval of the NBE prior to starting operations and limited to the geographical boundaries of Ethiopia and must be denominated in Ethiopian Birr.

The market penetration of European non-cash transactions hit 78 percent from it was 64 percent by the last two consecutive years (Nets, 2021). The major contribution was obtained from internet banking, smart phone penetration and android point of sale activities. In addition, according to Global Payments (2022) reports, the digital wallets, bar code and merchant payments are becoming major business to business and person to business payment systems encompassing almost 65% households, businesses and transactions across the world by 2025. Related to volume of transaction, the global business to business transactions figure depicted tremendously increasing trend in 2021 accommodating total transaction of $121.5 billion. It is also forecasted that the global non-cash transaction will reach to $ 200 by 2025 (Global Payment ,2022). Total, digital banking, digital wallet, point of sale and agent banking non-cash transactions are channeling $243.6 in Asia-Pacific region, $215.8 in Europe, $179.4

in North America and little less amount in Middle East and Africa hitting $17.1 billion. The mobile in particular, the IOS and android version penetration have contributed to the global non-cash payment system than before.

1.2 Awash Bank Digital Banking Profile

Awash bank is well-known by 486 founding shareholders with a paid-up capital of Birr 24.2 million and started banking processes on Feb. 13, 1995. As of the end of July 2019, the number of shareholders and its paid-up capital increased to over 4,369 and Birr 4.4 billion, respectively. Likewise, as of the end of June 2020/21, total assets reached Birr 120 billion with over 650 branches found through the country. Awash Bank continues to be leading private commercial banks and also the first private bank in Ethiopia. With regard to the performances of the digital channels, encouraging results were achieved in the use of ATMs and POS terminals, Mobile Banking and Internet Banking services. the number of ATM machines increased from 460 to 1450 as of June 2022. The number of card holders soared to 1.9 million though the ratio of ATM card holders to the total card holders is still has a room to progress. Similarly, the number of POS points in merchant sites increased to 3,000 and agent distribution registered similar growth patter with respect to previous years standing balance.

1.2 Statement of the problem

It is seen that the number of people using digital payment systems is fairly low compared to the number of mobile phones, computers and other devices registered in the world. On the other hand, this situation shows that there are still new opportunities in terms of developing and marketing these payment systems. In recent years, digital payment systems have begun to replace cash payment methods (Coskun et al, 2022). With the COVID-19 pandemic affecting the entire world in 2020, online purchasing became more popular, and the demand for next-generation payment tools increased. Recent studies include QR digital payment system adoption (Jiang et al. 2021), e-money (Fabris 2019; Omodero 2021) and central bank digital currencies (Náñez Alonso et al. 2020; Náñez Alonso et al. 2021; Cunha et al. 2021). The adoption of online payments services is measured with the attitude, behavioral intention and actual usage. Attitude is defined as the consumer's degree of positive and negative judgments of the fintech service (Ajzen 2002). An individual's attitude can be defined as his or her assessment of his or her readiness to use a particular system (Lederer et al. 2019). Attitude is influenced by the individual's prior experiences, as well as the situation in which he finds himself, and it can change over time. As a result, it influences the proclivity to behave in a

particular way (Pazvant 2017). Accordingly, he founds that perceived risk and relative advantages are more important factors to deal with further to secure prevalence of digital payments. on contrary come up with different factors which have significant impact on digital payment system adoption in Ethiopians. According he conclude that perceived behavioral control, behavioral intention, subjective norms, attitude towards use, perceived usefulness, perceived ease of use, availability of internet/network connection and awareness have a significant positive impact on customer's usage of e-banking service delivery channels, however, perceived risk has a negative significant impact.

Awash Bank Progress Report and bank research analysis (2021) revealed the inactive volume of ATM cards reached 51 percent and among 2000 point of sales of machine, only 55 percent are continuously active and serving the merchant across the nation. Digital wallet, agency banking, internet banking and other traditional electronic payment systems lags very much compared to performance of other public and private commercial banks operating in the industry limiting its performance to an average of seven percent which is low compared to the planned activities. Therefore, the study contextualized the case of Awash Bank digital payment adoption visa-a-vis selected variables from previous studies to vitalize the importance of separate studies for individual banks operating in the industry.

1.3 Research objectives

The General objective of this study is to identify factors that influence customer adoption of digital payment in selected Awash Bank branches in Addis Ababa City Administration**.**

1.4.2 Specific Research Objectives

Based on the abovementioned general objective, the following specific objectives are formulated and addressed in the study.

- To determine the effect of relative advantage on customer's adoption of digital payment systems.
- To examine the effect of compatibility on customer's adoption of digital payment systems.
- To investigate the effect of level of complexity of digital payment systems on customer's adoption of those services.
- To examine the effect of perceived risk on customer's adoption of digital payment systems.

- To examine the effect of customers' innovativeness on customer's adoption of digital payment systems.

1.3 Research Hypotheses

This study empirically tests the following hypotheses.,

- H1: The relative advantage influence positively and significantly customers' adoption of digital payment systems
- H2: The compatibility digital payment system positively and significantly affects customers' adoption of digital payment systems
- H3: The level of complexity of digital payment systems positively and significantly influence customers' adoption of those services
- H4: There is a positive and statistically significant relationship between perceived risk and customers' adoption of digital payment systems
- H5: The customers' innovativeness positively and significantly influences customers' adoption of digital payment systems

1.5 Scope of the study

Conceptually there are many factors influencing customer adoption of digital system but for the purpose of study will only concentrate on how relative advantage; compatibility; complexity Perceived Risk and consumer innovativeness will affect consumer adoption using digital payment transactions. Furthermore, the study was restricting geographically on Addis Ababa. Although there are different commercial banks in Ethiopia, these study targeted on Awash bank and that provide ATM, POS machines, Mobile Banking and Internet Banking channels and channel with Tele Birr plat forms.

1.6 Significance of the Study

Technology has sustained its position in Ethiopian banks. Years passes, innovation of services have advance drastically and banks in their quest need to offer fitting and improved services to customer. proposed research is significant to address problems that hinder the customer adoption on digital payment service gap. Also it was an attribute for further relate future studies.

1.7 Limitation of the Study

The proposed study may find a little set back in the following situation as a limitation. The study only focuses on Awash Bank and some limited number of branches in Addis Ababa town. In each case, though there are vast variability of conceptual frame works of variables , the study focused on five selected cases to assess the vulnerability of customer adoption of digital payment system in context of Awash Bank. Actually, panel data may explain the model better than analysis of five scale Likert scale questionnaire instrument. But the Bank is not willing to provide such confidential time series or panel data for this academic research purpose.

1.9 Organization of the Study

The study organized into five chapters. The first chapters which are an introductory one contain the background of study, statement of the problem, research questions, objectives, scope, significance, term and definition and limitation of the study. In the second chapter, a review related literature were present. The third chapters' research design methods of the Study were discussed. In the fourth chapter, facts and figures obtained from primary sources were present, discuss and analyze. Base on the fourth chapter, conclusions and possible recommendations were made in the fifth.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2 Theoretical Review

The purpose of this chapter is to review literature in the area of customer adoption toward digital payments; types of traditional and modern payment; selected banks profile; literature models; list of factors influencing customer adoption and empirical evidences from. Forming conceptual frameworks to highlights variables of the studies.

2.1 Adoption on service concept

According to Rogers (1995) Adoption process is a perceptual process through which an individual pass from hearing about an innovation to final adoption. The choice to adopt an innovation, involves a process tranquil of knowledge, determining and acting over a period of time. Anderson (2000) explains Service innovation tends to be diffused into the market at slower rate than good innovation. It can be difficult to implement change due to customer resistance to trying an unproven services or method delivering the service.

The rate of diffusion depend on innovation relative advantage, ability to communicate, complexity, compatibility and ability to test or sample it is process shorten when customer perceive that an innovation offer great benefit than existing alternative however service innovation tend to be adopted more slowly than physical product innovation because it more difficulty to evaluate their relative advantage in advance impart this is due to difficult in communicating intangible benefit that cannot be displayed seen ,touched or tested in advance.

The communication task is easier when the service can be explained relative to a tangible good. Complexity of service also slow down the option process. Innovative approaches to financial service such as online banking and investing for example product contain feature that are complex difficult to explain to a prospective customer. The lengths of time that take customer to adopt service innovation also it depends on its compatibility with customer past experience and existing values relative to this purchase. Finally, customer ability to try out service risk free before purchase affect the time to adoption.

2.1.2 Digital payment system

Digital payment system can define as the way of payment which is made through digital modes. In digital payments process, payer and payee both use digital modes to send and receive money. It is also called electronic payment. The ever-changing background of digital payments determined by prompt advances and investments in digital payments presents and capabilities, the worldwide payments landscape is undertaking a profound transformation. Yet, amid the overflow of change and innovation, few initiatives have emerged as clear achievements. Electronic payment use has greatly improved over the years and some of those factors that contribute to enhanced use of E- payment include the Outline of internet, improvement ICT and swift expansion of wireless telecommunication (Gerland, 2011).

Mckinsey & company, Global payment (2018) report explain Customer adoption is where product strategy marketing and customer interest initiative customer adoption using their products. It allows metrics that help drive customer retaining across the enterprise. Considering the focus on Financial Technology (FinTech), financial inclusion and transformation of banking models, many case studies have been completed on m-banking and its adoption. Moser (2013) stated that in 2012, mobile banking adoption was still low, even in conventional markets. This is contrary to the optimistic forecasts made in historical research, anticipating the impact of the technology on the future of banking. Moser (2013) also raised the question, whether m-banking is a fashionable rather than an industrialized concept.

New digital prototypes navigate banks in the direction of customer connections that present new bases of value. The current aspect for variance alternation for the financial sector is undergoing radical changes with alteration of customer behavior and the introduction of new disruptive technologies. Generally, this sector is shaken up by digitalization, which affects the industry across different domains. The shifting digital era increases its acceptance of substitute payment solutions and the digital commerce system in general, further contributes to the new technological trend.

2. 2 Payment Systems in Ethiopia

2.2.1 Traditional Payment Instruments

According to Wondwossen & Tsegai (2005) Ethiopian traditional payment device can be divided as follows;

2.2.2 Cash

Cash is a permitted tender defined by the National Bank of Ethiopia (NBE) to represent values and used as major gadget of payment. NBE has authorized Birr to be used as a legal tender all over the country. Similar in other African states, Ethiopia also physical currency is a leading fund of payment. Cash is so popular because of can instantly rehabilitated into other form without any intermediation, no verification, instant purchasing power, zero transaction cost, no transaction cost and unidentified but it has drawback it can easily stole, it forces payer and payee to physical present.

2.2.3 Checking Transfer

Checking transfer is an account transferred directly via a signed draft or check from a user inspection account to a business or other individual. Checking transfer is the second most common form of payment in Ethiopia. Checks have the normally used for large transaction not used for micro payment, have usually some float, not anonymous and can easily be forged than cash. The check clearing office in Addis Ababa, which is run by NBE, enables a payer from a given bank to issue a check payable to a payee from different bank.

2.2.4 Digital Payment Instruments

The diffusion of innovations theory (Rogers, 1995), which has been extensively recognized as an influential tool to explain the adoption of a variety of financial and mobile technologies including electronic payments (Szmigin & Bourne, 1999, mobile banking (M. S. Y. Lee et al., 2003). List below are few digital payment instruments in Ethiopia as follows;

Automatic Teller Machine (ATM) ATM service in Ethiopia is offered by the Commercial Bank of Ethiopia (CBE) and other private Banks. Itenable customers to withdraw a limited amount of money from their account at any time. The ATMs also allow customers to check their account balance. But putting money through ATM is not currently possible. The major challenge in the usage of ATM is the unreliable telecommunication networks which result in temporary service interruption.

POS terminals: Conventionally, POS terminals stated to those that were fixed at all stores where purchases were made by customers using credit/debit cards. It is usually a handheld device that reads banking cards.

Internet Banking: Internet banking refers to the process of carrying out banking transactions online. These may include many services such as moving moneys, opening a new lasting or recurring deposit, terminating an account, etc. Internet banking is also referred to as e-banking or virtual banking.

Mobile Banking: Mobile banking is referred to as the process of carrying out financial transactions/banking transactions through a smartphone. The use of a mobile device to conduct a payment transaction in the opportunity of mobile banking is only intensifying with the introduction of many mobile wallets, digital payment application. Many banks have their own apps and customers can download the same to carry out banking transactions at the click of a button. Mobile banking is a wide term used for the widespread range or umbrella of services.

2.3 Innovation Adoption Model

An innovation can be describing is an idea, repetition or object that is perceived as new by an individual or other unit of adoption. Innovation adoption in the literature, different theoretical models has been used to explain consumer innovation adoption. Typically, studies build upon Rogers' (2003) innovation diffusion theory, the Technology Acceptance Model (Davis, 1989), the Theory of Reasoned Action (Fishbein & Ajzen1975) or the Theory of Planned Behavior (Ajzen, 1985). Innovation adoption can be defined as the consumer's decision to make full use of an innovation (Rogers, 2003).

In the innovation adoption literature, characteristics of the (potential) adopter and perceived characteristics of the innovation are found to be major drivers of innovation adoption (Gatignon & Robertson, 1985; Meuter, Bitner, Ostrom, & Brown, 2005; Rogers, 2003; Tornatzky &Klein, 1982). The number of altered variables used to capture adopter characteristics is particularly wide research has been devoted to finding traits of consumers that are likely to adopt an innovation. Adopter characteristics capture the personal traits that describe the (potential) adopter of an innovation, which can be divided into socio demographics and psychographics.

2.4 Diffusion of Innovations Model

In Latin "diffusion" means "to spread out", Rosenberg (1994) stated that diffusion is not a passive process, though that involves a complex process with incremental adjustments to make all the parts of the system fit together. It is a distinct type of communication, in that the messages are alarmed with new ideas". Diffusion can be considered a process where all the variables involved have a high level of complexity and the context where innovation are developed and used play an important role in the rate of adoption. According to Hall (2005) innovation alone without the diffusion process would not have much effect. Everett Rogers, an American sociologist, put forward the diffusion of innovations theory in his 1962 book. This theory focuses on the factors that determine whether or not and at what pace, an idea or an innovation were adopted by member so far particular culture. He definite that diffusion is a process by which an innovation is communicated through certain channels over a period of time among the associates of a social system. According to Rogers, four elements affect: - a) Spreading Invention; b) Channels of communication; c) Time; d.) The social system.

In addition, five aspects have been the focus of diffusion research: 1). the characteristics of an innovation which may influence its adoption; 2). the decision-making process that occurs when. individuals reflect adopting a new idea, product or practice; 3). The characteristics of individuals that make them possible to adopt Innovation; 4). The consequences for individuals and society of adopting an innovation; and 5). The communication channels used in the adoption process.

Rogers believed that the process of innovation diffusion relied on human resources and that for an innovation to sustain itself, it must be widely adopted. The innovation diffusion theory highlights five categories of innovation adopters: innovators, early adopters, early majority, late majority and laggards. While innovation diffusion relies on the cultural context or the social system, it is also function of the type of innovation's decision Making process. Given, information flows through networks, the nature of the networks and the roles of the opinion leaders determine how likely it acceptable the innovations to be adopted. Apart from opinion leaders who's their personal contacts to influence as customer of prospective innovation adopters, other intermediaries called change agents and gatekeepers also form apart process of diffusion.

Diffusion is a macroeconomic concept and it refers to the spread of innovation on the market by communication (broadcasting, sales assistants, opinion frontrunners or other members of a market segment) within a certain time. Adoption is a microeconomic concept and it refers to the stages the consumers go through before accepting the new products.

2.4.2 Adopter categories

Adopter Categories Rogers (2003) fifth edition defined the adopter categories as "the classifications of members of a social system on the basis of innovativeness".

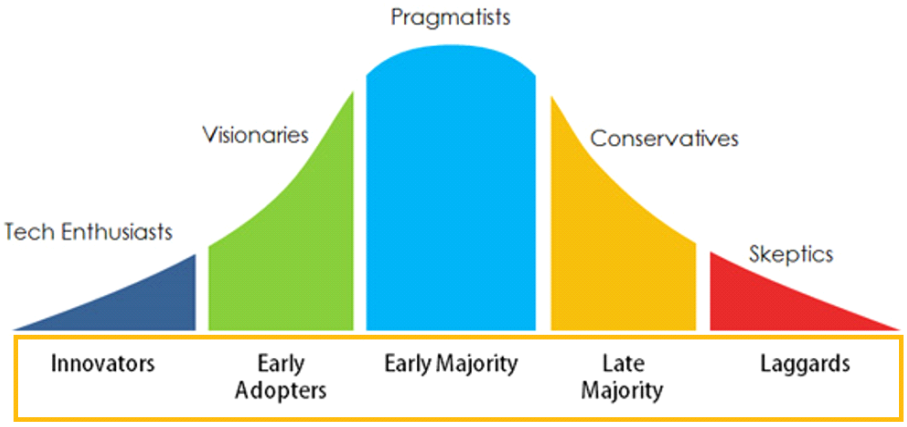


figure 1: (Schiffman and Kanuk, 2004)

- **Innovators Venturesome:** who are very keen to try 2.5% new concepts; acceptable if the risk is adventurous; more social connection; communicate with other innovators
- **Early Adopters Respect**: who are more cohesive into 13.5% the local social system; the person to check with before adopting a new idea; commonly are role models
- **Majority Deliberate**: who adopt new ideas just 34% prior to the average time; infrequently hold leadership positions; deliberate sometime before adopting
- **Late Majority Skeptical**: who adopt new ideas just after 34% the average time; adopting may be both an economic requirement and a reaction to peer pressures; innovations approached cautiously.
- **Laggards Traditional:** who adopt an innovation at 16% the final stage; oriented to the past; suspicious of the new product

2.6 Empirical Review

The increased rate and dynamics of e-commerce and e-payment in recent times have necessitated the need for studies to investigate the relationship between e-payment and consumers' spending in various countries and regions. According to Feinberg (2021),

electronic mode of payment will be more acceptable than the traditional mode of payment in the USA. This is also the case in developed and developing nations. Gholami et al. Oney et al. (2018) also examined the determinant of electronic payment system (EPS), based on consumers' personal experience in North Cyprus. Specifically, the study investigated perspectives of consumers on the security and trust and their effects on EPS. The finding of the study is that perceived security and trust significantly affects EPS adoption and usage. A micro-study by Omotayo and Dahunsi (2017) focused on the factors that influence point-of-sale (POS) adoption by businesses in Ibadan and Lagos metropolis using a Multistage sampling technique. The study submitted that factors such as perceived ease of use and subjective norms significantly influence the adoption of POS, while other factors like image, characteristics of the organization and perceived usefulness do not have a significant relationship with POS machine adoption in Nigeria. Studies of this nature have also been done in developed countries. The survey method was used to achieve this objective and the study concludes that debit and credit cards usage leads to an increase in the ratio of spending by approximately 10 and 8% respectively. Tus, any convenient and faster means of payment at the POS would motivate consumers to frequently undertake more transactions. In Nigeria, Adebayo et al. (2013) investigated the effect of e-payment options on consumer's buying behavior in retail outlets of Ilorin metropolis. Tis study dwells mainly on the buying and paying experience of customers and concludes that e-payment significantly afects consumer buying experience in retail outlets in Nigeria. Similarly, Adedokun (2017) examined whether e-payment methods such as mobile banking and POS services have significant impact on the financial performance of SMEs in Zaria metropolis, using the multiple regression method to analyses the data. the finding of Adedokun's study is that these innovative methods of payment have significant effect on the performance of SMEs in Zaria. On their part, Adeoti and Oshotimehin (2013) discussed factors that influence the adoption of POS terminals in Nigeria using the profit model. the study reveals that factors such as convenience ease of use, security, intention to use, availability and nativity influence the use of POS terminals in Nigeria.. In line with this submission, study by Kalakota and Whinston (2013) and Kim et al. (2012) argued and submitted that technical reliability and the resistance of the e-payment against security attacks are two factors affecting the security of e-payment. In addition, Laudon and Traver (2013) and Corbitt et al. (2013) identified sophisticated transaction procedures and process as crucial approach to resolving perceived security and trust concerns. the recent study by Oney et al. (2008) analyzed the determinants of perceived security and trust including the effect of perceived security and trust on the usage of e-

payment in Northern Cyprus employing structural equation modelling (SEM). the findings from the study indicate that both perceived security and trust influence e-payment usage. they also identified technical protection and past experience as common determinants of perceived security and trust. In another study, Barkhordari et al. (2008) investigated factors influencing trust in e-payments systems in Iran using factor analysis and structural equations modelling (SEM). the study submitted that perceived security and trust have positive impact on using e-payment systems. they also identified technical and transaction procedures and access to security protocols as most impotent factors on perceived trust of customers. Gardachew (2010) conducted a research on the opportunities and challenges of E-banking in Ethiopia and found that lack of suitable legal and regulatory frameworks for E-commerce and E payments, political uncertainty in neighboring countries, frequent power break, lack of skilled personnel's in key organizations, high rates of illiteracy and lack of financial networks that tie different banks are the major challenges. The research output showed Opportunities offered by ICT through e-learning programs and Obligation of the governments on the progress of ICT infrastructures is considered as drivers of using E-commerce and E-payment systems.

2.8 Conceptual Framework and Hypotheses Development

2.8.1. The conceptual Framework

The conceptual framework is the blue print of the research work that guides the researcher to conceptually understand the research and outline the dependent and the independent variables so that the measurement, processing, analysis of the data and interpretation of the result been easy and meaningful.

2.8.2 Hypothesis Development

Perceived innovation attributes are important factors that can be observed and measured in certain ways in different units of analysis, they can also help to explain the different rates of adoption, and identify the weakness of each attribute, which can later be improved or eliminated. According to Rogers (1983), research on the perceived attributes can help to predict rates of adoption be explored. A brief description of the five perceived attributes of innovations is detailed in the following section.

2.8.2.1. Relative Advantage and Customer Adoption of Digital Payment

Innovation is the "degree to which an innovation is perceived as being better/superior to the idea it supersedes" (Rogers & Shoemaker, 1971). This definition has also been cited by (Tornatzky& Klein 1982; Holak& Lehmann 1990). Relative advantage can be presented in economic profitability, social benefits, time saved, hazards removed (Tornatzky& Klein, 1982). Tornatzky and Klein (1982) found a relative advantage to be an important factor in determining the adoption. Agarwal and Prasad (1997) found a relative advantage as the dominant factor that predicts consumers" intention to adopt or resist innovation. In overall, perceived relative advantage of an innovation is positively linked to its rate of adoption (Rogers 1983; Tan &Teo 2000) and negatively related to consumers' resistance (Dunphy&Herbig, 1995). The hypothesis developed as follow.

- H1: The relative advantage influence positively and significantly customers' adoption of digital payment systems

2.5.2 Compatibility and Customer Adoption of Digital Payment

It is the degree to which prospective consumers believe that the new product fits with their socio-cultural norms or is consistent with existing values, past experiences, style, behavior patterns, and needs (Dunphy & Herbig, 1995, Holak& Lehmann, 1990). It has been stared as an important constituent included in outlook development (Rogers, 1995, Saaksjarvi, 2003) and is of special importance in hi-tech markets Although the impact of compatibility on other factors has not been studied empirically (Saaksjarvi, 2003), it is expected to positively affect relative advantage and negatively affect perceived risk (Holak & Lehmann, 1990). For example, if a new product is perceived as incompatible with consumers' work, lifestyle, it may not be possible to recognize all its advantages. Moreover, if a new product is perceived as compatible with past experience, principles, and lifestyle, they were aware of the previous items and hence much competent to judge the innovation in terms of its supremacy over current/timeworn products. The risk (especially psychosocial risks) associated with innovation decreases if innovation is perceived as more compatible with one's work/life-style (Holak & Lehmann, 1990). The hypothesis postulated as follow.

- H2: The compatibility digital payment system positively and significantly affects customers' adoption of digital payment systems

2.5.3 Complexity and Customer Adoption of Digital Payment

It can be defined as "the degree to which the innovation is perceived as relatively difficult to understand, use or comprehend" (Rogers & Shoemaker, 1971, p. 154). This definition has been followed by some other researchers (Holak& Lehmann, 1990; Dunphy&Herbig, 1995). Prior research has shown that; an innovative product with Considerable complexity demand more skills and efforts (to implement and use innovation) to increase its adoption and decrease the possibility of consumers' resistance (Cooper &Zmud 1990; Dickerson & Gentry 1983; Tan &Teo 2000). It is generally believed that innovative products that are less complex are easily adopted by consumers (Holak& Lehmann, 1990). There occurs a negative link between complexity and relative advantage, as if a product is perceived as complex, it was difficult for consumers to try it and hence cannot be utilized for its gains (Holak& Lehmann, 1990, W. Robert, 1998). Complexity as a factor of consumers' characteristics is expected to affect consumers' intention and lead towards adoption through relative advantage, risk, and also self-efficacy. It has been claimed by Holak and Lehman (1990) that bigger risk is allied with innovation which is perceived as more complex, so, there is a positive relationship between complexity and perceived risk. Complexity distresses consumer's adoption indirectly through perceived risk (Holak& Lehmann, 1990). Accordingly, the hypothesis formulated as follow.

- H3: The level of complexity of digital payment systems positively and significantly influence customers' adoption of those services

2.5.4 Perceived Risk and Customer Adoption of Digital Payment

Bauer (1960), Webster (1969), and Ostlund (1974) presented risk as a further dimension in the diffusion and adoption of innovation, also by Sheth (1981) and Ram (1987) as another factor affecting consumer's resistance. Here we are talking about the degree of perceived risk associated with adopting & using innovation. It is believed as positively related to consumer's resistance and negatively related to adoption (Ram, 1989, Dunphy & Herbig, 1995). Newer technologies/products may be perceived by consumers as riskier. Research has shown that the perceived risk is a critical determinant of a consumer's willingness to adopt an

innovation (Shimp & Bearden, 1982). As it is very difficult to capture risk as an objective reality (Dowling & Staelin, 1994), it is taken as the "consumer's particular expectation of suffering a loss in search of a desired outcome" (Yiu Chi et al., 2007, p.336). Even in situations, where a consumer has evaluated and considered to adopt an innovation, perceived risk and uncertainty create substantial barriers to adoption (Aggarwal et al., 1998). Innovation always involves some degree of perceived risks because of uncertainty (Ram & Sheth, 1989), so innovation that associated with considerable perceived risk, has a slower rate of diffusion (Dunphy & Herbig, 1995) and higher consumers" resistance (Ram, 1989). Usually, perceived risk is termed as an innovation characteristic, however, Fain and Roberts (1997) argue that most of the time, the risk is rather a perception of a consumer than merely a characteristic of innovation. Researchers have recognized six key points of perceived risk, which are; financial, performance, physical, time, social, and psychological risks (e.g. Cherry & Fraedrich, 2002; Ram, 1989; Dholakia, 2001). Thus, we developed the hypothesis as follow.

- H4: There is a positive and statistically significant relationship between perceived risk and customers' adoption of digital payment systems

2.5.5 Customer Innovativeness and Customer Adoption of Digital Payment

Innovativeness describe as the degree to which an individual or other unit of adoption is relatively prior in adopting new ideas than other members of a social system. If the individual is like most others in the late majority category, he is low in social status, makes little use of mass media channels, and secures most of his new ideas from peers via interpersonal channels.

Innovativeness indicates behavioral change, the ultimate goal of most diffusion programs, rather than cognitive or attitudinal change (Rogers, 1971). Many researchers have worked on the topic of consumer innovativeness because it is considered as a way to understand the consumer willingness to adopt new products and services (Kumar & Uzkurt). There are two types of innovativeness: (1) cognitive innovativeness, which refers to the affinity to get involve with pleasure in new experiences that arouse thinking and (2) sensory innovativeness, which refers to the tendency to get involve with pleasure in internal experiences. Consumer innovativeness is defined as the affinity to adopt new products and services more frequently and quickly than other people (Midgley & Dowling, 1978). Consumer innovativeness and innovators are considered as important factors in new products diffusion and adoption (Roger & Shoemaker, 1971). Accordingly, the final hypothesis postulated as follow.

- H5:The customers' innovativeness positively and significantly influence customers' adoption of digital payment systems

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

This chapter discusses the research methodology used for conducting this study. The population and sample of the study, the source and type of data, methods of data collection procedures, methods of data analysis, and finally, ethical issues related to the study is explained and justified.

3.1 Research Design

The study implemented both descriptive and causal research design. Mainly, the descriptive approach will summarize both frequency, central tendencies and dispersion of values representing variables included in the study. On the other side, the causal design will explicitly depict the relationship between dependent and independent variables along with the magnitude of impact. As casual or cause and effect studies are characterized by hypothesis which will specify the relationships between or among dependent and independent variables under the study. The research study is explanatory with the purpose of determining the study problem by defining the relationship direction, magnitude and significant by applying reliable analysis tools and techniques. Further, the explanatory research is selected since the major objective of the research is to determine factors influencing the adoption of digital from theoretical prospective thereby deducting to this research. The study also cross- sectional data which implies that relevant data of the paper were collect at one point in time also includes the demographic details of the respondents; the research design were explanatory. It's combining both numeric values from quantitative research and the detail of qualitative research and to counter balance curbs of applying the research approach.

3.2 Research Approach

When conducting a research, there are different ways of approaching the problem. Which are the quantitative researches, approach employ measurement that can be quantifiable while the qualitative approach cannot be measured (Bryman & Bell, 2007). In mixed research approach inquirers lure substantially from both qualitative and quantitative molds (Creswell, 2009). The research under subject were conduct using mixed research approach. From this

prospective, the research conducted an interview to a group of employees and customer to capture basic influencing factors existing on digital payment system adoptions and implemented quantitative approach to disclose the nature and magnitude of relationship between variables presented in the framework of study sections.

3.4 Population of the study

The procedure was drawing the sample from the available lists that is based on the bank's branch. Regards to the spatial distribution of branches concerned, the limitation of time and financial resources compel the researcher to focus on the total one private commercial bank namely, Awash Bank. Awash Bank has a total of 674 branches. Out of these 223 branches are in Addis Ababa city. In addition, the town is sub divided into four districts and each district has different number of branches

Table 3.1 Awash Bank District and NO of Branches in These Districts

no	District	No of branches
1	North Addis Ababa	61
2	East Addis Ababa	63
3	South Addis Ababa	47
4	West Addis Ababa	52
Total Braches in Addis Ababa		223

Source: Awash Bank Branch operations

Purposively, by random the biggest and representative district, i.e. East Addis Ababa is selected from these for locations for the study purpose. There are also different kinds of branch grade in each of the districts. The largest is grade one and the smallest is grade four. In East district from available 63 branches. The grade classification is as follows;

Table 3.2.

Table 3.2 East Addis Ababa District Branches Group by Grade and Sample Selection

No	Grade	No	Selected Branch	No of Employees	10% of employees as a sample
1	1	3	Legehar Branch	65	20
2	2	13	Shalla, Bole, Gerji, Urael, Shalla	178	53
3	3	19	Kokeb, Gerji Giorgis, Megenagna-22, Gore, Beshale,	193	58
4	4	28	Summit, Summit Woji, Goro, Yerer , Jackros, Figa, Salite Mihret , Harbu	221	66
Total				657	197

The study used the proxy of employees to collect customer intentions. Accordingly, employees from their own digital payment experience and they definitely know wide diversity of concerns and limitation that customers face during their customer service schemes. Accordingly, 197 employees from selected East District and branches with different grades are include in the study. Therefore, ***197*** questioner were distributed across selected branches residing in East region.

3.5 Sampling and Sampling Techniques

The staff respondents were selected under purposive sampling technique, the researchers purposely choose who, in their opinion are thought to be relevant to the research topic (Howitt & Cramer, 2011). In some cases, judgment sampling was where the researcher's judgment is used for selecting items that are considered as representative of the population. The process of sampling in this case involved purposive identification of the respondents. This is taking the criteria of services rendered by employees to their customers in routine basis. According, branch managers, customer service officers, digital banking officers and business development officer and managers are selected and included in the study.

3.6 Data collection Methods

3.6.1 Primary Data Collection Method

At the point when there are enormous enquiries, it quite popular to gather information through questionnaire by researchers (Kothari, 2004). Primary data were collect through a sample survey using a semi structure questionnaire. The questionnaire was designed for the select bank, namely Awash Bank customers that are using any Digital payments system such as (ATM, POS, mobile banking, Internet banking). The questionnaire will include the general questions are constructed to gather personal and demographic information about the respondents. The specific question is constructed also extensive review of the factors affecting consumer's adaptation of digital payment system. The respondents are asked to rate their level of perception of the variables on five point Likert scale and one open end question to selected employees. The questionnaire comprises the demographic, experience of employee, and some question related to factors influence adoption of digital payment system of customers. Collected from books journals articles, full research paper, and internet.

3.7 Data Analysis Methods

Basically, for causal research design, we frequently use inferential statistics with different types of models which fit the data available at hand. The study implemented econometrics model with one dependent variable and five independent factors which are expected to measure the variability on dependent variable. Specifically, the study uses multiple linear regression model to show the impact of the five independent variables on customer adoption of digital payment (CADPs). The model is specified as follow.

$$CADS = \beta 0 + \beta 1RA + \beta 2CM + \beta 3CDS + \beta 4PR + \beta 5CI + \varepsilon$$

Where CADS refers the dependent variable which is Employments Adoption of Digital payment system. And RA, CM, CDS, PR, CI represent the independent variables; relative advantage, Complexity of the digital payment system, Compatibility of digital payment system with devices, Perceived risk of digital payment system, and Customer innovativeness, respectively. *B0 is* the constant term and β1, β2, β3, β4, and β5 refer the parameters or coefficient estimates. Where a is the model intercept and ε is the random error term

Statistical package for social sciences (SPSS) were applied to analyze the data collected. The answers to the questions and the corresponding output of the analysis are to be presented in tabular form the implications of which explained well in the paper. Descriptive statistics (like percentage, frequencies, mean and standard deviation) and inferential statistics like regressions and tables are expected to be applied. Percentage and frequency apart from helping to discuss the general information of the respondents, it has been also applied to assess and Comparison of mean scores of each service quantity dimension. The motive of the collection of these demographic data is to know the general information about the customers of Banks. Those demographics data consisted of participants' age, gender, education and occupation, further analysis such as descriptive analysis, reliability test and inferential analysis are used to examine the data in this study.

3.8. Variable Definition and Measurements

The data for the six variables of interest of the study is collected using five range Likers Scale questioners. Following prior studies, we convert the order data into continuous form. These, we could apply linear model. In order to convert the order data into continuous form, we used overall mean values which is computed the mean values of each measures of the variables. For instance, in order to measure relative advantage about 10 items were included in the questioner. First we compute individual mean values of the 10 indicators, then we compute overall mean values of the 10 indicators.

3.9. Reliability and Validity

3.9.1 Reliability

Reliability reflects stability and dependability over time moreover; it is seen as the degree to which test is free from measurement errors. Since the more measurement occurs the less reliable the test (Frankel & Wallen, 2003; Mc Millian & Schumchel 2001, 2006; moss, 1994; Neuman, 2003). Cronbach‟s alpha is used in this study to assess the internal consistency (reliability of the instrument (questionnaire). Cronbach‟s alpha is a coefficient of reliability used to measure the internal consistency of a test. The coefficient has to be between 0 and 1 to label as reliable. And the closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale.

3.8.2. Validity

Bond (2003) comments that validity is prime of the thoughts of those developing measures and genuine scientific dimension is foremost in the mind of those who seek valid outcomes from valuation. And from the quote we can understand the trustworthiness and accuracy is core element on research study. Its denotes to the suitability of the implication made about the result of an assessment inference being "(Messick 1989). Secondly, validity is a matter of degree and not a specific value thirdly, validity applied for a specific purpose or use and therefore is not valid for all-purpose. Fourthly, validity is seen as a unitary concept of meaning that there is a different type of validity. Lastly, validity is apprehensive with evaluative judgment about an assessment (Gregory2000).

3.9 Ethical consideration

All the information will treat and kept secretly with high confidentiality without disclosure of the respondents‟ identity. No information is change or modify, hence the information is present as collect and the same with the literature collect for the purpose of this study. The information gathered through the questionnaire is used solely for this research whose objective is one of the fulfilling requirements of the study

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1. Introduction

This chapter presents result and discussion part of the paper. As explained in the earlier chapters, this study aimed at investigating factors influencing customer's adoption of digital payment systems: evidence from selected commercial bank in Ethiopia. Therefore, this part of the paper tries to analyzes, summarizes and presents the result of the collected data that influence customer adoption of digital payment.

4.2 Rates of Response

Respondents response rate refers to the proportion of questionnaires that were returned and filled during the study in relation to total number of questionnaires expected to be filled. A total of 197 questionnaires were distributed to target respondent. Out of the total 197 questionnaires, 176 questionnaires were obtained which is 89% response rate.

4.3 Reliability Test

Reliability refers to the consistency and stability of measurement. The finding of this research study said to be reliable if other researchers repeated this study and obtained the same result. In this study, Alpha reliability was used to measure internal consistency of the mean of the items at the time of administration of the questionnaire. The measurement of Cronbach's Alpha is specified as number 0 and 1. Hence, Cronbach's Alpha have better consistency within items in the scale if coefficient that closer to 1. George and Mallery (2003), provides the following rules of thumb: >0.9-Excellent, >0.8-Good, >0.7-Acceptable, >0.6-Quesstionable, >0.5-Poor, <0.5-Unacceptable (as cited by Gleam and Rosemary, 2003).

Total numbers of questions in the questionnaire were six testing variables. From the analysis the Cronbach's alpha result found from the data collected, the overall Cronbach's alpha score is 0.7. The values of the reliability analysis were shown in the below Table 1.

Table 4. 1 Reliability Statistics

No	Dimensions	Cronbach's Alpha	N of Items
1	Relative Advantage	.861	10
2	Complexity	.724	4
3	Compatibility	.778	4
4	Perceived Risk	.824	6
5	Employment innovativeness	.694	4
6	Customer Adoption of Digital payment	.716	4
Average Cronbach's alpha		**0.7**	**32**

Source: SPSS Output from survey result, 2022

4.4. General Information about the Respondents

The first part of the questionnaire consists of general information about the respondents and it requested a limited amount of information related to personal and professional characteristics of the respondents. Demographics information of the respondents was presented by gender, age, educational level, monthly income, and respondent's experience. Accordingly, the following variables about respondents were summarized and described.

Table 4. 2 General Information about the Respondents

Product Dimension	Measurement scale	N=176	100 %
Gender	Male	123	69.9
	Female	53	30.1
Age	18-30	99	56.3
	31-40	53	30.1
	41-50	15	8.5
	Above 50	9	5.1
Educational Level	Below high school	-	-
	Diploma	14	8.0
	First degree	66	37.5
	Masters or above	96	54.5
professional work	Government Employee	1	.6
	Private Employee	156	89.1
	Business	10	5.7
	NGO	2	.7
	Other	7	4.0
Monthly income	Up to 10,000	55	31.3
	10,001-20,000	117	66.5
	above 20,000	4	2.3

Source: SPSS Output from survey result, 2022

As the above table depicts, male respondent constitutes the largest portions of respondents, which is about 70% of the sample size, while female respondents covers 30% of the total. This implies that majority of the participants in the research were male.

The age of the respondents was classified in range and majority of the respondents (56%) in age group 18-30 years, (31%) in age group 31-40 and very small number of the respondents (8%) were in age group 41-50 years. educational level of the respondents was also assessed. Large number of the respondents (54%) had masters or above, (37 %) respondents had first degree education qualification and (8%) of the respondents had completed Diploma.

The professional work respondent Government employee (0.6 %), Private Employee (89%), business (5.7%), Ngo (0.7%) and other (4%) this implies that majority participant is private employee. respect of income level, the majority of the respondents fall with income level of between 10,000 - 20,000 Birr, which account 66% and followed by Birr up to 10,000 Birr (31%), and above 20,000 Birr (2.3%). This infers, high income earner was more likely to adopt mobile banking. Concerning respondents' using the service in the bank, around 67% of them have 1-4 years' experience, which have direct relevance to the research topic, and the remaining 14% and 18% of respondents have 5-9 years' and less than 1-year experience with the bank.

4.5. Technology usage

ATMs enable customers to withdraw limited amount of money from their account at any time. It also enables customers to check their account balance, transfer to other account holders of the same bank and some perform local money transfer. Result obtained from survey respondents of regarding their perception towards ATM Problems using descriptive statistics are shown below: -

Table 4. 3 ATM Problems

S.	ATM Problems		N	R	S	O	A	MS	SDV
1	Cards get blocked.	N=176	43	31	84	12	6	2.47	1.04
		100%	24.4	17.6	47.7	6.8	3.4		
2	Machine out of cash.	N=176	37	24	61	47	7	2.78	1.16
		100%	21	13.6	34.7	26.7	4		
3	Non printing of statement.	N=176	23	33	57	39	24	3.04	1.21
		100%	13	18.8	32	22.2	14		
4	Machine out of order.	N=176	15	33	78	39	11	2.98	1.00
		100%	8.5	18.8	44.3	22.2	6.3		
5	Long waiting time in queues.	N=176	11	48	85	24	8	2.82	.903
		100%	6.3	27.3	48.3	13.6	4.5		
6	Reduction in balance without cash payment.	N=176	24	53	61	32	6	2.67	1.03
		100%	13.6	30.1	34.7	18.2	3.4		
7	Service not available.	N=176	4	30	91	33	18	3.17	.911
		100%	2.3	17	51.7	18.8	10.2		
	Valid N							2.88	1.03

Source: SPSS Output from survey result, 2022

Result obtained from the survey of respondents regarding cards get blocked in ATM machines (24%) and (17%) respondents respond never and rarely respectively. While 47% respond sometimes and the rest 6% and 3% of the respondents respond often and always. Regarding non printing of statement during transaction (34%) and (26%) respondents sometimes and often respectively. 4% respond always and the rest 21% and 13% of the respondents respond never and rarely.

Regarding reduction in balance without cash payment (13%) and (30%) of the respondents responds never and rarely respectively. The overall mean rating and the standard deviation of the respondents for ATM problem was 2.88 and 1.01 respectively.

Mobile Banking Problems

This is a banking service where customers can gain banking services by using their mobile phone. This can be by using USSD codes, SHTML links etc. It is highly dependent by network quality. By using this service, customers can: - inquire balance; request a mini-statement; view daily exchange rates; make fund transfers.

Table 4. 4 Mobile Banking Problems

S.	Mobile Banking Problems		N	R	S	O	A	MS	SDV
1	Not providing information	N=176	29	44	44	37	22	2.88	1.27
		100	16.5	25	25	21.0	12.5		
2	Not being able to maintain security	N=176	32	58	65	12	9	2.47	1.03
		100	18	33	37	6.8	5		
3	Not giving fast response	N=176	23	39	73	31	10	2.80	1.05
		100	13	22	42	17.6	5.7		
4	Leaving the operation unfinished	N=176	16	43	68	47	2	2.86	.952
		100	9.1	24.4	38.6	26.7	1.1		
5	Internet banking can be tampered with by others	N=176	41	46	59	24	6	2.47	1.09
		100%	23.3	26	33.5	13.6	3.4		
6	Waiting for long time for conducting of transactions	N=176	16	54	53	42	11	2.87	1.07
		100%	9.1	30.7	30.1	23.9	6.3		
7	Service not available.	N=176	10	31	77	41	17	3.13	1.00
		100%	5.7	17.6	43.8	23.3	9.7		
	Valid N							2.78	1.06

Source: SPSS Output from survey result, 2022

Mobile banking problems dimension in this study comprises seven items. Of those items, providing information, maintaining security, response and waiting time for conducting of transactions are scored the highest mean value of 2.8, 2.4, 2.8 and 2.8 respectively. Thus, mobile banking problems dimension including all items has scored 2.78 grand mean which fall in the range of rarely and sometimes.

Internet Banking Problems

Internet Banking gives you control of your finances, accessing your account information 24 hours a day, 7 days a week. Customers were able to: view balance; download account statements and export to other accounting formats; transfer funds; control your loan progress; enquire daily currency exchange rates; request cheque and much more (Zemen Bank Annual Report, 2017).

Table 4.5: Internet Banking Problems

S.	Internet Banking Problems		N	R	S	O	A	MS	SDV
1	Login / Sign off are not easy.	N=176	54	59	39	11	13	2.26	1.17
		100%	30.7	33.5	22.2	6.3	7.4		
2	Lack of security in transactions.	N=176	69	49	30	15	13	2.17	1.24
		100%	39.2	27.8	17.0	8.5	7.4		
3	Lack of appropriate software.	N=176	49	46	47	18	16	2.46	1.25
		100%	27.8	26.1	26.7	10.2	9.1		
	Valid N							2.29	1.22

Source: SPSS Output from survey result, 2022

Analyzing the data obtained from the questionnaire concerning mobile banking problems, Login / Sign off are not easy, the result showed that, 33% and 30% of respondents were never and rarely respectively, 22% of them respond sometimes; while 6% and 7% respondents respond often and always. With regard to "Lack of security in transactions" The feeling of respondents indicates that 39% and 27% of customers respond never and rarely respectively.

Internet Banking Problems dimension in this study comprises three items. Of those items, High login / sign off are not easy, lack of security in transactions and lack of appropriate software are scored the highest mean value of 2.26, 2.17, and 2.46 respectively. Thus, the Internet Banking Problems dimension including all items has scored 2.29 grand mean which fall in the range of rarely and sometimes. Therefore, it is possible to conclude that, customers of the bank are facing internet banking problem sometimes.

4.6. Descriptive Results

The feedback of the respondents for the variables indicated below were measured on five point Likert scale with measurement value 1= Strongly disagree; i.e. very much dissatisfied with the case described; 2= Disagree, i.e. not satisfied with the case described; 3= Neutral, i.e., uncertain with the case described; 4= Agree, i.e., feeling all right with the case described and considered as satisfy; and 5 =strongly agree, i.e. very much supporting the case described and considered as highly satisfy. To make easy interpretation, the following ranges of values were reassigned to each scale: Less than 2.8 = Disagree, 2.9-3.2 = Neutral, above 3.2 = Agree

4.6.1 Relative Advantage

Relative advantage is the degree to which an innovation is perceived as being better than the idea it supersedes. The degree of relative advantage is often expressed in economic profitability, in status giving, or in other ways (Rogers, 2003). The respondents were asked to indicate their levels of agreement. The findings are presented in the table 4.6.1 below.

Table 4. .6: Relative Advantage

S.	**Relative Advantage**		**SD**	**D**	**N**	**A**	**SA**	**MS**	**SDV**
1	High Promptness of ATM card delivery.	N=176	15	10	41	66	44	3.64	1.16
		100%	8.5	5.7	23.3	37.5	25.0		
2	ATM location convenient also hours of operation (24 X7) is great.	N=176	5	19	42	67	43	3.70	1.04
		100%	2.8	10.8	23.9	38.1	24.4		
3	High Performance of plastic card, Mobile and internet banking.	N=176	5	12	61	66	32	3.61	.955
		100%	2.8	6.8	34.7	37.5	18.2		
4	Bank has up to date information.	N=176	3	31	35	65	42	3.63	1.08
		100%	1.7	17.6	19.9	36.9	23.9		
5	Wide range of products and services provided.	N=176	3	21	40	90	22	3.60	.913
		100%	1.7	11.9	22.7	51.1	12.5		
6	Faster log in facility using internet banking or mobile banking.	N=176	7	31	30	75	33	3.54	1.10
		100%	4.0	17.6	17.0	42.6	18.8		
7	Performance of Plastic cards (ATM, Debit/Credit)	N=176	3	17	49	78	29	3.64	.927
		100%	1.7	9.7	27.8	44.3	16.5		
8	Help desk, call center of bank are always helpful.	N=176	10	28	51	63	24	3.35	1.080
		100%	5.7	15.9	29.0	35.8	13.6		
9	Bank has huge range of services.	N=176	-	47	30	70	29	3.46	1.05
		100%	-	26.7	17.0	39.8	16.5		
10	Law Service charges.	N=176	21	44	25	52	34	3.19	1.32
		100%	11.9	25.0	14.2	29.5	19.3		
	Valid N							3.53	1.06

Source: SPSS Output from survey result, 2022

Analyzing the data obtained from the questionnaire, table 4.6. reveals that the study measured the relative advantage dimensions. Concerning ATM convenient location and operation hours, the survey result showed that, 25% of respondents were strongly agreed, 37% respondents were agreed, 23% of respondents are neutral; while 12% respondents disagree. As a result, the majority of the respondents satisfied with operation hours and convenient location of ATM machine. With regard to "High Performance of plastic card, Mobile and internet banking" The feeling of respondents indicates that 18% and 37% of customers strongly agree and agrees respectively. Thus, it indicates that the customer gets high performance of plastic card, mobile and internet banking.

The above table shows perception of customers about wide range of products and services provided by the banks. About 12% and 51% of the respondents were strongly agreed and agree respectively. However, 14% respondents were disagreeing regarding this issue.

Analyzing the data obtained from the questionnaire concerning help desk, call center of bank are always helpful, the result showed that, 13% and 35% of respondents were strongly agreed and agreed respectively, 29% of respondents are neutral; while 21% respondents disagree. As a result, the majority of the respondents agreed that help desk and call center of bank are always helpful.

Relative advantage dimension in this study comprises ten items that intended to measure the degree of customer adoption of digital payment. Of those items, High Promptness of ATM card delivery, convenient ATM location and Bank has up to date information are scored the highest mean value of 3.7, 3.6, and 3.6 respectively. Thus, the Relative advantage dimension including all the rest items has scored 3.53 grand mean which fall in the range of Above 3.2, it is considered as agreed. Therefore, it is possible to conclude that, customers of the bank are agreed with the relative advantage items.

4.6.2 Complexity

Complexity is the degree to which an innovation is perceived as relatively difficult to understand and use. Any new idea may be classified on the complexity-simplicity continuum. Some innovations are clear in their meaning to potential adopters while others are not (Rogers, 2003). Table 4.7 below illustrates the reflection of the respondents regarding Service quality dimension.

Table 4. **7: Complexity**

S.	Complexity		SD	D	N	A	SA	MS	SDV
1	simple language and information content	N=176	1	15	25	90	45	3.92	.888
		100%	.6	8.5	14.2	51.1	25.6		
2	The service doesn't require more skill and mental effort.	N=176	9	19	59	62	27	3.44	1.040
		100%	5.1	10.8	33.5	35.2	15.3		
3	the bank give Instructions on how to use (ATM, Mobile and internet banking)	N=176	1	22	34	82	37	3.75	.947
		100%	.6	12.5	19.3	46.6	21.0		
4	High ease of use	N=176	7	9	53	81	26	3.62	.935
		100%	4.0	5.1	30.1	46.0	14.8		
	Valid N							3.68	.952

Source: SPSS Output from survey result, 2022

Table 4.7 above depicts perception of customers about the bank give instructions on how to use (ATM, Mobile and internet banking). 19% of respondents were neutral; about 12% and 46% of the respondents were strongly agreed and agree respectively. This tells us that the bank give instructions on how to use (ATM, Mobile and internet banking) the service.

With regard to "The service doesn't require more skill and mental effort." The feelings of respondents indicate that 15% and 35% of customers strongly agree and agree respectively. Thus, it indicates that the service doesn't require more skill and mental effort.

The description presented on table 4.7 tells us the majority (76%) of the respondents were found the service with simple language and information content. The rest 14% of the respondents, however, found to be neutral regarding the aforementioned statement, while 9% of them show their disagreement with service with simple language and information content.

They responded having a scored mean value of 3.68 this shows that the respondents were "agreed" with the above listed items.

4.6.3 Compatibility

Compatibility is the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters. An idea that is more compatible is less uncertain to the potential adopter. An innovation can be compatible or incompatible (1) with sociocultural values and beliefs, (2) with previously introduced ideas, or (3) with client needs for innovations (Rogers, 2003). The respondents were asked to indicate their levels of agreement. The findings are presented below in the table 4.8

Table 4.8: Compatibility

S.	Compatibility		SD	D	N	A	SA	MS	SDV
1	The bank service is compatible with your life style or work style.	N=176	-	23	11	103	39	3.89	.894
		100%	-	13.	6.3	58.5	22.2		
2	The bank service is compatible with your personal habit.	N=176	2	26	25	82	41	3.76	1.00
		100%	1.1	14.8	14.	46.6	23.3		
3	The bank services complement with your routine financial activity.	N=176	2	11	44	70	49	3.86	.931
		100%	1.1	6.3	25	40	27.8		
4	Your requests are handled promptly.	N=176	-	10	38	100	28	3.82	.759
		100%	-	5.7	21.6	56.8	15.9		
	Valid N							3.83	.896

Source: SPSS Output from survey result, 2022

The description presented on table 4.8 tells us the majority (80%) of the respondents were found to be confident with the above statement. The rest 6% of the respondents, however, found to be neutral regarding the aforementioned statement, while 13% of them show their disagreement with the compatibilities of bank service with life or work style.

With regard to "The bank services complement with your routine financial activity" the feeling of respondents indicates that 23% and 46% of customers strongly agree and agrees respectively. Thus, it indicates that the bank services are complement with routine financial activities of the customers.

Table 4.8 above depicts customers are get prompt service from the bank for request handling, 5.7% of respondents were strongly disagreed; about 15% and 56% of the respondents were strongly agreed and agree respectively.

As it can be observed from the above table, respondents have generally developed positive perception regarding the Compatibility dimension. It indicating that grand mean value is 3.8 which is above the cut-off point 3.2.

4.6.4 Perceived Risk

Technologies are the medium and tools which enable the firms to get the appropriate information to the right person at the right time. Security refers to the need to protect data, equipment and processing time. Organizations restrict access to certain data and protect data and applications from manipulation or contamination (Bargh et, al. 2008).

Accordingly, different questions were raised under Perceived Risk variables to determine the impact on adoption of digital payment systems. Table 4.6.4 below illustrates the reflection of the respondents regarding the dimension.

Table 4. 4. 8: Perceived Risk

S.	Perceived Risk		SD	D	N	A	SA	MS	SDV
1	high Security for ATMs	N=176	2	7	49	75	43	3.85	.875
		100%	1.1	4.0	27.8	42.6	24.4		
2	Online filling is safe	N=176	2	17	50	72	35	3.68	.937
		100%	1.1	9.7	28.4	40.9	19.9		
3	high protection of banking transactions	N=176	2	19	40	85	30	3.69	.917
		100%	1.1	10.8	22.7	48.3	17.0		
4	high Privacy / Confidentiality of the bank	N=176	-	13	43	76	44	3.85	.879
		100%	-	7.4	24.4	43.2	25.0		
5	Problem solving through instant information.	N=176	2	18	48	68	40	3.71	.967
		100%	1.1	10.2	27.3	38.6	22.7		
6	Bank insists on error-free transaction records (NEFT, RTGS)	N=176	6	35	42	68	25	3.40	1.06
		100%	3.4	19.9	23.9	38.6	14.2		
	Valid N							3.69	.939

Source: SPSS Output from survey result, 2022

As shown in Table, out of 176 respondents, 48% and 17% of the respondents agree and strongly agree respectively with high protection of banking transactions. While 12% of the respondents disagreed and the rest 22% of the respondents uncertain about protection of bank transactions. Therefore, it can be observed that above half of the respondents believe that the bank use high protection of banking transactions.

Regarding to problem solving through instant information; the majority of respondents (60%) customers are receiving instant information.

Lastly, the respondents were asked bank insists on error-free transaction records. About 24% and 48% of the respondents selected neutral and agree respectively. However, 3% respondents were disagreeing regarding this issue. Therefore, the majority of the respondents agreed that bank insists on error-free transaction records.

They responded having a scored mean value of 3.69 this shows that the respondents were "agreed". It is found that customer awareness level of Perceived Risk is one of the major factors for the adoption of digital payment.

4.6.5 employer's innovativeness

Innovativeness define as the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system. Table 4.4.5 below illustrates the reflection of the respondents regarding customer innovativeness dimension.

Table 4. 4. 9: Customer innovativeness

S.	customer innovativeness		SD	D	N	A	SA	MS	SDV
1	you have service know how when using digital payment services (ATM, internet, mobile banking)	N=176	-	4	3	95	74	4.35	.634
		100%	-	2.3	1.7	54.0	42.0		
2	you have tendency to share information to other people when using new product	N=176	3	34	6	70	63	3.88	1.14
		100%	1.7	19.3	3.4	39.8	35.8		
3	Digital payment services (ATM, internet ,mobile banking) motivating you to use them more	N=176	2	16	17	89	52	3.98	.928
		100%	1.1	9.1	9.7	50.6	29.5		
4	You have eagerness to accept new technological.	N=176	-	-	42	53	81	4.22	.808
		100%	-	-	23.9	30.1	46.0		
	Valid N							4.10	.877

Source: SPSS Output from survey result, 2020

Table 4.6.5 above depicts service know how when using digital payment services (ATM, internet, mobile banking). 5% of respondents were strongly disagreed; about 42% and 54% of the respondents were strongly agreed and agree respectively. This tells us customers have the know-how when using digital payment services.

With regard to "Digital payment services motivating you to use them more", they responded having a scored mean value of 3.8 this shows that the respondents were "agreed" that digital payment services motivating to use them more.

The description presented on table 4.4.5 tells us the majority (76%) of the respondents agreed that there is accept new technological banking service. The rest 24% of the respondents, however, found to be neutral regarding the aforementioned statement.

4.6.6 Customer Adoption of Digital payment

Table 4.11 below illustrates the reflection of the respondents regarding corporate image & relationship quality.

Table 4. 4. 10 employer Adoption of Digital payment

S.	Customer Adoption of Digital payment		SD	D	N	A	SA	MS	SDV
1	The contribution of new technology is the miens of success to the banks	N=176	-	5	12	51	108	4.48	.748
		100%	-	2.8	6.8	29.0	61.4		
2	the bank has create clear awareness of its service	N=176	3	15	44	66	48	3.80	.991
		100%	1.7	8.5	25.0	37.5	27.3		
3	The bank give instruction on how to use technological service efficiently	N=176	-	24	61	39	52	3.67	1.04
		100%	-	13.6	34.7	22.2	29.5		
4	The bank service made a relevance impact on part of your daily activity	N=176	6	8	40	66	56	3.89	1.01
		100%	3.4	4.5	22.7	37.5	31.8		

Source: SPSS Output from survey result, 2022

Regarding to the contribution of new technology is the miens of success to the banks; the majority of respondents (90%) customers are agreed that new technology is the miens of success to the banks.

The respondents were asked the bank has created clear awareness of its service. About 25% and 64% of the respondents selected neutral and agree respectively. However, 10% respondents were disagreeing regarding this issue. Therefore, the majority of the respondents agreed that the bank has created clear awareness of its service.

As shown in Table, out of 176 respondents, 22% and 29% of the respondents agree and strongly agree respectively with the bank give instruction on how to use technological service efficiently.

The overall mean rating and the standard deviation of the respondents for customer adoption of digital payment was 3.96 and .947 respectively. It indicates that customers' attitude towards adopting digital payment is good. As it can be observed from the above table, grand mean value of customer adoption of digital payment is 3.96 this shows that the respondents were "agreed".

4.7 Inferential Analysis

The inferential analysis section includes correlation and regression analysis to investigate factors that are influence customer adoption of digital payment evidence.

4.7.1 Correlation Analysis

Correlation analysis is a method of statistical evaluation used to study the strength of a relationship between two, numerically measured, continuous variables (Fikre et al, 2009).

According to Mooi and Sarstedt (2011), the calculated value of the correlation coefficient ranges from -1 to 1, where -1 indicates a perfect negative relation (the relationship is perfectly linear) and 1 indicates a perfectly positive relationship.

The correlation between dependent and independent variables along with the causal effect was analyzed using Statistical Package for Social Science (SPSS). The below correlation matrix shows correlation between variables in the questionnaire with a Pearson Correlation coefficient to show the strength of relationship among the variables considered in the questionnaire. The correlation between the independent variables is pretty less than 0.5 which below level of association that cause multicollinearity problem. Therefore, it could possible to conclude that there is no multicollinearity problem,

Table 4. 4.11: Correlations

Correlations

		RA	COMX	COMP	PER	INO	C.ADOP
RA	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	176					
COMX	Pearson Correlation	.449**	1				
	Sig. (2-tailed)	.000					
	N	176	176				
COMP	Pearson Correlation	.086	.019	1			
	Sig. (2-tailed)	.254	.803				
	N	176	176	176			
PER	Pearson Correlation	.456**	.521**	.147	1		
	Sig. (2-tailed)	.000	.000	.051			
	N	176	176	176	176		
INO	Pearson Correlation	.168*	.135	.047	.225**	1	
	Sig. (2-tailed)	.026	.074	.537	.003		
	N	176	176	176	176	176	
C.ADOP	Pearson Correlation	.400**	.594**	.485**	.507**	.605**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	176	176	176	176	176	176

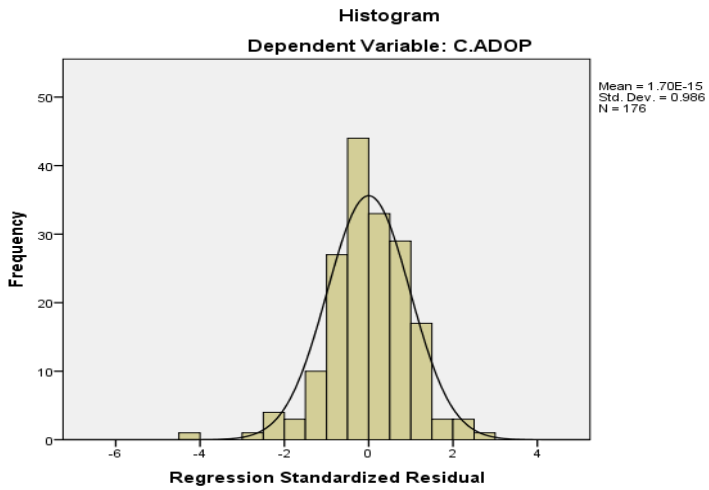
4.7.2 Testes for Regression Assumption

4.7.2.1 Normality Test

A normal distribution is one of the importantly assumed statistical procedures. Normal distributions take the form of a symmetric bell shaped curve. The standard normal distribution is one with a mean of 0 and a standard deviation of 1 (Garson, 2012). The study employed the relevant normality tests.

As we seen in the below figure (Figure 4), Bera-Jarque statistic has a P-value of 0.986 implying that the data were consistent with a normal distribution assumption and the assumptions of simple linear regression have been met and we can possibly assume that the model is accurate and can probably generalize to the population.

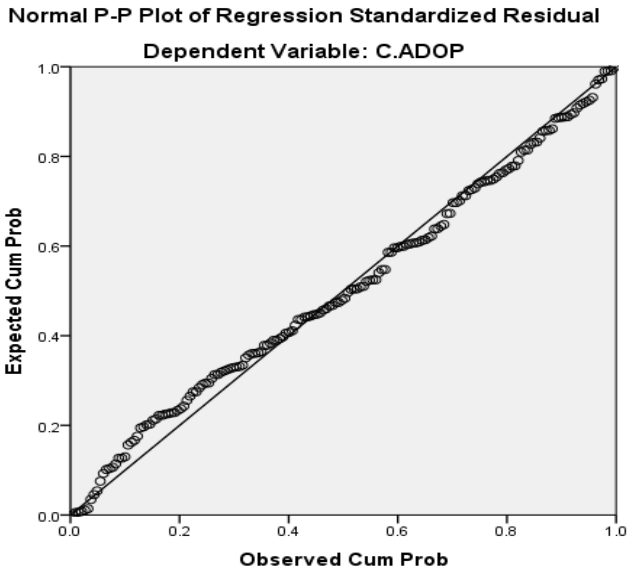
figure 2: Normality Test



Source: SPSS Output from survey result, 2022

4.7.2.2 Linearity Test

figure 3: Normally distributed errors



Source: SPSS output (2022)

The straight line in this plot represents a normal distribution, and the points represent the observed residuals. Therefore, in a perfectly normally distributed data set, all points will lie on the line (Field, 2009).

Likewise, as we seen in the above figure (figure 5), the dots are closely plotted to the straight line, which indicate a small or no deviation from normality and there are no extreme cases observed. Therefore, the assumptions of simple linear regression have been met and we can possibly assume that the model is accurate and can probably generalize to the population.

4.7.2.3 Multicollinearity Test

Multicollinearity is a situation where two or more explanatory (predictor) variables in a multiple regression model are related to each other and also with the response variable. (Akimande O. et al, 2015). If there is Multicollinearity in the model, the estimated coefficients possess large standard error, which means the coefficients cannot be estimated with great precision or accuracy (Gujarati, 2009). To alleviate this problem one or more of the correlated variables must be dropped from the model. Therefore, the study checks for the presence of Multicollinearity in the model. The collinearity statistics result for all independent variable constituents were performed on SPSS and presented as follows.

Table 4. 4. 12: Multicollinearity Test

Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
1	RA	.725	1.380
	COMX	.661	1.512
	COMP	.962	1.039
	PER	.635	1.576
	INO	.944	1.059

Source: SPSS Output from survey result, 2022

The values of Variance Inflation Factor (VIF) for all independent variables or factors are less than 10 (Gareth James, 2013). Hence, there is no multi- co-linearity among independent variables. Therefore, it is possible to use correlation and multiple regressions analysis.

4.7.3 Multiple Regression Analysis

Linear regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable (Field, 2005). It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

Table 4. 4.13: Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649[a]	.421	.404	.54299

a. Predictors: (Constant), INO, COMP, COMX, RA, PER

b. Dependent Variable: C.ADOP

Source: SPSS Output from survey result, 2022

R – Indicates the value of the multiple correlation coefficient between the predictors and the outcome, with a range from 0 to 1, a larger value indicating a larger correlation and representing an equation that perfectly predict the observed value (Pedhazur, 1982). From the model summery (R = 0.649) indicates that the linear combination of the five independent variables strongly predict the dependent variable (customer adoption of digital payment).

R-Squared is the proportion of variance in the dependent variable which can be explained by the independent variables. The R-squared in this study was 0.421, the weighted combination of the independent variables explained in the model summary are affect approximately 42% of the variance of customer retention and the remaining 58% is by extraneous uncontrollable variables. This result also indicates that there may be other variables that could have been neglected by the current study in predicting customer adoption of digital payment.

Table 4. 4.14: Analysis of Variance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.423	5	7.285	24.707	.000[b]
	Residual	50.122	170	.295		
	Total	86.545	175			

a. Dependent Variable: C.ADOP

b. Predictors: (Constant), INO, COMP, COMX, RA, PER

Source: SPSS Output from survey result, 2022

ANOVA is used to assess the statistical significance of the result by testing the Null hypothesis that multiple R in the population equals 0. (Pallant J., 2005). The model of this study hence proves to be statistically significant by showing .000 significances. The above ANOVA table shows the acceptability of the model. The p-value is less < 0.05 i.e. 0.001. From the ANOVA table it has been determined that F = 24 and Sig. is .000 which confirms that the independent variables have significant impact on customer adoption of digital payment.

Table 4. 4.15: Regression Coefficients

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.800	.437		.116	.000
	RA	.127	.067	.127	.401	.000
	COMX	.443	.072	.445	.196	.000
	COMP	.119	.060	.119	.992	.000
	PER	.316	.075	.309	.215	.000
	INO	.120	.083	.115	.245	.000

a. Dependent Variable: C.ADOP

Source: SPSS Output from survey result, 2022

Based on these results, the regression equation that predicts customer retention based on the linear combination of independent variable is:

Regression Equation

Y = a + bX1 + bX2 + bX3 + bX4…

C.ADOP = 1.80 + .127RA + .445COMX + .119COMP + .309PER + .115INO

Where, RA = relative advantage

COMX= complexity

COMP= compatibility

PER= perceived risk

INO= customer innovativeness

C.ADOP= customer adoption of digital payment

Five major hypotheses were constructed in this study to test the effect of mobile banking on customer retention in commercial banks.

4.7.4 Discussion on Major Findings

Hypotheses # 1

- *H1: The relative advantage influence positively and significantly customers' adoption of digital payment systems*

The result in the above table shows that relative advantage has a beta coefficient of .127 with a significant value of .001. This indicates that relative advantage makes a positive, statistically significant and unique contribution to the predication of customers' adoption of

digital payments. Therefore, controlling the variance explained by all other variables in the model; relative advantage contributes 12% to the variance explanation of the dependent variable. Thus, hypothesis one is accepted.

- *H2: The compatibility digital payment system positively and significantly affect customers' adoption of digital payment systems*

The result in the above coefficient table shows that complexity has a beta coefficient of .445 with significance value of .001. This indicates that complexity makes a positive, statistically significant and unique contribution to the prediction of customers' adoption of digital payments. Therefore, controlling the variance explained by all other variables in the model, complexity contributes 44% to the e variance explanation of the dependent variable. Therefore, hypothesis two is accepted

- *H3: The level of complexity of digital payment systems positively and significantly influence customers' adoption of those services*

As per the result in the above table, compatibility has beta coefficient of .119 with significance value of .001. This is an indication that compatibility makes a positive, statistically significant and unique contribution to the predication of customer adoption of digital payments. Further controlling the variance explained by all other variables in the model, compatibility contributes 19% to the variance explanation of the dependent variable. As a result, hypothesis three is accepted.

- *H4: There is a positive and statistically significant relationship between perceived risk and customers' adoption of digital payment systems*.

As per the result in the above table, Perceived Risk has a beta coefficient of .309 with significance value of .001. This indicates that Perceived Risk makes a positive, statistically significant and unique contribution to the prediction of customers' adoption of digital payments. Further, controlling the variance explained by all other variables in the model, Perceived Risk contributes 30% to the variance explanation of the dependent variable. Consequently, considering the significance of Perceived Risk to customers' adoption of digital payments, H4 is accepted. H4 is accepted, even though conceptual frame work of the study begin by Perceived risk will negatively influence customers' adoption of digital payments but research Hypotheses result is positive because respondent 48% agreed where 17% strongly agree that they have no perceived risk uncertainty issue on service and believe that the service is free from risks. Hence, hypothesis four is accepted.

- *H5:The customers' innovativeness positively and significantly influence customers' adoption of digital payment systems*

As per the result in the above table, Customers innovativeness has beta coefficient of .115 with significance value of .001. This is an indication that Customers innovativeness makes a positive, statistically significant and unique contribution to the predication of customer adoption of digital payments. Further controlling the variance explained by all other variables in the model, Customers innovativeness contributes 15% to the variance explanation of the dependent variable. As a result, hypothesis five is accepted.

4.8. Discussion on qualitative results

Based on respondents for final open ended question, we try to generalize there answer to pin point their suggestion for development of technology in Ethiopia. And here are different suggestions they have given as follows;

- The development of technology in Ethiopia banking industry must provide customer satisfaction so that they have to focuses on high advance technology.
- Due to globalization, bank must adopt technology because in future that what today cost highly valuable. it's very important to remain efficient also being constant on the service is crucial.
- Considerate of culture and religion aspect of a country also creates awareness using, social media, advertising etc. For the customer who does not know how to use it. Even motivate customer if they know how to operate but does not use it.
- Develop of technology in Ethiopia is barely important to compute with technology for more revenue in Ethiopia banking industry because Ethio-telecom need to raise internet access, infrastructure and service quality for local banks and take responsibility for right action.
- banks need more research to address all service issue and develop marketing strategy
- Successful training for customer motivates them to use digital payment repeatedly.
- Bank play important role for our nations so, banks must be Compare themselves with east African nation banks because. If there is no competition, there is no quality
- Too much dependency on technology may lead to failure to handle transaction and hence lead to customer dissatisfaction. Manual sometimes shall be performing parallel with digital before going changing drastically to adopt technology.
- Providing Physical security of software also create customer friendly product must take into consideration.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main purpose of the study was to analyze factors that influencing customer's adoption of digital payment systems: evidence from selected commercial bank in Ethiopia.

As the findings of this study indicated in table 2 the descriptive statistics of the respondents agreed with five dimensions that influencing customer's adoption of digital payment systems. Moreover, the respondents agreed with the five dimensions of by giving the higher rate scale to customer innovativeness followed by compatibility, perceived risk, complexity, and relative advantage with are average mean of 4.22, 3.83, 3.69, 3.68, and 3.53 respectively.

With regard to the Pearson correlation analysis, it can be clearly seen as that the five dimensions namely customer innovativeness, compatibility, perceived risk, complexity, and relative advantage are positively related to customer adoption of digital payment.

The relationship looks like the following: -

- relative advantage and customer adoption of digital payment have high relationship (r= .400** $P \leq 0.01$)
- complexity and customer adoption of digital payment have high relationship (r = .594** $P \leq 0.01$)
- Compatibility and customer adoption of digital payment have high relationship (r = .485** $P \leq 0.01$)
- perceived risk and customer adoption of digital payment have low relationship (r = .507** $P \leq 0.01$)
- customer innovativeness and customer adoption of digital payment have low relationship (r = .605** $P \leq 0.01$)

Multiple linear regression analysis was applied to evaluate the extent of factors that influencing customer's adoption of digital payment systems. The regression analysis clearly shows that 42% of variance in customer's adoption of digital payment systems is explained by customer innovativeness, compatibility, perceived risk, complexity, and relative advantage.

5.2 Conclusion

Primary data was gathered by using structured questionnaire. Quantitative descriptions were applied on the data gathered to analyze the information obtained. By undertaking a detailed analysis of the situation, the following findings were obtained. Majority of the respondents indicated that:

- The contribution of new technology is the miens of success to the banks.
- The bank has created clear awareness of its service.
- The banks give instruction on how to use technological service efficiently.
- The bank service made a relevance impact on daily activities of the customers.

The results of the study revealed that customer innovativeness, compatibility, perceived risk, complexity, and relative advantage are positively related to customer adoption of digital payment. Among the factors customer innovativeness and perceived risk are found to be the most significant predictor. Conversely, relative advantage was found to have least significant effect on customer adoption of digital payment.

5.3 Recommendations

This study raised a number hypotheses was designed related to the study variables. The main purpose of the study was to analyze factors that influencing customer's adoption of digital payment systems. The study applied an explanatory study on selected commercial bank in Ethiopia and tried to infer the findings through testing the hypotheses. Based on the conclusions drawn above the following recommendations are forwarded for the concerned bodies.

- Awareness should be created through convenience and safety of using digital payment rather than cash through different workshops, exhibitions, road shows and various promotion mechanisms to drive the cash based payment towards digital payment.
- Customers should be consistently educated about how to use technological service efficiently in addition to providing information through help desk, call centre of the bank.
- Banks should prepare a business model that can meet the requirement with huge range of services, and with low Service charges.
- Banks must work on enhancing the convenience of ATM location and operation hours and faster log in facility using internet banking or mobile banking. This will also avoid resistance of usage because of prior bad experience due to failed transaction.

- Banks should ensure high performance of plastic card, mobile and internet banking with up to date information.
- Develop a comprehensive regulatory and legal framework to protect consumers banking transactions with high Privacy / Confidentiality.

5.5. Suggestions for Further Research

In general, the findings of this study offer additional insights into the effect of factors that influencing customer's adoption of digital payment systems. This study included only five factors, there could be some other relevant factors that may be perceived as important by customers, but those were excluded from this study. Secondly, targeting only private commercial bank located in Addis Ababa could not adequately represent population of private commercial banks in Ethiopia. Therefore, it necessitates for conducting of further research by incorporating other commercial banks located other geographical area of the country. Thirdly, the fourth hypothesis perceived risk result is not support the hypothesis assumption this is, therefore need further investigation.

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APPENDIX A: QUESTIONNAIRE

Addis Ababa University

School of Commerce

Questionnaire for factors influencing customer's adoption of digital payment systems: Evidence from selected commercial banks in Ethiopia.

Dear Sir/Madam;

This research questionnaire aims are gather data on "Factors influencing Customers Adoption of Digital Payment Systems: Evidence from selected commercial Banks in Ethiopia". I am a graduate student at St. Mary University Collage and currently conducting a research for the completion of Master of Arts in Marketing Management.

I kindly request you to spend few minutes responding freely to the questions based on your knowledge. The information gathered were used only for study purpose and not for other purpose. You don't have to write your name.

Your assistance is appreciated!

PART ONE: - GENERAL INFORMATION /DEMOGRAPHIC QUESTIONS

1) Gender

☐ Male ☐ Female

2) Age

☐ 18-30 Years ☐ 31-40 Years

☐ 41-50 Years ☐ above 50 Years

3) Education level

☐ High school & below ☐ Diploma

☐ Degree ☐ Masters & above

4) What is your professional work?

☐ Government Employee ☐ Private Employee ☐ Business

☐ NGO ☐ other (please specify)

5) Monthly income

☐ Up to 10,000 ☐ 10,001-20,000 ☐ above 20,000

6) For how long have you been a customer of your bank?

☐ Less than 1 year ☐ 1-4 years

☐ 5-9 Years ☐ above 10 years

PART TWO: - Technology usage (The following set of questions relate to problem you may have or not using digital payment system) (A. Prameela 2016)

NB. 1- N = Never 2- R- Rarely 3- S = sometimes 4- O-Often 5- A= Always

	N	**R**	**S**	**O**	**A**
A. ATM Problems					
1. Cards get blocked					
2. Machine out of cash					
3. Non printing of statement					
4. Machine out of order					
5. Long waiting time in queues					
6. Reduction in balance without cash payment					
7. Service not available					
B. Internet Banking Problems					
1. Not providing information					
2. Not being able to maintain security					
3. Not giving fast response					
4. Leaving the operation unfinished					
5. Internet banking can be tampered with by others					
6. Waiting for long time for conducting of transactions					
7. Service not available					
C. Mobile Banking Problems					
1. Login / Sign off are not easy.					
2. Lack of security in transactions.					
3. Lack of appropriate software.					

PART THREE: - questionnaires regarding factors influencing customer's adoption of digital payment systems

The following set of questions relate to factors influencing using digital payment system. Read and show to what extent you agree with them by marking (√) sign.

NB. 1-SD = Strongly Disagree 2-D = Disagree 3-N = Neutral 4-A = Agree 5- SA = Strongly Agree

	A. Relative Advantage	**S D**	**D**	**N**	**A**	**S A**
1	High Promptness of ATM card delivery.					
2	ATM location convenient also hours of operation (24 X7) is great.					
3	High Performance of plastic card, Mobile and internet banking					
4	Bank has up to date information					
5	Wide range of products and services provided					
6	Faster log in facility using internet banking or mobile banking.					
7	Performance of Plastic cards (ATM, Debit/Credit)					
8	Help desk, call center of bank are always helpful.					
9	bank has huge range of services					
10	law Service charges					
	B. complexity	**SD**	**D**	**N**	**A**	**SA**
1	simple Language and information content					
2	The service doesn't require more skill and mental effort.					
3	the bank give Instructions on how to use (ATM, Mobile and internet banking)					
4	High ease of use					
	C. Compatibility	**SD**	**D**	**N**	**A**	**SA**
1	The bank service is compatible with your life style or work style.					
2	The bank service is compatible with your personal habit.					

3	The bank services complement with your routine financial activity.					
4	Your requests are handled promptly.					
	D. Perceived Risk	**SD**	**D**	**N**	**A**	**SA**
1	high Security for ATMs					
2	Online filling is safe					
3	high protection of banking transactions					
4	high Privacy / Confidentiality of the bank					
5	information Problem solving through instant information					
6	Bank insists on error-free transaction records (NEFT, RTGS)					
	E. customer innovativeness	**SD**	**D**	**N**	**A**	**SA**
1	you have service know how when using digital payment services (ATM, internet, mobile banking)					
2	you have tendency to share information to other people when using new product					
3	using digital payment services (ATM, internet ,mobile banking service motivating you to use them more					
4	you have eagerness to accept new technological service quickly					
	Employer Adoption of Digital payment	**SD**	**D**	**N**	**A**	**SA**
1	The contribution of new technology is the miens of success to the banks					
2	the bank has create clear awareness of its service					
3	The bank give instruction on how to use technological service efficiently					
4	The bank service made a relevance impact on part of your daily activity					

What suggestions you can give to the development of technology to the Ethiopian banking industry?

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THANK YOU!